# SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL 

# SNAPPER GROUPER COMMITTEE 

## Hilton Cocoa Beach Oceanfront Cocoa Beach, FL

June 14-15, 2016
SUMMARY MINUTES

## Snapper Grouper Committee

Dr. Michelle Duval, Chair
Robert Boyles
Charlie Phillips
Anna Beckwith
Chester Brewer
Chris Conklin (via webinar)
Dr. Roy Crabtree

## Council Members:

Dr. Wilson Laney

## Council Staff:

Gregg Waugh
Mike Collins
Dr. Kari MacLauchlin
Kim Iverson
Julie O'Dell
Amber Von Harten
Roger Pugliese
Observers/Participants:
Capt. Mark Gordon
Rick DeVictor
Iris Lowery
Jeff Radonski
Dr. Marcel Reichert
Tracy Dunn
Erika Burgess
Dr. Luiz Barbieri
Kenny Fex
Jim Estes

Jessica McCawley, Vice-Chair
Ben Hartig
Doug Haymans
Zack Bowen
Mark Brown
Jack Cox

LT Tara Pray

John Carmichael
Dr. Brian Cheuvront
Chip Collier
Dr. Mike Errigo
Myra Brouwer
John Hadley

John Sanchez
Dr. Mike Larkin
Dr. Joey Ballenger
Dr. Jack McGovern
Dr. Andy Strelcheck
Dr. Bonnie Ponwith
Nik Mehta
Jocelyn D'Ambrosio
Frank Helies
Dr. Scott Raborn

## Additional Observers Attached

The Snapper Grouper Committee of the South Atlantic Fishery Management Council convened at the Hilton Cocoa Beach Oceanfront, Cocoa Beach, Florida, Tuesday afternoon, June 14, 2016, and was called to order by Chairman Michelle Duval.

DR. DUVAL: We're going to call the Snapper Grouper Committee to order. Are there any modifications to the agenda? Seeing none, the agenda stands approved. The next item of business is approval of our March 2016 committee minutes. Were there any modifications to the minutes? Seeing none, the minutes stand approved. The next item of business is a review of the status of commercial and recreational catches versus quotas for species under annual catch limits, and, Rick, I think you're probably going to take us through those?

MR. DEVICTOR: I sure will, and thank you.
DR. DUVAL: This is Attachment 1a in your briefing book.
MR. DEVICTOR: There is a more up-to-date one, but I can walk through that. I emailed that, but I can go through this one. Just going through some of the species that we normally do, again, these are landings that are through June 10, last Friday. Again, we get these every Friday from the Science Center, and so black sea bass, 177,000 , about, was landed so far, and that's 23 percent.

Blueline tilefish, again, that's one where the ACL is 112,000 and then it was reduced to 17,000 last year. Right now, it started the year off at 32,000 and 122 percent was caught, and so we closed it June 1. Again, if and when Regulatory Amendment 25 is approved and put into place, that would increase that catch limit to 87,521 , and so that's blueline tilefish.

Golden tilefish, the hook and line sector, 49 percent was landed so far. That's 66,658. Last year, it closed on December 8. Golden tilefish longline, we closed that March 15, and 102 percent of the catch limit was reached. Gray triggerfish, if you recall, we have a split season now, and so the first season, where it was 130,287, that closed on April 2, but we got a landings report after that and realized that we hadn't met the catch limit, and so we reopened the fishery yesterday, and so that's for eighteen days. That will carry us into the second season, which is July 1 to December 31 , unless the catch limit is reached.

Moving on down the list, snowy grouper, we closed that June 14, and 104 percent of the catch limit was reached. Yellowtail snapper, we're at 66 percent, as of June 10, but, again, Regulatory Amendment 25 would change the start of that fishing year to August 1 . Moving on down to greater amberjack, 36 percent of the catch limit has been caught, and that's 280,000 pounds. Vermilion snapper, the trip limit was reduced on March 2 and it closed on March 29, and 100 percent of that ACL was caught. That concludes my commercial landings comparison to ACL report.

DR. DUVAL: Thanks for that, Rick. Are there any questions for Rick on the landings?
MR. BOWEN: Myra, if you can go and kind of magnify the scamp, in the May 20 briefing material that I received, it says that 123 -- I'm assuming that's numbers of fish? I was having trouble seeing it, but it looks like 45,000 pounds in the updated that was updated last Friday, and so we had 40,000 pounds of scamp caught in two weeks?

MR. DEVICTOR: You're correct. In the March 20, it shows 123, and that would be pounds, and then the June 10 one, it's come up to 45,573 , which is 21 percent of the quota.

MR. BOWEN: So we caught 45,000 pounds of scamps in fourteen days?
MR. DEVICTOR: That was what was reported to the Science Center.
MR. BOWEN: Wow. Thanks.
DR. DUVAL: Are there any other questions for Rick about the commercial harvest numbers?
MR. WAUGH: I don't believe that means that those were landed in between those two reports, those dates. It means it was reported to the Southeast Fisheries Science Center in between those two dates. Remember that we have a compliance issue, and so you don't have full compliance all along, and so what they're getting is, as those reports are updated and the Center does their projections, then that's incorporated, and so I think that's part of what you're seeing, is a delay in the reporting.

DR. MCGOVERN: Another thing is there was a seasonal closure for scamp, and so we're just getting into the beginning of when the landings started up too, and so there might have been a little delay in there.

DR. DUVAL: Any other questions? If not, I think Dr. Larkin is going to take us through the status of recreational landings, and that would be Attachment 1 b in your briefing book.

DR. LARKIN: Now for the snapper grouper recreational landings. Landings were summarized using MRIP or MRFSS, MRFSS calibrated from MRIP, depending on how the ACL was calculated. Landings estimates were updated by NMFS SERO to be consistent with the ACL monitoring, like if in fact it was post-stratification, because some of them, for example, we include the Monroe County landings and apply those to the South Atlantic. That's what we mean by poststratification.

It includes data all the way through Wave 6 of 2015. 2015 landings are still preliminary. As I mentioned earlier, we're still waiting on Wave 1 of 2016, which should be available next week. All landings include both the MRFSS or MRIP landings as well as the headboat landings also.

First, I will go through the 2014 landings. This is very similar to the dolphin wahoo one that I gave earlier. I'm just going to highlight the ones that had overages. For example, Atlantic spadefish in 2014, they were 455 percent over the ACL. Actually, I take that back. Atlantic spadefish were 355 percent over the ACL, because 100 percent is the full ACL. Gray triggerfish were 22 percent over the ACL, and they had a closure on November 26 in 2014.

Hogfish is 31 percent of the ACL, and then porgies was 20 percent over the ACL. It closed on September 17, 2014. Snappers was 14 percent. That one, actually, when we summarized the 2014, that's when we realized it was over the ACL, when we got the full landings for 2014. That's why there was no closure there, but they were 14 percent over. Snowy grouper was 132 percent over the ACL. That closed on June 7, 2014.

Then I will move on to 2015. Blueline tilefish, that one you can see actually the ACL was changed in the middle of 2015. It's 111,000 down to 17,000 , and so a big drop there, and you can see that drop resulted in an overage of about 262 percent over, and that was closed on June 10 of 2015.

Golden tilefish was 37 percent over the ACL. That one closed on August 11, 2015, and then hogfish was 230 percent over the ACL. That was closed on August 24 of 2015. Then, more of the 2015 landings, porgies were at 103 percent. That was another example of when we sum up the 2015 landings, when we got them all together, then it was actually 3 percent over. Greater amberjack and black sea bass did not have overages. These don't have the calendar year. You can see amberjack is May 1 to April 30 and black sea bass, for 2013/2014, is June 1 to May 31. Both of these were below the ACL. Then the 2014/2015, both of these were below the ACL, 74 percent and 39 percent. Then currently what we have for the 2015/2016, at the present time, both of these are also currently below the ACL.

Now, a similar format to what I showed before, when I break it down by the modes, by charter/headboat, private, and shore, this is for black sea bass, and so if you want to dig into the details and see how they break down by mode and them sum them up to the total there. Then the same format as before. The Y-axis over on the left is the landings. The Y-axis over on the right is the effort. It actually says MRFSS, but it should be MRIP, because now we're currently doing MRIP, but the MRIP effort and the headboat effort, which relate to the red being the MRIP and the orange line going through the series there is actually the headboat effort, but then, you can see at the bottom there, you've got the years and then the landings broken down by mode.

The important thing, at least from my perspective, is you can see how they are relative to the dots, and the dots are the ACL. You can see in recent years that the actual -- The landings, when you sum them up, they're below the ACL for black sea bass. Then the breakdown by mode for gag grouper, this is actually in pounds gutted weight. Then you see the figures here, and you can see the -- When you sum up the landings for the recent years, it's below the dot, which is the ACL. Each color represents a different mode.

Greater amberjack, you can see how these break down by mode, and then the figures here, you can see in the 2012/2013 season that it did exceed the ACL, but in current years, the 2013/2014 and the 2015/2016, you can see they're below the ACL.

Mutton snapper, you can see the breakdown by mode there, and then the landings by mode there in the figure here and then compared to the ACL, as well as the effort. Yellowtail snapper, you can see it broken down by mode there. I'm kind of just taking my time while you guys look at it. Then I will go to the next one, and you can see this one also in relative years is below the ACL, and -- Part of my question before is it looks like I will do a ten-year time series, and so that will make the numbers easier to read on the bottom, and so I will focus on that ten-year time series from now on.

Then red porgy, you can see them broken down by mode. Then the figure for red porgy there. Then, moving on to vermilion, here's a table of the landings by mode. Then vermilion snapper, you can see it here broken down. Also, in this case, it looks like they're below the ACL, because they sum up below the dots there.

Then snowy grouper, this one is actually in numbers, numbers of fish, summarized there. This one, you guys can see we're above the ACL in recent years, 2012, 2013, and 2014, but then we're currently below it in 2015. Then golden tilefish, this one is also in numbers of fish. It's a similar case, where in recent years, except for 2014, the other years did exceed the ACL, hence the closures we've had in that fishery. Then, Zack, this one is for you, scamp.

MR. BOWEN: I noticed that. Thank you very much.
DR. LARKIN: Following Zack's request, I added scamp. I created a new table here and added it in. Then you can see the landings here of -- You can see they change over time as well as the landings relative to the ACL. That's it. I did have a quick question though before I address questions. There are ten species here, and so my question for the council is I can certainly keep these in. I know Zack wanted scamp, and so I added scamp in. I guess if there's any that you would like removed or any added, I would like to open the floor real quick to address that question. I will certainly keep these in if that's what the council requests, but if there's any that could be removed.

MR. COX: I just wanted to say scamp and gag pretty much have the same correlation. It seems the effort has really gone up and catches in the last five years are doing some decreasing. On the gag side, we're seeing that on the commercial side as well.

DR. DUVAL: To address Mike's question, how does the committee feel about the species that are included in this presentation? Are there any that you would want removed? No? I am seeing heads shaking no around the table. Are there any that you would want added?

DR. CRABTREE: For my purposes, I would be happy to see this once a year instead of every meeting. I don't really know why we need to do this every meeting.

DR. DUVAL: Other thoughts on that?
MR. COX: Roy, I just think it's good that people recognize how the -- I like the tables on it, because it gives you a good idea of where the effort is at and things that might just kind of jump out at us, if we're paying attention, especially to stuff like gags and scamps and things like that.

MR. PHILLIPS: I like to see it. I like to be updated, and I could easily go to like twice a year instead of once a year, just so I can get a really good feel on the updated trends and stuff, but I could live with once a year, too.

MS. BECKWITH: It wasn't updated information. This was actually the same presentation we got at the last meeting. I wouldn't mind having this as a reference document in our folders at every meeting, but if we want to save a few minutes and not go through the actual presentation, I'm sure people can reference it, but the data doesn't seem to change very much.

DR. DUVAL: I heard a suggestion for maybe a couple of times a year, like maybe in June and December, or in March, presumably, that's when we would hopefully have the finalized MRIP information from the year before.

DR. LARKIN: I think that's unlikely at this time. I think June is a better estimate for that.

DR. DUVAL: Okay, and so maybe June and December would be an appropriate timeframe.
MR. BOWEN: What you touched on, to your point, kind of leads me into my next question that I had, before this topic was even brought up, but when do the numbers become final instead of preliminary, because the 2015 landings up here still say preliminary, and it's June of the following year.

DR. LARKIN: It's supposed to be around April, but there's been some issues that have slowed it down. Like, for example, right now, we don't have final, as we discussed, final 2015. We will next week, and so I feel like I can't give you -- There is some uncertainty there is what I'm saying, but we should -- I'm confident if, in the future, and I will cross my fingers here, that they should be finalized in June as well as Wave 1 in June should be available. The previous year and Wave 1 , those should be available in June in future meetings.

MR. BOWEN: Thank you.
MR. BROWN: Is that a four-month delay on everything that we look at?
DR. LARKIN: No, I think it will pick up pace now that they have that vessel trip report issue resolved in the North Atlantic, and so my understanding is that will pick up the pace, and so the other ones should not be as late, other waves that is.

DR. DUVAL: All right, and so is anyone opposed to only seeing this twice a year, in June and December? Okay. If that's okay, we'll just go ahead and -- When we see it in June, that will allow us to see the final numbers from the previous year. Then, in December, we can kind of get a sense of how the year has been going.

MR. COX: Would you consider adding blueline tilefish to it?
DR. DUVAL: I think that would be a good addition. Thank you. Since we're on this topic, what about the commercial landings? I'm assuming that, because those are reported, presumably weekly, that we would really like to see those at every meeting. I am seeing heads nod around the table.

I guess one concern that has been brought forward by folks is in regards to the reporting for golden tilefish, I think particularly the longline sector. It sounds like there was maybe a little hiccup earlier this year, and I know that fishery tends to run pretty fast, and I believe our regulations, as they stand right now, allow for more frequent reporting than weekly.

I would just throw that out there, that the golden tilefish commercial sector might be one fishery where we may want to consider, at least on the longline side of things, daily reporting, just because the burn rates in that fishery are so high, and it might address some of the concerns that I think some of the dealers have brought forward. We don't have to get into a big discussion about that now, but I just thought that I would put that out there. All right. Any other discussion about status of commercial and recreational landings?

MR. BOWEN: Mr. Conklin just texted me and asked to be recognized. He wanted me to see if I could get you to recognize him. He has something to say.

MR. CONKLIN: I had a question about the commercial landings. Are there any dealer reportings that are lagging behind that are holding those up? If so, how long does it take for those landings to become final from year to year? If there's a holdup, is it based on non-compliance on the dealer side?

DR. DUVAL: Chris, were you asking about just the status of like final 2015 commercial landings?
MR. CONKLIN: That is correct, yes.
DR. LARKIN: I'll address that. At SERO, we get the final from the Science Center in June, and so that's when we get the final. I think there's always some lag, and they have to go through and find out about non-compliance and follow through with those, and so I wouldn't say the final 2015 -- We won't have those commercial until June.

DR. DUVAL: Now we're going to move on to the status of amendments under formal review, and I think Mr. DeVictor is going to take us through that as well.

MR. DEVICTOR: Thank you, Madam Chair. Yes, I have three amendments to go over, and, again, these are amendments that have been submitted to NMFS that have been approved by the council and they're undergoing rulemaking. The first, Amendment 35, removes four species from the Snapper Grouper Fishery Management Plan, black snapper, mahogany snapper, dog snapper, and schoolmaster. It revises the regulations for the golden tilefish endorsement, and so those with the endorsement may not fish for golden tilefish using hook and line gear under the 500 -pound gutted weight hook and line trip limit. The final rule published on May 23, and the regulations will be effective on June 22.

Moving on to Regulatory Amendment 25, this deals with blueline tilefish, yellowtail snapper, and black sea bass bag limits. It would increase the commercial catch limit and recreational for blueline tilefish and change the blueline tilefish bag limit to three fish per person per day and increase the black sea bass bag limit and change the fishing year for yellowtail snapper to start August 1 for both sectors. That was submitted to NMFS on March 4, the proposed rule published on June 1, and the comment period closes on June 16.

The final amendment that I wanted to go over is Regulatory Amendment 16. Again, this has to do with the black sea bass pot closure. That would allow fishing starting on November 1 in certain locations on the South Atlantic coast. This was submitted to NMFS on March 4, and we're working on the proposed rule package right now. Again, the goal there is to get that in place by November 1, to allow some fishing to go on during that time. I believe you will be getting a report on the Snapper Grouper Biological Opinion on Thursday in the Protected Resources Committee.

DR. DUVAL: Any questions for Rick on the status of amendments under review? Okay. Then we will go ahead and move into our next agenda item, which is the Southeast Reef Fish Survey Update for 2015. This is Attachment 2 in your briefing book, and Dr. Joey Ballenger with the MARMAP Program through South Carolina DNR is going to walk us through this.

DR. BALLENGER: Thanks for having me here today. Once again, I'm Joey Ballenger from the South Carolina Department of Natural Resources. This is going to be a very similar presentation
to the one that Marcel Reichert has given the last couple of years to you guys. With that, I will go ahead and get started.

As a reminder, the Southeast Reef Fish Survey is composed of currently three separate programs, the MARMAP program, the SEAMAP South Atlantic Reef Fish Survey, and the Southeast Fishery-Independent Survey, with the MARMAP being established in 1972 and the other two programs established in 2009 and 2010, respectively. Each of these programs are using these primary research vessels you're seeing here on the right-hand side of the figure.

Today, I'm going to be talking about our three biological sampling monitoring gears that we conduct via the Southeast Reef Fish Survey, that being the chevron trap, the long bottom longline, and the short bottom longline. Most of this is review, and so I'm going to go through this pretty quickly, but, if you have any questions, feel free to ask me.

Once again, the chevron trap is deployed from the R/V Palmetto, the R/V Savannah, and the NOAA Vessel Pisces, and it is utilized by all three of the survey programs. This has been our workhorse monitoring gear, with consistent and standardized use since 1990. We're generally deploying it in depths up to approximately 110 meters deep, and we're targeting a soak time of approximately ninety minutes and baiting the traps with clupeids. In recent years, with the advent of the SEFIS Program, we've been attaching one to three video cameras on each trap, to get some additional video data for the development of additional indices and also to get information about habitat, trap behavior, et cetera.

Our second monitoring gear that I'm going to be covering today is our short bottom longline. This gear is deployed exclusively from the R/V Palmetto, and we're using this to target species like snowy grouper, jacks, tilefish, and speckled hind, and generally higher-relief habitats, near the continental shelf edge. Once again, we're targeting a soak time of approximately ninety minutes. This is a twenty-hook short bottom longline that was baited with whole squid.

Our final gear is our long bottom longline. This is our gear that we are deploying in our deeper depths of approximately 170 to 270 meters on mud-bottom habitat, or the so-called tilefish grounds. These habitats are generally found sixty to eighty nautical miles offshore of South Carolina and Georgia.

We're targeting a soak time of approximately ninety minutes, once again, with this gear, and this is a one-nautical-mile-long longline baited with 100 hooks, with each hook being baited with whole squid. The MARMAP program is the one utilizing this gear. We're deploying it off the R/V Lady Lisa, which you're seeing here in the bottom-left photo. Once again, our target species is golden tilefish.

Currently, we have a sampling universe for each of these gears that we can randomly select stations for sampling each year. For our chevron trap universe, we currently have about 4,000 sampling stations with known live bottom habitat, of which about 1,500 to 2,000 are randomly selected annually, ensuring that any of those that are randomly selected are at least 200 meters apart from any other selected station. Those are the red dots you're seeing here on the figure.

For our short bottom longline universe, we've got approximately 300 sampling stations with known live bottom habitat, of which we're selecting 100 to 150 annually, randomly, to be sampled. Those are your blue dots in the figure.

Finally, sort of a little bit different sampling strategy is our long bottom longline survey. Instead of having individual stations identified, here we have fifteen blocks of tilefish habitat, where we're targeting a minimum of two long bottom longline sets per block each year for this survey, and those are the black boxes that almost show up as dots in the future at this distance, for me at least.

Who is doing the sampling? For chevron traps, all three surveys are deploying chevron traps via their research vessels, but generally a splitting of the effort with the MARMAP and SEAMAP South Atlantic, targeting waters off of South Carolina and North Carolina, and the SEFIS Program is targeting sampling off of Georgia and Florida. For all other gears, only the MARMAP and SEAMAP program is doing all the sampling region-wide.

In regards to the data analysis, MARMAP and SEAMAP South Atlantic is responsible for all life history processing and analyses, while the SEFIS Program is responsible for video processing and analyses. We do have one combined database, and it's up to, I think, about two years ago. All that data is available via the seamap.org website, and that's updated annually.

In 2015, we deployed chevron traps on a little over 1,500 monitoring stations, short bottom longlines at 103 monitoring stations, and we deployed forty-five long bottom longlines. We also deployed some additional gears, totaling 460 additional gear collections, which includes things like CTD cast, water sample collections, rod and reel sampling for diet studies, and various other gears. The figure on the right is just showing the spatial distribution of who is doing what sampling and where and what type of sampling

Going into actually what we caught during 2015, this is where this presentation is slightly, very slightly, different from the one that's in the briefing book, just so I could increase the font size a little bit. Whereas the briefing book has the top twenty species, here it's just the top fifteen species. If you want to see the additional five species that dropped off, it's in the briefing book material.

Anyway, here is the list of the 2015 top fifteen species captured via to the SERFS Survey, with tomtate topping the list, followed by black sea bass and so forth. Of note, we caught 43,237 fish that were collected in 2015 and measured for length frequency analysis, and these top fifteen species represented about 97 percent of all fish collected and measured.

Also of note is that about half of these I would consider are generally of commercial and recreational importance, including things like black sea bass, vermilion snapper, gray triggerfish, red snapper, snowy grouper, and scamp. Somewhat absent from this list is gag and blueline tilefish. They have been on this list in previous years.

Of those samples, we collected additional life history samples from a number of species, as shown here. We took additional life history samples from 11,142 individual fish, representing forty-nine priority species, and, once again, here is the top fifteen species list. The top twenty is available in the briefing book. This is just showing the biggest players are black sea bass, vermilion snapper, red porgy, white grunt, and gray triggerfish, and now the red snapper is composing almost 10 percent of our total life history samples.

Of interest is that we're actually starting to see some lionfish showing up in our chevron trap sampling as well. It's ranking twenty-third on the list in 2015, with fourteen being captured via chevron traps, whereas, I think, prior to last year, we caught like less than ten in the history of the chevron trap survey.

Now I'm going to move forward and start talking about our relative abundance indices. This is an overview of our catch per unit effort. This is similar to what we've provided in previous years, but I'm providing relative abundance indices for the chevron trap survey, covering the time period of 1990 through 2015. The short bottom longline survey is covering the time period of 1996 through 2015, and the long bottom longline survey from 1996 to 2015 . We use species-specific depth ranges when developing our relative abundance indices, and our response, or catch per unit effort measure, is catch per trap hour. Remember that we're targeting a ninety-minute soak time for each of our gears.

In this presentation, we're using a delta-GLM standardized relative abundance. We're presenting a delta-GLM standardized relative abundance index, and keep in mind that this is what we presented in previous years, and the goal of this, for standardizing an index, is to try to account for annual vagaries with regards to sampling with respect to some key environmental or other variables. Here, we're trying to account for things like temperature, latitude, depth, and so forth. I will be presenting each of the indices normalized to a long-term average, and the error bars you'll be seeing in each of the figures represent the 95 percent confidence interval for that annual catch per unit effort.

There are some caveats associated with this. This is a summary overview and not an update of stock status. Much more information goes into a stock status update and stock assessment, and, further, the constraints, stratification units, and model for catch per unit effort may be different from those used in actual stock assessments. Further, many species have not been assessed or updated through the SEDAR process, and not all trends and analyses have been discussed in the SEDAR framework.

I am going to start going through my overview of selected species. Just to orient you to things, the species in blue are the species for which we do routine life history sampling for. The species in green, we currently do not have routine life history sampling for those.

Starting up, I have gray triggerfish, and I'm just going to sort of pull up these graphs, and I'm going to pause on them for a second and let you digest it and then move forward. Feel free to stop me at any point in time, but first off is gray triggerfish. You can see that here, and with several species, which gray triggerfish is one, we see that 1990 seems to be a bit of an anomalous year. This was actually brought up and discussed somewhat in the SEDAR 41 review workshop as well, and it may be because it's due to the impacts of Hurricane Hugo, which hit the core of our sampling region approximately nine months prior to sampling in 1990.

Here we have greater amberjack captured via the short bottom longline survey. There is a high degree of uncertainty with regards to our annual abundance of greater amberjack. Here is tomtate captured via our chevron trap survey, keeping in mind this was the most numerous species we caught in the survey in 2015, and it's been one of our top four or five species throughout the history of the survey.

Here is white grunt, another very commonly captured species in our chevron trap survey, showing the recent relative abundance trends. Next up is red snapper. As I said, this was, I think, our fifth or sixth most commonly caught priority species in 2015 and our ninth most common species captured in the survey overall in 2015.

Moving right ahead, here is vermilion snapper, another very common species captured in our survey. This is another species that seems to be that 1990 may be a bit of an anomalous point relative to some other years nearby. Here is the blueline tilefish relative abundance index, as sampled via our short bottom longline survey. Once again, there's a high degree of uncertainty about these annual estimates.

Here's the survey for golden tilefish, as observed using our long bottom longline sampling gear. Keep in mind that both the short bottom longline and the long bottom longline surveys were halted in 2012, due to some funding constraints, and it was not until 2015 that we actually resumed the long bottom longline survey for golden tilefish.

Here's the relative abundance of bank sea bass, as observed using the chevron trap. Here's the relative abundance of black sea bass, as seen in our chevron trap survey. Here's the relative abundance of gag, as captured via our chevron trap survey. Once again, 1990 seemed to be a bit of an anomalous year. Here is red grouper and scamp. This is snowy grouper, as observed via our short bottom longline survey. There's a fair degree of uncertainty about our short bottom longline survey.

Here is knobbed porgy. Once again, 1990 seemed to be a bit of anomalous year for knobbed porgy. Here is red porgy. Here's what we call Stenotomus sp. It's generally scup and longspine porgy combined, because we can't determine -- They are hard to tell apart. That's it.

As far as the 2016 reef fish monitoring, our sampling season started on May 3, and we're scheduled to conclude it on October 14. As far as activities, the Southeast Reef Fish Survey will be using three monitoring vessels, the R/V Palmetto, R/V Savannah, and the NOAA Vessel Pisces. Once again, all three of those vessels will be deploying chevron traps, two video cameras, and a CTD cast will be associated with each set of chevron traps deployed.

In addition, we'll be conducting an additional hook and line sampling for diet studies, collecting DNA samples for a variety of species, including additional information on number of species. In addition, the MARMAP and SEAMAP South Atlantic Programs will continue to do the short bottom longline sampling and long bottom longline sampling, targeting the species like snowy grouper, blueline tilefish, and golden tilefish.

Just to mention, as most of you guys are probably aware, the R/V Palmetto went through an extensive overhaul during the fall of 2015, which is actually still ongoing. Thus far, because of that, the MARMAP Program has actually been utilizing a NOAA Sanctuary Vessel, the NOAA Small Research Vessel Sand Tiger, for sampling during the month of June, just so it wouldn't impact our survey overall. With that, I will take any questions.

DR. DUVAL: Are there questions for Joey? I see Zack and then Charlie and then Jack.

MR. BOWEN: Thank you, Madam Chair. Joey, this was raised in some workshops with SEDAR 41, and thank you for the presentation, by the way. It was excellent. When you all are videoing during the chevron trap process, and I saw the pictures here in the presentation, but are the video -- Do you have any video cameras pointing straight up or are they just out? I mean I saw the angles, but --

DR. BALLENGER: No, we don't have any pointed up. They are generally pointing out, looking at the horizon, and so it just depends on the field of view of the actual individual video cameras.

MR. BOWEN: Would that mess up the methodology if we pointed one up, or if you all pointed one up?

DR. BALLENGER: It would be a different gear or a different survey at that point in time, at least a change in the orientation of the way the video camera is pointing, and so it would be a change to the survey. We would have to try to see if there was an effect of that or not.

MR. BOWEN: Okay, and one last point, just for the record, is I am voicing concern about your drastic drop in CPUE for sea bass. That's very concerning, but thank you for your presentation.

MR. PHILLIPS: Thank you, Joey. That was informative. A couple of details I'm curious about. You said something about species-specific depths, and I know it surprises you, but red snapper, for instance, but what is the mean depth of the traps that you're fishing?

DR. BALLENGER: Unfortunately, I do not have that in front of me. We do generally, in an actual full trends report, we put together a table showing the mean depth and the minimum and maximum depth sampled for each gear that are included. What I mean by the species-specific depth range is basically considering any gear that we have ever used to sample. We look at sort of the minimum depth we ever caught a given species and the maximum depth we ever caught that given species, and we're only including those, just so we aren't including a bunch of zeroes from depths where we wouldn't expect to catch that species.

MR. PHILLIPS: A follow-up, because obviously we hear from fishermen -- I had a guy tell me that he was trying to catch snowy grouper in 440 feet not long ago, and the first thing he caught was a thirty-pound sow, and I also noted that, of your rod-and-reel fish, the percentage of fish for red snapper was over 2 percent, and everything else for rod-and-reel fish, it was like 1 percent, and so is there a difference in the size of the rod-and-reel fish versus the chevron trap, or do you all just run them all together? I am trying to get a feel on how this works and where the center of the effort for the traps are and things like that.

DR. BALLENGER: I had the figure up there that showed where we did our sampling this past year. Like I said, I will go back to look at the report, but, generally, our mean depth, if I remember correctly, for the sampling of the chevron trap is between about thirty-five and forty meters deep. It's going out to 100 meters and as shallow as fifteen to twenty meters in a given year.

For the rod and reel sampling, that is generally conducted in the similar areas of where we have chevron trap stations already identified as well, and so it's not like -- I don't have those numbers and I don't have those figures, but I wouldn't expect there to be a whole lot of difference between the mean depths and the areas sampled via rod and reels versus chevron traps. It's just not as
intensive of a sampling, because we're generally doing that in the evenings, while we are waiting for daylight the next morning or something like that.

MR. COX: Joey, on page 30, if you will go to that, can you tell me what species that is?
DR. BALLENGER: That's a red grouper.
MR. COX: I was just going to say that that's a strong correlation between what we're seeing on the commercial ACL and what you guys are seeing on the trap, and I was going to ask you, are you guys working some of these traps a little bit further north, to see if there's any distribution change with the sea temperature changing and things like that? Are you all moving the traps from where you've traditionally set them?

DR. BALLENGER: We are definitely doing a lot more sampling off of Onslow Bay and Raleigh Bay since 2010, with the advent of the SEFIS Program, than we did historically. I would say our sampling in the more northern, up to Cape Hatteras, is more extensive now than say prior to 2010. We had sampling in that area prior to that, but it was just not to the magnitude that we have currently, and, to that point, here is -- If you look at the figure on the right, all those blue dots and red dots represent places where we had deployed a chevron trap, for those 1,500 or so that we deployed in 2015, and so we had them going up to just south of Cape Hatteras in 2015. The same was true in 2014 and so forth. I don't know if we have any plans in the near future to extend past Cape Hatteras.

MS. BECKWITH: Are we going to eventually be able to get lengths off of those videos of the fish or is that sort of just an abundance index?

DR. BALLENGER: That would be a question more for the Southeast Fishery Independent Survey and the Southeast Fisheries Science Center. Currently, we do not have the ability to get lengths from those surveys, but I know there's a lot of interest to do that.

DR. PONWITH: To that point, the big challenge is, when we were using still cameras, you could put dual cameras in and use that to get stereoscopic images and use that to range the length. I know that there have been cases where they've used laser in the past, where you've put a laser and ranged the laser reflectance off the fish, and so work like that has been done. In fact, some of that has been done by us. I can check with the team to see what options exist with a video system like we have that's not in stereo.

DR. CRABTREE: Joey, could you put it on the red snapper CPUE? Myra, am I remembering right that we closed red snapper in January of 2010? I think that is right, and, if I reading this right, Joey, that's exactly when that remarkable upward trend in CPUE begins, right? In 2010 is when it starts up?

DR. BALLENGER: Yes, and I mean that's when the steepest incline seems to be increasing, is from 2010 onward.

MR. BROWN: Joey, I see a snapshot, I guess from the trap, for an individual picture, showing three red snapper in the picture, and you said you got the video. Who reads the video and how long does it take to read the video?

DR. BALLENGER: As I mentioned, the Southeast Fishery-Independent Survey staff are responsible for all the video reading. It is a much more labor-intensive process, but maybe Bonnie wants to speak to that.

DR. PONWITH: I don't have the numbers off the top of my head. He's right that we do read the video at the Science Center, and it is laborious. It's a really big part of the job.

DR. DUVAL: Did you have a follow-up, Mark?
MR. BROWN: No, I'm just trying to wrap my brain around who is going to actually be reviewing these videos and establishing what they see on the video and making some sort of record of it.

DR. DUVAL: These are trained folks. I will let Bonnie speak to that.
DR. PONWITH: Yes, that's correct. The video comes off the ship and comes to the Southeast Fisheries Science Center, and our Science Center team are the ones reviewing the video, and so they are experienced at this. When they originally set up the program, they collaborated heavily with the scientists in the Gulf of Mexico, who have been running a video trap survey for a number of years as well, and so that's the answer, is it's being read by scientists at the Science Center. Again, the part that I don't know off the top of my head is how long it takes, but it is -- I will say it is a laborious process.

MR. BOYLES: Marcel just reached down and indicated to me that there's part of a QA/QC that goes on as well. MARMAP and SEAMAP staff are doing some assistance with 500 to 1,000 videos a year as well.

DR. BALLENGER: I was just basically to say what Robert just said. The Southeast FisheryIndependent Survey is responsible for the video index. They do subcontract us out to read a portion of those, and there is extensive training of personnel, the quality QA/QC, to make sure, the standardized video clips, that they're getting the same reads that other folks have and so forth. There is a lot of standardization as far as between independent readers of who is reading the individual videos.

MR. BROWN: So what is the timeframe of when you receive the video? What is the delay or the timeframe by the time they're read? I mean is there any kind of indication on how long it takes before a video is presented to the Southeast Science Center and it's read or looked at?

DR. PONWITH: The videos are read within the same year that the data are collected, and so if they finish collecting the data in October, those videos are read within the same year that they're collected. It's not like they're -- These data are being used in stock assessments, and so the turnaround on them -- We're working on them as quickly as we can, and so it's not like we're accumulating a backlog of these. They're read in the same year that we collect them.

DR. DUVAL: Joey, I just had one quick question. For the hook and line sampling that you all do, you said you're doing this at night while you're waiting to set traps for the next day and everything. Is that opportunistic? Is there any -- Do you have sort of standard hook and line spots or certain particular species? Is it just if the conditions allow for that?

DR. BALLENGER: It's generally opportunistic in nature, as far as what terminal year is being used and what areas are being sampled. It depends on overall increasing efficiency of the survey. Back in 2009, I believe it was, there was a big fishery-independent survey review. At that time, we were pursuing looking at using a hook and line standardized survey to develop a relative abundance index from that, and the general conclusion from that workshop is that, because of various skill of fishermen and so forth, that getting a standardized hook and line index would be difficult, given the limited funding constraints that we had at that time, and so that continued to happen.

DR. REICHERT: If you allow me, as a clarification, the hook and line survey, a lot of them are related with collecting information relative to stock identification, the additional DNA samples, diet studies, and so those specific projects, we do set up a sampling program, where we know we sample all depth ranges and all latitudinal ranges.

In those instances, the rod and reel collections are following a standard protocol. In other instances, it's simply to provide some additional life history information. An effort that we did this year was sampling hook and line during the winter period to get some life history information on species that spawn in the wintertime that we usually don't catch in our standard sampling period from May through the end of September, and so all those rod-and-reel collections are part of that list that Joey showed, just as a clarification for why we are conducting these sometimes opportunistic collections.

DR. DUVAL: When you say standardized, like so the ones that are being collected for diet studies you said are standardized, so that they're being captured throughout a depth range, and what is that standardization?

DR. REICHERT: It depends on that -- I don't have the numbers in front of me, but we did that for black sea bass, where we had, I believe, per size class, ten individuals per depth range, per latitudinal range, and so we have sufficient samples throughout the sampling area to conduct a thorough diet study, but I don't have those exact numbers offhand, but that's just an example of a standardization of the sampling efforts.

Sometimes it takes us two years to collect all the samples from all the depth ranges, because, in a lot of instances, and that's why we use hook and line, because, if we use fish from the traps, a lot of times the fish gorge themselves on bait, and it's very difficult to identify the true diet items, and so that's why we use hook and line, but, more often than not, those fish regurgitate their prey, and so that's why it takes a lot of samples to get a thorough analysis done.

DR. DUVAL: Thank you, Marcel. Doug and Mark and then we're wrapping this up.
MR. HAYMANS: A quick clarifying question to Mark's point about the video. Does the CPUE include video-sampled fish or just what went in the trap?

DR. BALLENGER: Currently, this shows what we captured in the traps. This does not include any video data.

MR. HAYMANS: That's what I thought, and so, to Mark's point, do we have any idea how long before we're going to see the video data updated into a CPUE? Regardless of how long it takes to read it, do we have an idea of when we're going to see it?

DR. BALLENGER: I don't have an answer to that question. I could pass that over to Bonnie, I guess.

DR. PONWITH: Now I understand the question. I thought you were talking operationally and how long does it take to review the video, and so your question is when will you get to see CPUE data for the video trap?

MR. HAYMANS: That's my question.
DR. PONWITH: Like for the video, and so we've talked about this in the past, and here's the deal. We are concerned about using raw data as a leading indicator of the status of the stocks, because the raw data aren't a substitute for an actual processed index of abundance, and so that's a caution. The real question is where do you want to use your effort on this? One of the things that we've talked about, in conjunction with this, is the notion of doing some sort of an annual specification for these stocks, and we've talked about this in the committee and I think also in full council.

That is if the council wishes to shift from holding operational stock assessments once every X number of years and shift more toward updating those indices of abundance on an annual basis, we can talk about that. What that costs is the amount of hands we have at the Center that are capable of doing those analyses are limited, and so it makes it hard to do both.

To be able to keep up with prepping the data and getting those data conditioned for use and then actually pumped into an annual index, those are the same people that you need free to be able to get data ready for a stock assessment.

If there is an interest, again, in doing annual specifications, updating these indices of abundance, we can talk about doing that, but it comes with tradeoffs in throughput for the actual assessments themselves. Other councils, other Science Centers, make significant investments in updating these indices of abundance and doing annual specifications. It's a little bit different for them, because the time series they're working on are stable. They've existed for decades, and it makes it much, much easier to automate those. This is something we're willing to have a conversation with you about. My big concern is I do want to be careful about looking at data that have not been adequately processed and making strong inferences about them.

DR. DUVAL: Thank you, Bonnie. A quick follow-up, Doug, and then Mark and then that's the last question.

MR. HAYMANS: Thank you. It's duly noted, your caution, because, just as Roy pointed out, red snapper is climbing, when the assessment says opposite, and black sea bass is the opposite, when the assessment says they're not, but there are many, many, many, many people who would much rather see us put a whole lot of effort into indices of abundance than overstimulated models that we don't have enough data to drive, and so maybe we really do need to have a discussion about that and how much effort we put into this type of work versus the assessments.

DR. DUVAL: To that point, Roy, and then Mark.
DR. CRABTREE: Just, from my perspective, I would like to have that conversation, because I would like to see us put more emphasis on some of these abundance indices from the surveys that we have, and if that means we give up some assessments, I would be willing to do it, because I know I look at this, and I can understand this.

It seems pretty clear to me, and we're getting into some really data-poor model situations, and red snapper is an example, that I have a lot less comfort with than something like a CPUE series, and so, from my perspective, if there is a way that we could get more updates and more reliable use of CPUE indices, and if there's a way we can pull it into actually setting specifications, including catch limits, I would be willing to explore that, even at the risk of not having as many assessments.

DR. DUVAL: We have noted that as a potential future agenda item, because that's going to be a pretty big conversation, I think. Mark, the last word.

MR. BROWN: I will be brief. Joey, do you know if there was any kind of a video done on the mortality for sea bass, because I saw the Silver Crescent doing some sort of study out there with a big net and putting fish down to a certain depth there and studying. I talked to them on the radio, and was there video of that done?

DR. BALLENGER: Yes, and so that was a graduate student that was housed out of the South Carolina Department of Natural Resources and working with us. He was doing a bycatch mortality study and looking at black sea bass and several other species, like red snapper and so forth. That data has not been necessarily finalized as of yet. It's analyzed, but it hasn't been written up into a manuscript and so forth, and so that should be available shortly, but that was a graduate student for a couple of years that was using this -- It was basically to look at delayed mortality, because, most of the time when we're doing bycatch mortality studies, you look at the disposition of the fish at the surface and then try to infer whether that fish is going to die later on or not, and so what she was doing was trying to hold them in a net structure for a couple of hours and using videos to look at their behavior over the next couple or three-hour period.

MR. BROWN: Okay, and so that data will be important, especially from what I'm seeing with the black sea bass with the graph and everything, what we're discussing now.

DR. DUVAL: I will just note that there are other similar types of hook mortality and barotrauma studies that are occurring up and down the coast that some of our SSC members are involved with. Thank you, Joey, very much for a great presentation and for your patience with all of our questions. It's much appreciated.

DR. BALLENGER: Thanks for having me, and just, once again, I wanted to acknowledge Wally Bubley and Tracey Smart and some other staff at SC DNR who did the bulk of this work in putting this report together this year, and so thanks.

DR. DUVAL: Now we're going to welcome Frank Helies with the Gulf and South Atlantic Fisheries Foundation. Frank is going to give us two presentations. These are Attachments 3 and 4 in your briefing book, and the first one deals with catch and discards within the commercial snapper grouper vertical hook and line sector. I believe the Foundation has had several grants that
have looked at this. Then the second presentation is going to be with regards to a cooperative bottom longline survey to augment fishery-independent reef fish data collection, and so welcome, Frank. We are going to switch it up, and Frank is going to do the presentation on the longline research first, which, again, is Attachment 4 in your briefing book.

MR. HELIES: Thank you, Michelle. I think this will be a good follow-up to what you just heard from Joey, particularly pertaining to the long bottom longline work. Real quick, I'm the program director at the Gulf and South Atlantic Fisheries Foundation. We've been around for a long time, doing cooperative research with the commercial fishing industry from Texas to Virginia. I want to recognize my Board President, who made it to the meeting, and I thank him for all the support he's given me over the last seven years.

A little background. We submitted this proposal a few times, starting about three-and-a-half years ago. Like Joey mentioned, MARMAP got their funding cut on the bottom longline survey. This was right around the time where blueline tile catches were starting to accelerate in North Carolina and Virginia, and so we all got together and came up with the idea of trying to get some funds to do a bottom longline survey for deepwater species, primarily golden tilefish.

We brought Michelle onboard, and she asked if we could do some blueline work too, and we added that in there. Then it was almost a perfect storm. We received the S-K Funds, and some Marcel got some money back to do the bottom longline, and then the Science Center found some money to do blueline work, and so where you have no money for a bunch of years, all of a sudden it comes in waves, at times, but we were able to get this off the ground. We got the funds back in September, and I wasn't able to start the sampling until May, because of our marine mammal issue in the South Atlantic. I couldn't get a permit to do the sampling.

These are the main objectives of the project. Through a science and industry-based collaborative research program, establish the utility of the bottom longline survey for deepwater species in the South Atlantic and work up life history for those collected species.

When we originally got involved in it, we were going to utilize the MARMAP standard sampling protocol so we could augment their database, since we were missing a bunch of years of data there. We were going to randomly sample deepwater habitat at varying depths. We weren't going to focus on just certain depths.

We broke it into latitudinal bands, and so we had seven latitudinal bands. The majority of them are south of South Carolina. The latitudes in the middle there that are missing are regularly sampled by MARMAP, and so we tried to hit the areas that aren't, and the main point is to utilize industry vessels. We have found, over the years, that it's more cost-effective to use industry than having to charter a research vessel. This is just some of the areas that we randomly selected out of.

We had a planning meeting and then we were able to deploy on our first trip out of Florida, and we realized that we were going to run into some challenges with our original design. First and foremost, the MARMAP bottom longline gear that Joey described in his previous presentation is deployed independently in one-mile stretches. I also found that they don't deploy in bottom currents greater than two-and-a-half knots.

Where we're missing most of the data is off of Florida, in deepwater portions of Florida, where there is screaming current out there. Through consultations with industry, we decided that trying to deploy the one-mile sections, there is a high probability of losing that gear, and so we had to make some changes to the design.

Anecdotally, the folks up in North Carolina tend to target golden tilefish with bandit gear, and I couldn't find any boats up there that had cable that was capable of deploying the bottom longline gear for the golden tilefish, and so we were going to focus on blueline off of North Carolina.

We modified the design to incorporate a four-mile stretch. Each mile had a different gear configuration. We were going to continue to utilize the MARMAP sampling protocols with randomly-sampled bottom and, of course, all the life history information would continue to be utilized, but we changed it from, instead of augmenting the MARMAP samples, we were going to do a gear comparison.

This is a picture of the two different types of gear used off of Florida. The MARMAP gear is on the right-hand side. You can see the main difference is in the length of the leader. They also use a lower pound test, only 200-pound test. On the left is the captain's choice, or the alternative gear choice, and that's about a six-foot leader and 400-pound test.

We continued to use the MARMAP whole squid, but the captain's choice was cut bait. This was another quite large difference. The MARMAP hooks are just crimped on to the leader. They don't have a swivel. The captain's choice has an added swivel attached to the hook. This is a short video of the guys working, if it will work. It's always a problem with PowerPoint.

Some of the information that we recorded is full description to the gear, all the sampling site information, and length frequency for the fish that are caught. The life history information, I mentioned earlier that we received an LOA from the Regional Office to do this work. We could retain all of the fish. All the sharks we released. The workup included hard parts, gonads, fin clips, and all of the harvested fish were donated to a food bank.

These are preliminary results of our first three trips. We have made four trips, to date. We just finished a trip out of North Carolina, but I hadn't received the data prior to getting this PowerPoint in, and so we made three trips off of Florida. We were catching lots of fish, and it's interesting that both gear types are catching fish, almost equally as well, but we're finding that there's quite a bit of gear failure on the MARMAP gear. That lower-pound test tends to break. It will break off at the hook, where it's crimped, often. The swivel allows the fish to be retrieved without popping off the hook, and so it's almost a case of retrievability versus catchability.

Ultimately, we want to see a long-term bottom longline, to find the money to do it. Hopefully the results of this project, we can show the industry is capable of getting it done and we can all get together in a cooperative effort and design this survey. We see we can cross-calibrate some of the information, and, like I said, economically feasible is really important in this day and age, where it's tough to find funding.

We did see a lot of sharks. It's very sharky out there, and so don't let anybody convince you otherwise. There's a lot of people to thank, the Freeman Family, I have port samplers that have
been helping with the workup, my board, Michelle and Ben for their support. I will take any questions real quick, if you guys have them.

DR. DUVAL: Are there any questions for Frank about this work? Obviously it's still ongoing, and I guess the grant runs until September, through the end of September, or something like that?

MR. HELIES: Yes, we were afforded thirty-eight sea days. The guys have stepped up, and they're only charging us for days that they're actually fishing, and so they're comping us the travel days, which is really nice. We get extra days out of that, but it runs through September, and we hope to get the sampling knocked out in the next month and a half, at the latest.

DR. DUVAL: I will just note that the trip out of North Carolina that occurred last week, I think 164 tilefish were sampled. Obviously Frank didn't have time to include that in his presentation, but that was just the information that I got from the captain, and so good stuff. The other thing I will note is John Carmichael and Marcel and myself and Nate Batchelor and Todd Kellison with the Science Center, along with some of the fishermen who participated, who are participating in this grant, got together as part of a cooperative deepwater survey design workshop, and the proceedings from that workshop were completed late last year and are now a NOAA Technical Memorandum. I know we've spoken about this a couple of times in the past, at previous council meetings, and so I just wanted to make sure that folks knew that, and, for anyone who is interested, John or Todd Kellison could forward you that NOAA Technical Memorandum.

MR. COX: Frank, what is the cost of -- What does it cost the Foundation to do a longline survey, per day?

MR. HELIES: The guys are being fairly substantially reimbursed for their work. It was only a $\$ 285,000$ grant for thirty-eight days, and that included our overhead. To move it forward, obviously there wouldn't be start-up costs. We have all these things worked out now. The first trip was basically figuring out what's going to work, and so I think you can do it substantially cheaper, moving forward, and negotiate the rate with the guys.

Just one day with the Lady Lisa is a substantial amount of money, and it's mostly just in the warm weather months that they do that work, and so you're a proponent of cooperative research. You get that we can utilize industry vessels to do this work, and I think it's substantially cheaper. Also, the folks at SC DNR, Wally and Tracy and Marcel and Joey, have been awesome. They've gone above and beyond what they were even supposed to do on this project, and I can't thank them enough for their help.

DR. DUVAL: It takes a village. I guess one of the other things I will just note from the workshop proceedings was that there was consensus about sort of a combined research vessel cooperative vessels of opportunity, utilizing industry vessels as a feasible way to move forward, and so there was some sampling done in the fall for specific to blueline tilefish that Bonnie was able to find some money for. That has contributed to the stock ID workshop that's going to be occurring at the end of June. I think the challenge is, even with a cooperative fishery-independent survey, is it still requires resources to fund it, and so that's the key challenge for us in moving forward. If there are no other questions for Frank on this presentation, I will let him move into his other presentation, and that's Attachment 3 in your briefing book.

MR. HELIES: I have an assistant for this one. I brought in the brains, and so he's going to do most of the technical talk after I go through just basically updating you guys on this project. This project is kind of near and dear to my heart. This is where I got my start in fisheries science, way back in 2007. I was an observer on the original iteration of this project, and I kind of used that experience to get my current role, but we were fortunate enough to get some funds to continue the work.

We had a couple of year lag in there, where we weren't able to get funding to do it, and so the data analysis is going to miss a couple of years, but I think we have some really interesting information to provide you guys. This will be our third talk to you all about this program.

We got funds, back in 2007, the characterize the catch and discards in the South Atlantic bandit reel snapper grouper fishery, and we've been doing it on and off here since then. There is some folks in the room that I have been on their boats and continue to use them. Jack, we really appreciate your support, and Kenny is in the back. I am probably missing -- Chris's boats we use all the time, but it really wouldn't be possible -- Because this is a completely voluntary program, it wouldn't be possible if industry didn't provide the support and their vessels for us to collect this data on.

Vessel participation is voluntary, and so it's not technically non-random, but we have a fairly large pool of boats that we will randomly select out of. Our observers underwent detailed training prior to their deployment. We conduct that ourselves, and they are also NMFS certified. They were asked to fish under normal conditions, and the data collection is ongoing. To date, we have made ninety-six trips in almost 600 sea days.

We have hit ports from Ponce Inlet all the way up to Morehead City. I talked to Myra, and, as of December 15, there are about 500 vessels with unlimited permits, and we've sampled twenty-eight of those. Scott did a little back-of-the-envelope work, and we think we have sampled maybe 7 to 14 percent of the fishery at this time. I am going to bring up Dr. Scott Raborn. He works for LGL Research Associates in Texas, and he's going to talk about some of the finer details.

DR. RABORN: Thank you, Frank. There is a lot we can do with this dataset, and the analyses that I'm going to present today are still preliminary. We still have I don't know how many observer trips left to perform, but there are several left. The dataset is not complete yet, and I think we expect to finish that this year, and so we will finish those by September and then finalize this data analysis.

I just chose a smattering of results to show you, and I would appreciate any feedback on what you would like to see in terms of results and questions that might be answered by this dataset. For now, objectives are, to date, to show an accurate way to get at effort for this fishery. Effort is always one of the key problems with any fishery, accurately estimating effort. With the bandit reel, it's no exception, and so I will go over that. It seems, in the past, people wanted to see effort by depth. I will show that quickly, and then give a quick characterization of the catch and the discards, in terms of catch per unit effort.

Effort for this fishery is difficult, because, at any given set in the location, you can have a number of different reels being fished, a number of different hooks per reel, and so just estimating the time at each station doesn't really get at effort. It can vary quite a bit, and so we're going to talk about
effort in terms of hook hours, and I will report things in units of ten-hook hours. That was just the nearest multiple of ten, and so that would be the equivalent of one hook fished for ten hours or five hooks fished for two hours, and you get it.

We have to use this algorithm. It's really just the number of hooks per reel times the number of reels times the amount of fishing time is the hook hours, but you never know the number of hooks per reel. It varies across reels, and the observer can't keep up with it, and so we have to estimate the number of hooks per reel, and we can get a fairly good estimate of hook hours. On average, at a given site, station, there's about four hook hours. There's an average of three reels that are fished. An average fishing time at a station is 0.6 hours, and all that means is about two hooks per reel, but, like I said, it varies.

This is a plot of the actual hook hours at each site versus the fishing time at each station, and you can see there's quite a bit of variability. For instance, a fishing time of four hours, the hook hours can range from ten to fifty hook hours, which can throw your estimates of catch per unit effort off by quite a bit if you were just using a fishing time at a station. We have a way to get at accurately measuring effort, but one of the goals of this study is to expand that to the entire fleet, and I will talk a little bit about that later.

For now, I will get into Objective 2. This is effort by water depth by statistical zone. I'm not sure if you can read the slides, but the top is Statistical Zone 29. Then below that is 30 and 31 and then starting with 32, 33, and 34. On average, Statistical Zones 31 and 32 had deeper average fishing depths. I think you have access to this PowerPoint, and you can look at these data at your leisure.

Objective 3 is total catch by species, and hook hours were tabulated for each station within a trip number, and then the catch per unit effort is just the individuals per ten hook hours, as I said, and, for this presentation, I only did it for selected species, and catch per unit effort has to be modeled, and I will explain why in just a second. The model I used was a negative binomial regression, but this is a general species list for what the catches were.

We saw a total of 142 species, and the most common was red porgy. There were 3,056 discards of red porgy and 5,952 kept. That includes kept for bait. For the catch and discards modeling, we were asked to focus on vermilion snapper, red snapper, black sea bass, and gag grouper. Those are highlighted in yellow.

Frank asked me to look at the total catch composition and how that's changed over the years, and this is a proportion by species, and so you can see how each species -- What proportion of the catch, the total catch, each species represents across years, but I should caution you that these are not modeled. These are just the arithmetic means, which means that it's not balanced, and so, for instance, 2008 may have more data collected in the summer and 2009 may have more data collected in the winter, and so you may not be comparing apples to apples across years here. This is just the first approximation, and it's standardizing this and balancing this data and looking at this multivariate response will be one of the objectives of the final report.

You can do this for discarded catch as well. In terms of the catch and discard modeling, dependent variables were kept catch, and that included bait, and discarded catch. Independent variables were just the categorical variables of year, trimester, and statistical zone. There are some other modeling details there.

With this table, I would like to talk about the reason why we have to model these data. This is the number of stations, the number of data points, going into this statistical model that I had to use, and this is a matrix of all the levels of all the categorical variables. On the far left, you have year and then trimester in the second column, and then across the top row is statistical zone, and you will see that a lot of these combinations of levels are missing and that the numbers are not the same for the rest of them.

If all of these cells had numbers in them and they were all the same number, then I would more or less be out of a job. You wouldn't need modeling. You would just look at the arithmetic means, but if you just look at the arithmetic means without modeling these data, you can get a biased vies of things, and so if you were trying to look at the pattern across statistical zone, just by averaging across all years and trimesters, the year 2015 would weigh in more heavily than other years with respect to Statistical Zones 28 and 29, because there is no data there. The goal of running this matrix through a model is to try and balance this matrix so that you get unbiased estimates of each effect.

These missing cells and the unbalanced nature of this dataset, you will notice that 2012 and 2013 are missing. That results in a lot of variability and uncertainty in the output, and this is for vermilion snapper. This is the number of individuals caught per ten hook hours. The dark bars are discarded catch, and the light bars are kept catch. The prediction intervals are quite wide. These are 95 percent prediction intervals.

On the top-left graph is the statistical zone, and then to the right is the year, and the bottom is trimester. Like I said, these results are preliminary. We can tighten these confidence intervals up a good bit, I think, by reconfiguring how we -- Rather than using year, combine years and try and reduce some of these missing cells in this matrix, but, at any rate, I think we can come up with a meaningful estimate across some of these effects.

It looks like, for vermilion snapper, you see greater catches in Statistical Zone 30. Then it looks like 2016 had greater kept catch of vermilion snapper, but 2016 only includes the first trimester. For gag grouper, it's greater catches in Statistical Zone 31. It looks, across the dataset, that you have lower numbers of kept catch for gag from 2007 to 2015, although this model is a little suspect. It wasn't able to form an estimate for 2010, 2014, or 2016.

Across trimester, you see lower numbers of gag caught for kept catch in Trimester 1 and greater numbers in Trimester 2. That's probably a regulatory thing. I would also like to, rather than use trimester, which is just an arbitrary season demarcation, come up with something that's more meaningful, something that coincides with the regulations or something that's more biologically meaningful, but I will be working with Frank on that.

For red snapper, it was difficult to get at kept catch, because I don't think any was allowed after 2011 in the dataset, and so it caused the kept estimates to be extremely uncertain, so much so that you couldn't even graph them and see these discarded catch, but you can see the discarded catch declines as you increase in statistical zone, and then you see greater discards in Trimester 3. Black sea bass, this is a really poor model, and the confidence intervals are too wide to really draw any inference, and so I won't speak to that any more.

Our next step, obviously we need to refine the catch and discard models. We'll be doing that in the coming months. We need to somehow get an index of effort, in terms of hook hours, that we can get off of the trip tickets, and so, if somehow we can have an index that let's us estimate the number of hook hours, just based on the trip ticket information, that would be useful. Then we can take the total fisheries hook hours estimated for each temporal and spatial strata and multiply it by the catch and discard estimates from our other models and theoretically estimate the number of discards for the entire fishery. That's something Frank and I will be working towards by the end of September.

Toward that end, I was looking at how you might be able to estimate hook hours for a trip, and I know that the total fishing time at a station -- I showed you hook hours versus total fishing time at a station and how variable that was, but, when you add all those stations up for a given trip, the areas cancel each other out, and it turns out that the total trip length is not a bad index of total hook hours for the trip, and so, in these graphs, on the top left, are where -- First of all, on the Y-axis, it's total hook hours for the trip. The X-axis is trip length, in days, and then each of these panels is separated by the statistical zones that were fished.

It's too small to see, because I couldn't figure out how to get it to increase the label sizes, but the top left is Statistical Zones 29 and 30, and so these are trips where people fished in those two zones. Then, to the right, is Statistical Zones $30 / 31$, then $31 / 32,32 / 33$, and then $33 / 34$. As you increase the trip length, the number of hook hours increases, and there's an interesting pattern that I discovered here.

First of all, the longer the trip, the more hook hours, and so that works until you get to a trip length of about seven, but then, if the trip lasts eight days, for some reason the hook hours drops off. I was talking to Frank about that, and he said, well, sometimes -- An average trip is about seven days, and a lot of times people fish for seven days and then they come back that night, but if they stay an extra night and the trip is technically eight days, they will make a few sets in the morning and then come on in, and so they're not getting full day of fishing, and so, if the trip is eight days, the effort drops off, and you have to account for that if you're going to use this as an index of effort.

You can get the trip length from the trip ticket, and so we're hopeful that this will be an index that will help us expand our effort estimations to the entire fleet. If you have any questions or if you have any feedback on what you would like to see, in terms of analyses and results, I would be happy to take that at this time.

DR. DUVAL: Questions or comments for Scott and Frank on this study and additional analyses that folks might want to see?

MR. HARTIG: I know we've talked in the past, Frank, about this work, and I mean my interest is -- Have you taken this and compared it to what's reported from the 20 percent of the logbooks? Have you looked at the differences in the number of fish discarded? Like red porgy is your number one discard. In the logbooks, I don't think it is, and so some way to get at how accurate the logbooks are, based on your information, would be really critical for us. If you could figure out how to do that, that would be a really good thing to know.

MR. HELIES: We haven't looked at that, but if we can get some of that logbook trip ticket data that Scott mentioned that we would like to see, so we can kind of do some of those comparisons, I think we could probably do that.

DR. RABORN: Yes, that was an overarching reason for this latest funding cycle, was to actually do that, but we actually have to have that data to fulfill the objective of the study, because we don't have it yet.

MR. HELIES: Ben, those discard logbooks is just 20 percent of the fleet, right? How accurate do you think they are?

MR. HARTIG: They're not anymore, no.
DR. DUVAL: There has been -- During various SEDARs, there's been an approach that the commercial indices working group has had to take, where they're removing the discard reports from vessels that have like only recorded zeroes and they've had less than I think five reported trips in a year or something like that.

I mean the numbers that I'm seeing right here might be off by a little bit, but, in order to I guess eliminate the issue of, quite frankly, non-reporting on the discard logbook, there's a method that can be found in some of the working papers from the recent assessments. I think if you look back even to like just this last couple of assessments that we've gone through, through the benchmarks, there's generally a working paper that addresses commercial discards in a particular fishery that might be helpful in that regard. I would imagine you would need to request logbook records probably from the Science Center to do that, and get an authorization from your participants to look at their logbook records. Are there other questions or comments for Frank or Scott?

I would like to thank both of them for coming up here and providing this information. I think anytime that we can work with our stakeholders, commercial or recreational or otherwise, to try to advance the state of the science and collect better information, the better off we all are, and so I don't know if you all are going to be around here for the rest of the day, but some council members might have additional input afterwards that sort of strikes them.

MR. HELIES: Thank you very much, Michelle. Once again, thank you to the industry and everybody who participates in this. The last two presentations I gave just demonstrate the value of cooperative research and utilizing that on-sea knowledge. On a side note, I have really thoroughly enjoyed working with the council staff and the agency over the last seven-plus years, and thank you for allowing me to do that.

DR. DUVAL: Thank you, Frank. We appreciate it. I will tell you what we're going to do. We're going to go ahead and take a little fifteen-minute break here. Please come back at 4:00, and we will jump into the Snapper Grouper Advisory Panel Report, which will be given by Kenny Fex, our Snapper Grouper Advisory Panel Chair, and then we will move on to the SSC Report, and so be back in fifteen. Thank you.

DR. DUVAL: All right, everybody. Thank you, Kenny, for being here. Kenny is sitting down at this end of the table, next to Zack, and, again, this is Attachment 5 in your briefing book, and I
believe Kenny is going to be here through tomorrow, and so Kenny is going to run through the report, and we will take any questions for him when he's done, and, if there are additional questions that might come up as we go through our discussions and deliberations, Kenny is going to be here to help us out with some of the AP discussion that happened, and so, Kenny, we will turn it over to you.

MR. FEX: My name is Kenny Fex. I'm the new Chair of the Snapper Grouper Advisory Panel. I'm sitting next to Zack. He told me that my motions won't fall on deaf ears at the last AP meeting, and so I figured I would sit beside him to make sure that he was listening, at least. I was nominated. I would like to thank Jim Atack for his service as Chair. David Moss was newly elected. I would like to thank him for taking the position. We did note that, since I was a commercial panel member, they wanted a recreational one, and so that was another reason that we chose David, to be fair. I would like to thank Don DeMaria for twenty-six years on the advisory panel. I cannot believe that. That's a long-time commitment. He has served his terms now, and he is off the panel.

The meeting started with a presentation from Paul from UNC-W Sea Grant. You guys have seen the same one, but it's cooperative research with Tom Burgess on the efficiency of the escape traps on the trapping for black sea bass. We did note that a two-and-a-quarter-inch sized mesh would help on the discards of illegal-sized fish, and so that was sent to you as a motion, to try to utilize the two-and-a-quarter, and we did note that most fishermen are using less than twenty traps, and the cost would probably be less than $\$ 500$, and so I don't think that would be an economic impact too heavy on the individuals.

Since we did note that only twenty traps were being utilized, some of the people thought that the endorsements could be maybe given back to some of the people that lost their opportunity in the endorsements. Under that endorsement, it would be non-transferable. You would not get the endorsement if you owned a permit and did not have trap landings or you were not the original trap owner of that permit, and so that was one of the stipulations, and it was not to be sold. It was only to be kept. Red Munden did make a comment that we would have issues with all that many more lines, but he noted that if twenty more individuals were allowed in and trap limits were down to twenty traps per person, that we would not exceed the trap line issue we had originally.

We did go on and look at Amendment 37 on hogfish. We didn't make any comments on it, because we had already previously seen that amendment, and so I think any of our comments would have been null and void.

We did look at the amendment on mutton. Our individual motions will be noted in the briefing of the amendment. One other motion that was not standing on that would be the spawning closure for spawning muttons in the Keys, maybe setting two months out of the year to set up an area that they typically would spawn, to allow them to spawn and leave them alone.

Next, Julia Byrd gave us a presentation on the up and coming SEDARs. I did note some reluctance in getting involved in the next SEDARs. I think it was just the last one was pretty enduring for that long of a time, and the results were pretty impactful, but we did get a few people. John Carmichael came up and gave us the bad news on the SEDAR 41. I would like to thank him for that.

Next, we did look at the visioning blueprint. We got a few ideas brought forth. One would be a split season for red porgy. Note that we do have an issue -- We don't catch fish in the beginning of the year when they're spawning, and MARMAP does not sample at that time, and so we're kind of losing some sampling errors, I believe, and so I believe the split season would help alleviate some of that.

Another thing would be a commercial split season of all the small-mouth species, just to get them to coincide and get less discards that we're having. Lower trip limit on the second season for vermilion was brought up. I understand it's a good idea, but, also, you've got to look at that you could drop the trip limit lower, but people are still going to go at it as hard as they can, and so even if you drop it down to 500 pounds, people are going to go out day in and day out, and so, unless you limit the number of trips per month, which is probably not going to be very approving by the general public, then I think that would still leave us with the same problem we have.

We do have an importance of trying to keep the fishery year-round open with trip limits and adjustments to the fishing years. That's mainly generally to keep the fishermen fishing and keep the market open. We did have an issue with the market flooding. If we use our commercial trip limits at $50 / 50$, we might be able to avoid, and maybe shift them $60 / 40$, to try to avoid the issues of not having fish year-round.

We did get updated for the for-hire reporting. We also got updated for the citizen science. We did send a motion forth to support funding for citizen science, because, as you know, that does help improve cooperative research, and it gives people more faith in what's going on in the science.

Under Other Business, as you know, we've always tried to look for some kind of recreational stamp for the recreational fishermen, to kind of get a grasp for the MRIP, and we actually were looking at a federal recreational stamp, since we are fishing in federal waters. Another one was limited entry for the for-hire. That was part of the visioning, and so it was just coinciding with that.

Another thing that was brought up by Kerry Marhefka was a characterization of the snapper grouper fishery, because we really don't know who is really in the fishery from one state to the next, and so if we actually had a good idea, then we could probably better regulate that way.

Finally, we looked at a framework for the future of the snapper grouper fishery, a few more things. One thing that sticks out is South Florida needs its own management area, and that's been brought up by Don DeMaria and that's been kicked through the AP a lot of times, and it has rationale. You guys sit here and we make regulations for South Florida, and you could actually just take a few representatives, Florida representatives, to vote on that and maybe one representative from each other state to be a voting member and the other ones just be non-voting members, and so there is some rational for that, and it is a totally different fishery down there than all the others.

Another one is the limited entry for the for-hire and sector separation for the for-hire is something I never heard, but that's also to allow the people that are actually charter fishing to kind of regulate and manage their fishery the way they see best fit for them and then to allow the recreational to do the same. Back again to the federal reef stamp. That's another thing. A federal deepwater complex stamp is a good idea, because you're going, again, back out in federal waters and you're fishing the deepwater species that's pretty highly regulated, and we're getting low numbers for them, and
so that was an idea. Then, again, the federal recreational reef stamp is another, and so that ends my -- Any questions?

DR. DUVAL: Are there any questions for Kenny?
MS. BECKWITH: Thanks, Kenny. Just for clarification, that Appendix A, the framework for the future of the South Atlantic fisheries, was that approved by the entire AP, or was that just forwarded by Captain Johnson?

MR. FEX: Which one exactly are you talking about? Are you talking about the whole paper? That was just ideas brought by the whole AP. It was just not all stuff by Robert Johnson.

MS. BROUWER: Just to clarify, that was something that was shared by, as you pointed out, Robert Johnson, and the AP took the time to go through it and discuss it. They did not make any motions to approve it, but, as you saw, many of the recommendations had already been discussed previously by the AP, and Robert just sort of captured it all in this one document.

MR. HARTIG: Kenny, that characterization of the snapper grouper fishery, I just want to be clear on that. That pertains to the people, right? I mean it's the people in the fishery and who are fulltime and who are part-time? When we do that, I would make sure that we did it like Kerry did with black sea bass, is the whole portfolio issue of fishermen who participate in the snapper grouper fishery as well, and so it's a good idea.

MR. FEX: That's correct. That was exactly her point, because you never know who is really in the fishery. You try to figure out that you have X amount, and like Florida has two-hundred-and-twenty-some of the federal permits, southern Florida, and so if you actually separated southern Florida, then you would know you only had two-hundred-and-some or 300 more permits from that part of Florida, and so you just get a grasp of who is actually commercially fishing, heavily commercially fishing or just recreationally commercially fishing.

DR. DUVAL: Thanks, Kenny.
MR. HAYMANS: Thanks, Kenny. Thanks for the report. I didn't review all of the minutes and I looked at the report. I looked at the motion there on black sea bass pots. We eliminated some folks, and some of the folks that we've eliminated have bought back in, at significant cost, and then we're thinking about, at least the AP is, about allowing those that we booted out, to allowing them back in, and so how much discussion centered around -- I hate to use the word "fairness", but what was the discussion there about opening that door back up?

MR. FEX: There was a reluctance. There was only seven for and four against it, but what it was is we had two members on there that didn't get their endorsements, and they're not trying to get it to sell it. That was not their intent. It was just they actually were trapping, and they thought that they got squeezed out, and now that the quota was looking safe and we're looking fine on it, they were just looking at it as an option to get in.

It's a shame that the ones that did get the endorsements turn around and sold them, because that's the downfall, is you wanted an endorsement, but you turned around and sold it, and so the intent was just to allow them to get an endorsement if they were in it, if they had the history. If they sold
it and no longer had that permit, then they weren't going to get it, but it was just to allow those people back into it.

MR. BOWEN: I just want to correct the record. Anna was asking about this Appendix A, the framework that Captain Johnson had written, and then Myra said they didn't vote, but they actually did vote on limited entry. The AP has voted on limited entry the last two meetings, and both votes were -- The one before last was unanimous, and the one they voted on the last meeting, everybody was in favor but one person. I just wanted to correct that for the record.

DR. DUVAL: Any other questions for Kenny? All right. If not, thank you very much, Kenny, for the report, and I'm glad you're sticking around, because we may call on you later. Thank you. The next item on our agenda is the Scientific and Statistical Committee Report, and I think this might be a tag-team affair between Chairman Reichert and Immediate Past Chairman Dr. Barbieri, and so I'm welcoming Dr. Reichert up to the microphone, where he will walk us through his portion.

DR. REICHERT: Thank you, Madam Chair. The SSC met on May 3 through 5, and we had a very full agenda. Given the fact that Dr. Luiz Barbieri led the discussions during the SSC meeting, as Chair, and he was also the Chair of the Review Workshop for SEDAR 41, he kindly offered to present the SEDAR 41 report, and, of course, I took him up on that offer, and he will give that report after my report.

I also want to note that the SSC Socioeconomic Panel met just prior to the SSC, and I included various Socioeconomic Panel recommendations in this report. The details of those recommendations were provided in the SEP Report, which was appended to the SSC Report, which is in your briefing book.

Dr. Mike Larkin provided an overview of the 2015 landings, catch limits, and applications of the accountability measures, and, of course, the SSC expressed the usual concern about stocks that exceeded the ACL. However, we also discussed some concern about stocks that were well below the ACL, and this is consistent with some of the discussions that you had earlier this morning.

In the past, we generally did not discuss these stocks extensively, but if landings are significantly under the ACL, this item may be a signal that the stock is underexploited, perhaps by market or other socioeconomic factors. However, it's also possible that the biological conditions differ from those in which the ABC and subsequent ACL were based on, and this speaks to the issue that we need to make sure that there's actually a biomass available to move from one year to another or from one sector to another, and so the SSC recommended that it would be good to investigate stocks that have landings that are less than 40 percent of the ACL.

We felt that this could be done, for instance, by monitoring landings relative to the ACL, which we are already doing, but also looking at some socioeconomic factors and potentially marketdriven factors and evaluate management actions that were taken and examining other survey information, such as the fishery-independent data. We feel that that may help identify if a reevaluation of the ABC recommendations may be appropriate. As discussed previously, one example of such stocks may be red grouper. That may warrant a closer examination.

I don't have that on my slide, but there is a summary in the report. I think the SSC recommendations related to optimum yield are relevant in these discussions, and you have touched on some of those earlier today. The Socioeconomic Panel recommends that the council consider the following items when attempting to move towards optimum yield, and this is especially relevant in the context of reallocating between sectors. For instance, how certain is the assessment of a stock? What is the longevity and productivity of a species? Can it quickly rebuild, for instance? The SEP also recommended to move fish between sectors incrementally, and it may be good to leave some fish in the reserve sector, to maintain a lower harvest cost and also for for-hire encounter rates.

Long-term shifts between sectors may need increasingly better justification to move towards optimum yield, and one should be aware that the relative timing between the commercial and recreational demand and/or demands between different geographical regions in the council's jurisdiction should be taken into account.

Of course, something that we knew, but the SEP reminded us was that it's much easier to immediately measure commercial benefits than it is to measure recreational benefits. However, those recreational benefits exist, even if they are not or cannot be measured. In addition, the socalled shadow value, which is the opportunity cost of fish in the reserve, in the water, is also of value that should possibly be accounted for. Something I mentioned earlier is are regulations a significant factor in not catching its allocation of the ACL? That may have to do with socioeconomic or market factors. The full SSC echoed those issues.

The flexibility of commercial market for species is important to take into account, and, last by not least, placement of fish in trip landings portfolio for both sectors is relevant. It's well known that the marginal value of additional fish can make or break a commercial trip, and so unless you have any questions, I will move to the next item, which was SEDAR activities, and I'm going to be really brief, because John Carmichael updated you on the discussions at the SSC relative to the blueline tilefish terms of reference recommendations and red grouper, and so I will skip to the next slide, but let me know if you have any questions.

DR. DUVAL: Are there any questions for Marcel?
MR. HARTIG: Marcel, I mean, on your bullet with further investigate stocks with landings less than 40 percent of the ACL, by a number of things --

DR. REICHERT: I'm sorry, Ben, but that goes to the previous slide or --
MR. HARTIG: Yes, it was in the previous slide. It was in your SSC recommendations on stocks that exceeded ACL. This is actually kind of like a mini rumble-strip approach, isn't it? I mean what you're trying to develop here is a way to give us some information before stocks get to a really low level where we could take some action, but we also need to look at it going the other way as well.

I mean you're looking at the penalizing way. To me, you need to look at stocks that are also increasing as well and maybe be able to do something about that, and so it's a two-way street, if you guys can get onboard with it and have the necessary information to be able to make that kind of determination.

## DR. DUVAL: All right. Moving on.

DR. REICHERT: The SSC also discussed the black sea bass bag and size limit analysis, and Dr. Mike Errigo provided an overview. A couple of things. The SSC noted that the discard selectivity for the ages one and two fish were based on SEDAR 25 and subsequent updates. There is also some questions about how the method deals with the increasing population ages.

The SSC felt that the analysis of the headboat data should be handled in a manner that was similar to the analysis of the charterboat data. This means that it should be based on the trip or bag limit rather than estimating how many anglers may have hit their individual bag limits. We had some discussion on that, and input from the industry would benefit, and we had some input from the industry during the meeting.

We felt that the fishing mortality rate should be changed to exploitation rate. The uncertainty is not included in the current analysis, and we discussed this with Mike, and it could be possible to address that by introducing variability in the length at age, probability of age at a given length, and some of the numbers at age. We also felt that it may be good to have some further review and perhaps discuss this again at the October meeting. However, overall, with some suggested changes, we felt that this method can be used to analyze the bag and size limits, and it could possibly be used for other species as well. For black sea bass, the analysis showed us that there doesn't seem to be much of an impact of the proposed bag limits on the landings. Please interrupt me if you have any questions or I can provide further details.

The SSC was updated on the South Atlantic for-hire reporting. We had a broad discussion about the reported data. We felt that emphasis should be given to data that can be used both for assessments as well as for management advice. We also discussed that analysts should probably be consulted to determine what data would be most useful in stock assessments and how these data would be used and what data would be most relevant.

It was noted that fishermen were consulted during the process, and the SSC felt that that was very important, so they can provide feedback on the most useful and reliable information to be gathered. We felt that the information of depth, fate of the fish, the reason for discards are all important for estimating discard mortality. We also felt that the information on the range of depth fished could be useful in considering bathymetric management, management by depth, and the SEP, the Socioeconomic Panel, had some recommendations to include information that has a socioeconomic relevance, such as distance traveled for recreational fishers, collecting information of hours fished. The ability to include trips could be useful.

If additional data, such as home zip code of anglers, for instance, could be incorporated, that could be of value to generate consumer surplus estimates for for-hire trips. In short, we felt that a lot of information could be very, very useful. However, it is very important to optimize the usefulness of the data, which could vary among species.

We also felt that, once the types of data for reporting are selected, it would be good to do a simulation with say the top ten list of species, to evaluate if the relevant data that are collected are actually used. Last, but not least, we discussed that the sheer impact on the amount of requested data should be considered, especially relative to the return that's provided in the analysis. What do you get out of your collection information, for instance? For instance, it may be difficult to
collect all of the suggested data on weekly reports, and so we had an extensive discussion on these points, and I hope they are useful for further decisions.

DR. DUVAL: I don't see any hands. Keep going.
DR. REICHERT: Moving on, the SSC received an overview by Dr. Erik Williams of both the research and operational assessment plans, as well as the stock prioritization, and John mentioned some of our discussions earlier today, and I have summarized the recommendations in the next two slides here.

A minor point is that the SSC recommended to consider dropping "assessment" from "research track assessments". We felt that the expected outcome of a research track may not necessarily be an assessment, per se. Rather, it may address more general issues, such as modeling approaches and specific issues that are important for multiple assessments, et cetera.

It may be beneficial to the process to hold a panel review equivalent to other panel reviews to evaluate which assessments are already available for an operational status. The SSC also recognized the need to carefully consider how best scientific information available is defined and to ensure that timelines are clearly developed in these plans. We also feel that the stock prioritization exercise will definitely assist in determining when certain assessments could be conducted.

We had considerable concern and considerable discussion about the SSC's role in these new plans and the workload, or the potential change in workload, for the SSC in this new structure, and we feel that this may require a little more discussion once the plans are further developed. The current plans call for involvement by the SSC during the development and the execution of the research track, but also the SSC will be the only body to review the operational assessments, and we felt that that can be expected that there may be a significant increase in the SSC's workload.

The SSC discussed several candidates for research tracks, for instance an assessment to look at several data-poor stocks. MRIP revisions could be a candidate for a research track, because they would likely have a significant impact on stock assessments, ACLs, ABCs, and other management aspects, and Dr. Williams mentioned that scamp, both in the South Atlantic and the Gulf of Mexico, might be a good candidate for the first research track, and we agreed on that.

The last issue I want to mention, which is not a new one, but it's close to my heart, is the fact that the SSC stressed the importance of involving the data providers in the scheduling discussions. An increasing number of operational assessments is expected in the future, and that means that there is an increasing -- It's expected that there will be an increasing demand for data, for timely available data, and, in this context, a careful scheduling is important, especially for those data that involve a significant amount of time.

Bonnie mentioned the video analysis, and age and reproductive analyses can take a considerable amount of time, and so we felt that that was important to take those aspects into account, to avoid that assessment swill be constrained by the data availability.

As I said, we also provided an update on the prioritization, and, as I said, John provided an update earlier. We felt that the tool could make decisions more transparent and objective on how stocks
are actually chosen for assessments. We also felt that this may be an excellent topic for an upcoming National SSC Meeting, in particular to review methods and scalars.

As you discussed, we also agreed that there will likely remain a human factor in the setting of the schedule, and the SSC expressed some concern that this may eventually lead to a subjective system, similar to what's in place currently. As John mentioned, the SSC plans to further discuss, in particular, the methods and the scalars at a workshop that we are planning in conjunction with our October SSC meeting, and so if you have any suggestions or guidance for us, please let us know.

The SSC also reviewed the golden tilefish update assessment. Dr. Genny Nesslage presented the assessment to the SSC. The terms of reference were addressed, we felt appropriate, and applying the robust likelihood fitting approach the SSC felt improved the model, and we concluded that the assessment represents the best scientific information available. We also felt that all assumptions and modifications in the assessment were well-documented in the assessment report and acceptable and that all the key uncertainties were appropriately identified. We have to realize, however, that, as this was an update assessment, changes to the model were necessarily limited.

The bottom line is that the assessment indicated that the South Atlantic golden tilefish stock is not overfished, but is undergoing overfishing, and the SSC applied the ABC control rule, and I can provide details if you are interested. They are in the SSC report, but the resulting total adjustment was twenty, which meant that the $\mathrm{P}^{*}$ is 30 percent, which is slightly lower than that of the prior assessment, due to the change in the stock status.

Dr. Nesslage provided the SSC with the updated projections with the $\mathrm{P}^{*}$ of 30 percent. She did that during the meeting, and we very appreciative of that, and I will present those in the next slide. They're also in the report, but, before I go there, I would like to briefly go through some additional SSC recommendations.

One of them is that we recommended a comprehensive regional data collection program that should be established to develop a much more comprehensive index for tilefish and other deepwater species. This speaks to the presentation that Frank Helies provided you just a while ago, and this could address some of the data concerns. Frank mentioned his project, and we feel that a longer-term, coordinated, comprehensive effort is needed.

Given the distribution of tilefish, coordination and collaboration with assessments and management activities in the Mid-Atlantic are important. The SSC also felt that further exploration of the 2013 year class, some information on sexually-dimorphic growth, and time-varying growth may benefit the next assessment. Talking about the next assessment, the SSC felt that that should be conducted in about three years, but we also felt that it shouldn't be longer than five years. We feel that it could be done as an update, but a benchmark could be considered only if there's significant new data available.

This slide gives you the projections. As a reminder, the overfished evaluation was based on the SSB in 2014 over SSB MSY, and it was 1.13. The overfishing evaluation was based on the average F from 2012 to 2014 over FMSY, which was 1.22. This resulted in the ABC recommendations that are on your screen here. For 2017, that's 233,000 pounds, or 30,000 individual fish.

I know that many of you noted that these projections are below those provided after the previous assessment. We discussed this a little bit, and it's mostly due to the effect of the improved robust likelihood procedure. That was one of them and the smoothing of some of the spikes in the recruitment, and, of course, the change in stock status and the resulting slight change in the $\mathrm{P}^{*}$ value. If you're interested, Mike Errigo told me that he prepared some additional information that may be relevant in the discussion, and so I will leave it up to you if you would like to ask Mike to come to the table and provide that additional information.

DR. DUVAL: I don't know how other committee members feel, but I wouldn't mind seeing the additional information that Mike has prepared. I know that I had a question about just particularly the drastic impact of the robust $\log$ likelihood on the model outputs. I mean this is basically like a 60 percent reduction between the ABC that we had previously and what's coming out of this assessment, and I think when -- I think it's very difficult to explain to stakeholders when the last time, when we reviewed SEDAR 25, we took I think what was probably a conservative approach in terms of setting the annual catch limit, based on the SSC's recommendation.

We set the ACL at the equilibrium yield from 75 percent of FMSY, and so that was -- We did not set it at the highest level possible, and that was because there was concern about recruitment, small fish coming into the fishery, and so, at that time, the status was not overfished, and overfishing was not occurring, and the status now is not overfished, but overfishing is occurring, and that's a pretty -- That's a pretty steep cut for what appears to be a change in the model code.

Now, I know we always want to use best practices, and this is the same code that's been applied in the gag update assessment, but that's a -- I think I understand, sort of intellectually, what the robust log likelihood does. It modifies the weighting, I think, of small versus larger sample sizes, is my understanding, but it's really hard to wrap your head around what does that actually mean. I don't have that intuitive understanding of the model, and so, hopefully, Mike E., you will try to explain that to some of us.

DR. ERRIGO: Yes, and what I am going to do is I will -- I will go over what it did in the model and what those changes mean for the assessment and the projections and all of that, what the big changes were and how it affected MSY and productivity so much. Those are the really important points.

What it did was it affected two very important pieces of the puzzle. One was recruitment, and so the red -- In all the graphs, the red is SEDAR 25 and the blue is the new update. This is recruitment over time, and you will see that's the SEDAR 25 enormous spike in recruitment that was showing up in 2000 or 2001. That was way, way, way above anything that was seen in the time series, and here's the zoomed-in version. You'll see that's the spike. I cut it off, just so we can see what's going on.

These straight lines here are the estimates of R0. R0 basically is the initial recruitment when the biomass is pristine, and so we haven't fished it. It's an estimate of productivity. It's an estimate of what the productivity of the stock can be if we don't fish it. You will see that when that spike is removed that the estimate of R0 goes down, and so the estimate of the productivity of the stock decreases when that spike is smoothed out, and so that's one piece of the puzzle right there, and there's one other piece of the puzzle that was changed pretty significantly by the new distribution, and that's the estimates of the fishing selectivities.

The big selectivities that were affected were the longline selectivities, and so, again, red is SEDAR 25 and blue is the update. You'll see that they're shifted to older age classes, and so the gear is selecting for older age classes. That's the longline. MARMAP was unaffected, and the hand -This is done not only by the new distribution that was used, but also the addition of the years of data. That would also affect this estimate, and here's the commercial hand line selectivity, also shifted to older age classes.

Now what I will do is will show you the effects of those changes, of those parameter estimates. It estimated those parameters very differently, and now I will show you how that translates into fishing mortality, spawning stock biomass, MSY, and all of that.

What happened was this is biomass, total stock biomass, B over BMSY, just so I can compare the two, because the estimates of BMSY were drastically different between the two runs. Again, red is SEDAR 25 and the blue is the update. The black line is MSY, and so it's one-to-one. B equals BMSY. You will see that SEDAR 25 showed a large increase, starting around 2001 or so, where that giant spike in recruitment was. It goes up, up, up, up, and then it starts to level off. In the update, that spike is gone, and so you don't see that much of an increase. You still see an increase, but it doesn't get up to BMSY, which is why the projections are below the update's estimate of MSY.

This is fishing mortality rate, F over FMSY. Red is SEDAR 25 and the blue is the update. You will see a lot more overfishing going on in the stock in the 1990s and early 2000s than what SEDAR 25 predicted. That has to do with the difference in the estimates of selectivity. Because the gear now is selecting for older ages, and there is typically lower abundance of older age classes, but the landings haven't changed in that time period, you now have a higher level of overfishing occurring in that time period than you did in SEDAR 25, because of the change in the estimates of selectivity. All of that translates into spawning stock biomass. That's over SSB MSY, and this is over MSST. Ignore the last red point. That was accidentally put in.

DR. REICHERT: Mike, I have just one point of clarification. You said that the selectivity changes. The selectivity did not change. The updated model modeled a different selectivity than the previous model, and so I just want to clarify that it's not that selectivity changed over time, but it's the update model modeled a different selectivity than the previous model.

DR. ERRIGO: Yes, and thank you for clarifying that. The selectivity didn't change over time. The update, when it estimated the selectivity in the same time periods that SEDAR 25 did, it just simply estimated a different selectivity pattern than SEDAR 25 did, based on the data that it had in the update plus the new robust multinomial likelihood distribution that was used and all of the changes in the update, and so, yes, the selectivity didn't change over time. It was different between the -- It was estimated differently in the two models. It was estimated to be different in the two models.

When it comes to spawning stock biomass, you will see that in SEDAR 25 that we were well above SSB MSY, the terminal year, whereas, in the update, we are just under SSB MSY, and this is MSST, which is the overfished definition. We are just over MSST in the update, whereas, in SEDAR 25, we were well above MSST in the terminal year, and so that's why the new estimates of ABC are significantly lower, the new estimates of MSY are significantly lower, and the productivity was estimated so much lower.

DR. DUVAL: I have a couple of questions from folks, but let me just make sure that I understand this. Because of the change to the robust log likelihood, the updated model estimated a different selectivity pattern in this update than SEDAR 25, and that selectivity pattern showed a greater removal of the older age classes, which impacted the estimates of biomass, which impacts our maximum sustainable yield? Okay.

DR. CRABTREE: Maybe you said this and I just missed it, but why did the big spike recruitment year go away? What happened?

DR. ERRIGO: That was due directly to the change in the use of the robust likelihood function. When the model ran, it simply didn't estimate the same recruitment pattern, and that spike didn't show up. I don't know all the internal workings of what exactly happened, because I didn't see all of the model outputs for all of the runs, but it was the -- From what Genny told me, it was the robust likelihood that removed that huge spike in recruitment.

DR. CRABTREE: Can you put that slide up that showed that recruitment? I mean I look at that -- I never believed that happened when it first was in there the first time, but that's what we went with, and so management goes off on a path. Then we come in and it's gone. Marcel, can we not get a more understandable explanation of what this is and why that happened, because that really seems to be what's making such a big difference in the estimates of recruitment and productivity.

DR. DUVAL: I appreciate any additional answer.
DR. ERRIGO: One thing I can say is the reason why -- The SSC did discuss this at their meeting, and they did say that the fact that the recruitment pattern looks more believable is one reason why they thought that the use of the new likelihood distribution was a good choice.

DR. CRABTREE: My question would be why didn't people see that to start with, before we went down this path, but I've got to say this explanation of where it went -- I mean I'm not faulting you or Marcel or anyone, but it comes across as just a black-box mystery that's something we can never understand in the model, and that's not very acceptable to folks, and this is a big cut. It's not like this is a little cut, and we're going from a stock that was in good shape and we thought everything was fine to a huge difference now, and it all seems to be because of some black-box explanation, and so I guess I would ask Bonnie if we couldn't get some understandable explanation of what happened.

DR. DUVAL: That was one of the suggestions that I was going to ask for, is when there are what appear to be simply changes to model code that result in a change in stock status, it would be great if we could get an explanation that we can provide to stakeholders that they can understand. I mean I think Mike has done a great job here of trying to explain how that change, which has been used in the gag update assessment, which has been used -- When was that change made, in 2012 or 2013 or something like that?

DR. ERRIGO: Right after 25, I think they started using that distribution.
DR. DUVAL: So I mean the appearance, if you don't look at this stuff, is that, well, the council didn't manage this fishery very well, and so now we have an overfishing designation, when that's -- I would say that's not the case. We were very deliberate, and I know not everybody who is
sitting around the table right here was sitting around the table when we did -- It was Regulatory Amendment 12 that we used to update the annual catch limits from SEDAR 25, and we were being precautionary, we thought, to address the issue of not having recruitment, and so I do think it's really important to have an explanation that the general public can understand for how these changes are impacting things. This is not a small cut, and I'm sorry, Anna, that I jumped in ahead of you. Please go ahead.

MS. BECKWITH: Thank you. I guess I have two questions. The first is do we have any fishery data that would indicate that this recruitment did happen during that time or didn't? Like was there any sampling? I don't want to say where did that original spike come from, but is there chevron trap data or where did we get the information that this sort of recruitment spike happened, and if it wasn't that dramatic, I'm sort of curious if there's any data that could collaborate if it did happen or if it didn't happen, if there was a good recruitment during that time or if there wasn't. Then I have a follow-up to that.

DR. ERRIGO: I do remember significant discussions during SEDAR 25 about this one recruitment spike. Most people did not believe that this level of recruitment for that year happened like that. However, they had no way of changing it or fixing it. I think one of the problems was the model was having a very difficult time reconciling the landings with the biomass that was there at the time, and so it needed to -- We needed to help fill the population out by putting in -- At that time, we had data through 2011, and so it would have needed to -- We wouldn't have had very much information on that particular recruitment year, based on when golden tilefish recruited to the fishery, if I'm not mistaken.

There is more data now. We should see those fish in the fishery and in whatever MARMAP data is available now, and that is another reason why we don't see the spike anymore. It's partially due to that likelihood function and partially because there is no spike in the age and length comps and things like that shows all the recruitment, or in the landings.

DR. DUVAL: I think those fish are like six or seven when they recruit to the fishery, and so count back six or seven years from the terminal year of the assessment and that's really the last information you have on recruitment. Then, after that, it's modeled recruitment, based on past patterns.

DR. REICHERT: A couple of things relative to the MARMAP survey, since you asked that. The longline survey, first of all, that was halted, and so we did not have much information past 2012, and I was asking Mike to remind me of the terminal year of the previous assessment, which was 2011, and so there was only one year of data, which was the terminal year, that we had some additional information to inform the MARMAP survey. That year was added to a previous -- The MARMAP survey was divided into, I believe, five-year blocks, and so that's why it would be difficult to pick up any spike in recruitment, because that was an aggregated index over five years, and then that last year, the terminal year was added, I believe was added, to the previous five-year block. The short answer is that the fishery-independent survey I don't think would inform the model relative to whether or not there was a short spike in recruitment, and so that may be an explanation of that.

MS. BECKWITH: Okay, and my second question is just trying to make sure that I understand what Mike said. I am hearing you say that we're having a higher level of overfishing because
we're now selecting, or some gears are now selecting, for older age classes, which are less abundant, but the catch levels have not varied, and so a conclusion to that would be that we are catching more of the fish that are less abundant. Is that what I'm hearing you say? That's going to be a hard sell to the commercial fishermen in trying to explain this.

DR. DUVAL: It already is.
MS. BURGESS: Mike, thank you for putting this together for us. I appreciate it. I'm not sure who is the best person to direct this to, but I read in the stock assessment report and the SSC report different than what Anna just mentioned, and that was there was a noted decline in catch per unit effort over the last few years from the longline fishery, the commercial fishery for longline.

That concerns me a little bit, knowing what I know about the longline fishery over the last couple of years. They are constrained by a very small quota, considering their catch rate. They catch their quota very quickly, and they have also changed their fishing behavior over the last couple of years to try and address this, and so there's been years where they've slowed down their fishing to try and stretch out the season.

There's also been times where they've had bad weather, but there's been a fear that they're going to miss out on the quota if they don't go out and fish, and so that could affect their CPUE during that time period. Unfortunately, this was a stock assessment update, where the people operating the assessment, who are very brilliant, very smart, do not have the benefit of the commercial fishery providing input on the data that was going into that assessment, and I would like to know how that affects the assessment results.

DR. ERRIGO: If the fishery was operating differently in the years since SEDAR 25, that might cause there to be a difference in selectivity, in the selectivity pattern or something like that, in those years. Now, it is possible to model a selectivity block, and so you can model different selectivity for different years of the fishery, but an update does not allow for that. You use the same assumptions that were used in the previous assessment, and you simply add the last years of data and turn the crank.

If you guys feel that there is a difference in how the fishery has been prosecuted since SEDAR 25, then the next time this species is assessed, you may want to have it at least be a standard, so that these changes can be input into the model and the modeling framework can be changed, because an update does not allow for that type of change.

DR. CRABTREE: What is the reference point we're using on this? Do we have an MSY estimate and an FMSY estimate, actual estimates, or are we using a proxy?

DR. DUVAL: It's an estimate.
DR. ERRIGO: We're using MSY estimates.
DR. CRABTREE: Even with all of this uncertainty about the recruitments, we feel that the spawner-recruit relationship is adequately described to define and to get an estimate?

DR. DUVAL: It's 0.84 .

DR. CRABTREE: Is it the 0.84 ?
DR. ERRIGO: In essence, it's a proxy, but we're not using SPR as a proxy.
DR. CRABTREE: What SPR corresponds with that particular steepness, in this case?
DR. ERRIGO: I would have to look it up. I don't know.
DR. CRABTREE: Can we find out about that? I would like to know. Maybe John knows.
DR. DUVAL: While we're getting that information on what SPR that corresponds to, I'm going to go to Ben.

MR. HARTIG: Mike, do you recall if the new way of calculating natural mortality was used in this assessment? I can't remember, and I didn't think it was. I don't know how that's going to work out the next time we use that, when we look at tilefish again, but Roy has got a great point. I didn't even think about his point, but, realistically, you have two core groups of fishermen. You have a core group of fishermen off of about mid-central eastern Florida who have never moved much since this fishery has started in earnest again. They have stayed in the same general areas. They haven't moved much, and their catches, their CPUEs, are down. There is no doubt about that. I talked to every one of them, and their CPUEs are down.

You talk to somebody like Josh, who fishes farther north, and some other people who even go to Georgia, their CPUEs are the same, or higher, in some instances, and their age structure is different, because their catches are going to much lighter-fished areas compared to what's in Florida. Now, the Florida guys stay there because they can go in and out every day. They can go in and out. Whatever they catch, they can be home at night and go the next day.

You really have to look at this fishery in an areal type situation to go back in the logbooks and figure out what is exactly happening, because, in certain parts of the area, the CPUEs are still very, very high, and in the areas where they haven't, they're low. The hook and line area that I fish, where no longlining occurs, is showing some wear and tear. My CPUE is not the same as it was even two years ago, and so there has been some kind of change. Where those fish went, where the new recruits went that were in the fishery, I don't see them in the numbers that I would have expected in the last two years. From 2012, you should have been seeing them progress to the fishery, and you are, to some degree, but not to the degree where we saw this whole swamping of these two-pound fish that moved into the fishery in 2012.

While there is some concern, the concern I have is how we arrive -- You know I can't even wrap my brain around what we just went through here, and so I mean trying to tell the fishermen any more about what happened in the assessment is impossible. I can't go, in red snapper, and tell people with a straight face and any credibility what happened. I can't do it. I can't do it in golden tile. I can't tell fishermen in golden tile that it's your effort that is causing the problem. It's really not. It's the intricacies of how the stock assessments are done, and I don't know how you ever get around that. I can't tell you how high my frustration level has been with the MRIP process as well, and I'm on my soapbox, and I'm going to stay on it for a second.

We have all these uncertain estimates going into these assessments, not so much tilefish, but other assessments that are just -- It's killing our industry, our recreational fishermen, and I don't know what to do anymore. I am at my wit's end.

In the red snapper thing, I'm going to give a presentation, and I mean I did this -- I was leaving the council because I could not -- My frustration level was so high with the management, combined with the assessment process, and I can't explain things anymore. It's getting to the point where I can't do it, but I went all in with red snapper, and I will tell you about it.

I went the opposite way. I was going to leave the council, and so I said, no, I'm going to go all in, and I'm going to put everything together I can, all the science, all the management information that I can bring to bear on that stock, and hopefully I can get an experimental change in the way we move forward. I'm sorry to go off like that, but I am -- You have heard me before say that it's hard for me to do this.

DR. DUVAL: I know that we have one outstanding question of trying to get the piece of information with regard to what the SPR is. One of the other things that came up at the SSC meeting was coordination and collaboration in terms of the assessment and management activities with the Mid-Atlantic.

The Mid-Atlantic Fishery Management Council also has a golden tilefish fishery management plan. We've had discussions about this. They have had a separate assessment for the golden tilefish fishery up there for many years. It is an ITQ fishery, and so I don't exactly know the modeling approach that is used up there. My understanding, from my counterpart in the MidAtlantic Council, is I don't know if they have -- I am pretty sure they don't have any fisheryindependent indices of abundance, but it would be interesting to check in with the folks at the Northeast Fisheries Science Center to see what methods they're using to assess golden tilefish up there.

I think they have an annual catch limit that is close to a couple million pounds, maybe one-and-ahalf million pounds or something like that, and so that was one of the things that I meant to look into before getting here, and I just simply didn't have the time to do it, and so I apologize for that, but I do think it's worth an ask, given that it's the same species, how it's being assessed elsewhere.

Then we have other topics to move on to, but I am going to throw out there for folks to consider, and this might be something that we take back up at full council, but I don't know if we can -Well, I know we can, but if the committee would ponder going back to the SSC and asking them to reconsider their catch level recommendations for the next couple of years to phase in this type of reduction. This is a 60 percent reduction. I think that might be one option that we would want to look into.

DR. REICHERT: I think the SSC would entertain that. Obviously we serve at the pleasure of the council. The only thing I would ask is to ask the SSC some specific questions in terms of where the council feels that the SSC should reevaluate data or model approaches, because, obviously if you just kick it back to the SSC, there may be -- The danger is that we come to the same conclusion, and so I think it's very important that we get some guidance in terms of what to look at and how to approach the reevaluation of the assessment, and we can certainly pick that up during our October meeting or otherwise.

DR. DUVAL: I mean, when I say that, I'm thinking about the approach taken by the Mid-Atlantic Council when they received an update to their summer flounder assessment. I think they were looking at a 45 percent reduction in an ABC recommendation, and they went back to their SSC and requested reconsideration of a phased approach to the ABC recommendations for the following year. It wasn't do another assessment, but that might take a little bit of conversation and thought between now and full council, so that we could provide the SSC with a very specific task, but I just throw that out there for the committee's consideration.

DR. CRABTREE: It seems to me, Marcel, that there's a big spread between the MSY estimates and the catch level estimates, and I'm wondering how much of a buffer we're putting in through the $\mathrm{P}^{*}$ calculation. We've got to be wary that ending overfishing and phasing that in will be difficult, because the statute doesn't allow it, but we may be able to phase in achieving the $\mathrm{P}^{*}$ that we would normally -- That may buy us some extra yield, and then we could, over time, move towards that, and so I think it is worth exploring, because it does look, to me, like there's a big spread there, and that, I think, you have some flexibility on, because the $\mathrm{P}^{*}$ is essentially a risk assessment, which you could decide in this case you want to alter.

DR. REICHERT: Thank you for that.
DR. DUVAL: If I recall correctly, that may be the approach that the Mid-Atlantic SSC took, was they reevaluated their risk assessment in making the ABC recommendation, and so we'll give that some thought.

DR. PONWITH: Just a caution that you don't pick a $P^{*}$. The $P^{*}$ is generated through sort of a formulaic process based on the answer to a series of questions, and so it's not like you say, well, I think I want $\mathrm{P}^{*}$ to be X , and so I think you have to take that into consideration when you evaluate the merits of that.

DR. DUVAL: Okay. Anything else on the golden tilefish update right now? If not, Marcel, did you have some additional slides?

DR. REICHERT: I have only a few more slides, I believe. The SSC received a review from Dr. Kari MacLauchlin on the review panel that, as you know, is part of the spiny lobster accountability measure. We asked if there was a region-wide assessment, which there isn't. Due to what's known about the pattern of regional recruitment for this species, we also realized that traditional stock assessment methods for spiny lobster were considered inappropriate.

We also realized that an increase in ACT is required to avoid triggering accountability measures that may be unnecessary. However, the SSC notes that changes in the OFL and ABC would be needed to increase the ACT, and we will discuss that at our October meeting. We also felt that new information on recruitment and environmental factors and metrics, if available to track abundance, would be useful to aid in management decisions, but I believe that information, that recognition, isn't new.

One of the things that was brought up, and I think is important, is that it was unclear if the landing trends were driven by the biology of the species, for instance recruitment patterns, or if they were more market driven or, if both, what is the relative importance of each of them? We thought that
was an important discussion point, and the SSC will discuss the OFL and ABC recommendations in its October meeting this year.

We extensively discussed the hogfish decision tool. Both the SSC and the SEP discussed this tool, and we made several recommendations. Using partial years of data may increase the uncertainty of the analysis. However, we realize the data from previous years can be used to help identify anomalous trends, and as long as the uncertainty is presented and transparent, it can be taken into account. We also realized it's difficult to partition data into a finer level than a wave and still retain the level of reliability of the data. We don't want to increase the uncertainty.

A retrospective test of the model using past years could be used to determine the performance of the model, for validation purposes, and we felt that the most uncertain parameter could be chosen to explore performance and validation.

Bag and size limits were treated separately in the tool, and there is also currently two separate datasets that feed into the tool, and we discussed this. The SEP discussed this also, and the SEP recommended a change of the order of the reductions. For instance, start with size limits and then bag or trip limits, and try to get the datasets combined, or the information linked, and also perhaps it's possible to come up with a tool that combines the two.

However, we felt the assumptions that were made in the calculations of the reduction are transparent and that the model is appropriate for the available data. The SEP made several other recommendations. For instance, hogfish may actually have a higher consumption surplus than calculated in the model. Also, they addressed the order of the analysis in their report.

There were some questions about an apparent pattern for landings cycling. It seemed to peak every three or four years, and we were wondering where there was a biological origin, and SERO staff revised the analysis after the SEP meeting, using a four-year lag to investigate this, and it didn't produce any meaningful results, and so this may be something to look a little further into whether that cycling is real and how significant it is.

We considered, overall, the hogfish decision tool the best available scientific information, and SERO staff agreed to incorporate some of the recommendations that we made during the meeting, to the extent practical, and the SSC also recommended the retroactive validation of the tool. That would be very important. However, we also felt that this is a complex tool. We did not have much time to play with the tool, so to speak, and test it extensively, and so perhaps the tool and the SSC could benefit from some further discussion and review. The SSC also received an overview of the findings of the ABC control rule. Go ahead.

DR. DUVAL: I apologize, but there were a couple of questions over here from the Florida contingent.

MS. BURGESS: Marcel, I heard you say that the decision tool was modified by NMFS staff or council staff, following your meeting, based on requests from the SSC. I'm curious if the hogfish decision tool, the version that you looked at, had the same quirk that the council's version has, where if I choose a bag limit and a size limit and seasons, it produces an estimate of landings and discards, and the landings have a buffer plus or minus with it, and the total removals comes out as one number. Then I changed it around and I go back to how I did it the first time, and my total
removals are the same, but there is a wide discrepancy in the reported landings and dead discards that I get on each iteration of the tool.

DR. REICHERT: I am not sure if I can answer that question. Maybe someone else can let me know. Myra, do you have information relative to that?

MS. BROUWER: I do, and I can attempt to answer it intelligently, and so just bear with me. My understanding is that the SSC had some issues with the level of uncertainty in the recreational -This is the recreational decision tool. Dr. Farmer included, in the decision tool, a method to do some bootstrapping, iterative bootstrapping, and so what happens is, every time that you select the various management measures, there is this thousand iterations that get done, and so you're never going to get a point estimate that is the same as the previous one.

However, we had discussions with Dr. Farmer, and he assured us that it's within the range of the confidence levels for that tool, and so we felt that the results, the projected landings that are resulting in the revised tool, are comparable and within the range that is acceptable, and so this is all explained in the new version of Amendment 37, to make sure that that is transparent and everybody understands what that's about. Did that make sense?

DR. DUVAL: Thank you, Myra.
DR. REICHERT: So the question is the version that was in the council's briefing book is an updated version than the one that the SSC saw in May?

MS. BROUWER: I believe Nick made this change right when the SSC was actually meeting, and so there were a couple of versions of the tool that you guys reviewed.

DR. REICHERT: Thank you, Myra. We had a subcommittee that reviewed the ABC control rule. Dr. Steve Cadrin chaired that subcommittee. The subcommittee consisted of Steve Cadrin, John Boreman, Amy Schueller, Nancy Yandle, Eric Johnson, Carolyn Belcher, and Fred Serchuk. I think Michelle brought this agenda item up earlier today, but a couple of things. The number of species that are available for an analysis is still very limited.

One of the things that the committee looked at and felt was very useful was to look at the $\mathrm{P}^{*}$ derivations, and this showed that the $\mathrm{P}^{*}$ values have ranged from about 0.15 to 0.14 , with most close to 90 percent, in the 0.3 to 0.4 range. They noted that the $\mathrm{P}^{*}$ generally became less conservative and tended to shift to lower number tiers over time. Similarly, the P scores for stocks with multiple ABCs tended to improve over time. This may be due to increasing information, but it also may be due to a positive management/science feedback.

The review of the SEDAR stock assessment information expanded the previous review, by evaluating the frequency of overfishing for fourteen stocks and twenty-seven ABC recommendations. The review showed that 40 percent of the ABC recommendations, eleven out of twenty-seven stocks, resulted in overfishing. If we remove the cases where overfishing was a result of excessive catch, for instance significant overages to the ACL, the performance improved to 27 percent. Note that this is actually approximately the expected value for $\mathrm{P}^{*}$.

The committee also noted that there was no overfishing for coastal migratory pelagic stocks and a 38 percent frequency of overfishing in snapper grouper stocks, which, again, is about the expected frequency. In short, the ABC allowed for growth of some stocks, overfished stocks, but not others, and the subcommittee also conclude that these preliminary results were insufficient for a definite evaluation, and we feel that evaluation should be further updated to accumulate sufficient numbers of stocks and ABC recommendations, and, also, I think it's important to expand the evaluation to include more performance metrics, in particular socioeconomic metrics.

Also, note that this approach to evaluate performance assumes that stock assessments are correct. Therefore, the SSC recommends that it should be complemented by a management evaluation strategy. The latter can consider assessment bias and precision, and the subcommittee recognized Dr. Errigo for his work on that, and we will continue to evaluate the ABC control rule.

My last slide, I believe, is to let you know that several items were on the agenda that did not require specific recommendations. We got an update from Dr. Boreman on the South Atlantic SSC's discussions relative to blueline tilefish and the recommendations. We got an update on the citizen science, and we received that update from John Carmichael, and, of course, the SSC is happy to provide input and recommendations concerning specific citizen science projects.

We received an update on the work plan. We received the same update on the SERFS that you received earlier, and I earlier mentioned the SEP report that was amended to the SSC report, and we did not have enough time to discuss Amendment 37, except for the decision tool, and Amendment 41 and Amendment 43. With that, unless you have additional questions, I would like to hand it over to Dr. Barbieri to give you an update on SEDAR 41.

DR. DUVAL: Thank you, Marcel. Actually, I think it might make a little bit more sense, before we get into the SEDAR 41 -- Because I am imagining that this is going to be subsumed by the red snapper portion of SEDAR 41, as opposed to the gray triggerfish portion of SEDAR 41, but I was wondering if we could let Dr. Larkin go first and give us the 2015 landings update. I think that's going to be a pretty short presentation, for the most part. Everyone has seen the Fishery Bulletin, and so I think, if we can allow Mike to do that and then, Dr. Barbieri, we can go to you and see how far we get, if that's okay with you.

DR. BARBIERI: That's fine with me.
DR. DUVAL: I appreciate that. I neglected to mention that this is Attachments 7a through 7d in your briefing book.

DR. LARKIN: I will go ahead and get started then. To go through it real quick, the background, SEDAR 24 and SEDAR 41, which was recently completed, determined that the South Atlantic red snapper stock is overfished and undergoing overfishing. To go through some of the history, Amendment 17A in 2010 closed the fishery in 2011. Amendment 28 established the following, a process to determine if the red snapper fishing season will occur each year, which would include specification of the allowable harvest and season lengths for the commercial and recreational sectors. It came up with an equation to determine the ACL, the amount for each sector, and management measures, if fishing is allowed.

Keeping that in mind, here is the equation here from Amendment 20A. There's two not really steps, but it's an either or. It's either you do Number 1 or you do Number 2. In the total removals, and that is the number of red snapper that are landed plus the dead discards, and so you add those together to get the total removals. For the previous year, if they're greater than the ABC from the previous year, then the ACL equals zero. Unfortunately, that's where it is. That's where we are right now.

There's another equation if the total removals are less than the ABC , but, unfortunately, that's not the situation when you look at the total removals for 2015 and compare them to the ABC for 2015. I am going to focus on -- Really, where we are is the first equation there.

To go through it real quick, the data sources, the commercial landings came from Florida, Georgia, South Carolina, and North Carolina. The commercial discards were determined from a delta log normal model expansion of commercial discard logbook self-reported discards. The headboat landings and discards came from self-reported logbooks, with some auditing by biological samplers and at-sea observers. The recreational charter and private boat landings and discards came from back-converted MRIP to MRFSS, because the ACL was defined in MRFSS, and so the current MRIP dataset is converted to MRFSS.

Here is the summary of the recreational, both the landings and the discards. Each column here -The two to the left is the charter and private landings, and over to the right is the charter and private discards. All of these were in numbers, and so there is one example of a state survey. That's the highlighted yellow one, where South Carolina used the charter logbook to estimate discards, but those were not used in the summary to determine the total removals.

Anyway, you can see that the landings over here in the two columns to the left, it's 904 for charter and 639 for private. Those are low, but the big -- You can say the bus driver is the discards over the right. The charter is 110,000 and the private had 470,487 total number of red snapper discarded. To keep in mind these are the discards, and then they have a discard mortality rate applied to them to get the dead discards, because total removals is the number of fish landed plus the dead discards.

Now, here to summarize it in the next table, this is what we have for 2015. The ABC is 114,000 . You can see the top there, and then that's compared against all the numbers below it, and so the commercial landings and the commercial dead discards plus the headboat landings and the headboat discards plus the charter landings and the charter dead discards plus the private landings and the private dead discards, and you can see the thing that stands out really is the private dead discards was really high in 2015.

You add those up, and you can see the essentially 276,000 is greater than 114,000 , and so the total removals for 2015 is much greater than the ABC of 2015. Following that equation, you end up with an ACL set for zero fish for the current year, for 2016. That's it. That's the summary of the landings, and I'm happy to take any questions.

DR. DUVAL: Before I go to questions, and I see Doug has his hand up, I just want to make a correction to the numbers that are noted there. When I saw in the landings report that there were 207 fish from North Carolina that had been landed by the private sector, I asked our recreational statistics program staff to look into that, and what that is is that was a red grouper and not a red
snapper that was intercepted. I have the raw data sheets. The species was correctly identified by our port sampler and correctly recorded. It was mis-keyed by the contractor.

We got a pretty big data dump back, our staff did, and it came back coded as a red snapper by the contractor, and so that has been corrected. We did get confirmation from the MRIP staff up at Headquarters that that correction is included in the 2015 final MRIP estimates, and so I just wanted to note that. It's certainly not breaking the bank here in terms of the total removals, but I did just want to note that, for the record.

MR. HAYMANS: Not that this makes a dramatic difference either, but I really didn't understand the explanation of why the mortality rate was used from SEDAR 24. We had a discussion in March that with circle hooks and whatnot that there was a new mortality estimate of 28, but yet we've used somewhere between 39 and 41, whether you're private or charter, and so can you help me understand that?

DR. LARKIN: What mortality rate are you referring to, the commercial, the charter/headboat of 0.41 , or the private of 0.39 ? You're saying using a different discard mortality rate?

MR. HAYMANS: We had a discussion in March about a 28 percent mortality rate, and that was based on, I think, the fact that we had gone to circle hooks since SEDAR 24, and I had asked Bonnie about that point, of would we be able to use the lower mortality rate for this estimate.

DR. CRABTREE: If I could, this ABC and all is based on the previous assessment, which used the other discard mortality rates, and so if you want to switch to using the new ones, then that's the new assessment, because it's all built into it. Now, I don't know if you changed those and used the new discard mortality rates -- I suspect, because we're so far over, that we would still be over.

MR. HAYMANS: Right. It's 10 percent difference, but I understand we've got two different assessments, but we're talking about dead fish in 2015 or 2014, and, to me, if we've made a change in management, like circle hooks, that changed the actual -- If we change the mortality, based on the management measures, then we should have applied that to those removals, or the dead discards.

DR. CRABTREE: That may be the case. I don't know if the SEDAR assessment that we're going to hear about in a little bit handled the mortality that way or not, and so I'm not sure, but, if you want, I'm sure Mike could recalculate these numbers, but I can't imagine it's going to make that much of a difference here.

MR. HAYMANS: It's not going to make a difference, but I know we asked that specific question in March, about which would be used, and I was just really surprised to see that we stuck to the 39 and 41.

DR. CRABTREE: Right, and I'm sure that Dr. Barbieri can fill us in on how all of that was handled in the new assessment.

MR. BOWEN: I was just going to add to it. Again, I was part of SEDAR 41 from start to finish, and, from my understanding, they did adjust the discard mortality rate to 28.5 percent, but I don't think -- Again, this is my understanding, but I don't think we as a council went through that review
yet and adopted those new measures. If somebody can correct me if I'm wrong, but I think I'm accurate in that statement, and that's the reason the discard mortality, the updated discard mortality, has not been used in that presentation that Mike just gave us.

DR. DUVAL: That is correct. I think Doug's point was just that the management measure to implement and require the use of circle hooks took place -- I think it became effective back in 2009 or something like that, and so he was just trying to suggest that, because that measure was implemented previously, that we might be able to apply those updated discard mortality rates to these total numbers of removals, and so that's all, and so Mike can certainly look at that.

DR. LARKIN: To speak to that real quick, we're still in the same boat. I used the discard mortality rate of 0.28 , and still the private dead discards alone exceed the ABC of 114,000 , and so, unfortunately, those discards are so high that, even with the lower discard mortality rate, you still exceed the ABC.

DR. DUVAL: Are there any other questions for Mike about the removals?
MR. HARTIG: Mike, the landings there, those are all state water landings, the landings in 2015? Did we have a season in 2015?

DR. LARKIN: No, we did not, and so they must be non-compliance.
MR. HARTIG: You have a number of landings from every fleet there, and so those landings came from state waters?

DR. DUVAL: There were no landings from North Carolina. That was the correction that I made after Mike gave his report, was that that was a red grouper that was mis-keyed in by the contractor as a red snapper.

DR. LARKIN: I looked at the recreational landings, Ben, and 80 percent of them came from federal waters. Zero came from state, but there is a blank in the dataset, meaning it just wasn't recorded if it was federal or state, and so the recreational landings, those 20 percent, it just wasn't recorded, but there were zero listed as from state from the recreational landings and discards for 2015, if that's helpful.

DR. ERRIGO: I also was getting the questions about the landings in 2015. I did look at the recreational landings, the MRIP landings. I don't have the headboat landings or anything, but, besides the North Carolina landings, which we now know how those occurred or what happened there, they're all listed as B1. Now, we often don't think about what A and B1 landings are, but B1 landings, or harvest, can be dead discards that are reported to the interviewer as, yes, it was dead when I threw it back. It's considered harvest, and so those landings could be dead discards or some other thing, something like that, and so they're not necessarily landed fish. They could also be misidentified. There's lots of different things, because they're all B1 besides the North Carolina one, which was mis-keyed. They were never intercepted by an actual port sampler.

DR. DUVAL: Thank you, Mike E. All right. If there are no other questions for Mike, I would like to go ahead and see if we can get into Dr. Barbieri's presentation. I understand that we might
need to adjourn and take this back up tomorrow, but we have a full day tomorrow, and so let's see how far we can go this evening with this.

DR. BARBIERI: Thank you, Madam Chair and members of the council. As Chairman Reichert pointed out, I was the Chair of the SEDAR 41 Review Panel, and so I thought it would be good for me to actually give this portion of the presentation. I'm more familiar with the outputs, the discussions, and results of the assessment, and I can provide more details.

I am going to go over some of the main results and summary results, a discussion of the review workshop, and then a summary of the SSC recommendations. I encourage all of you to pull up the SSC report, the PDF report that you have as part of your briefing book, and follow along, because that might help fill in some of the information that you might be interested in as I go through this brief summary.

This was a benchmark assessment conducted by the Science Center using data through 2014, and the result of the assessment, from the biomass status, was overfished, with a biomass estimated to be, in 2014, of about 18 percent of the MSST. The exploitation status that came out of the assessment was overfishing, with a fishing mortality rate estimated for the last few years of data in the assessment, and that's a geometric average of fishing mortality during the period of 2012 to 2014, about three times what's considered a sustainable level, which is F 30 percent SPR.

I just want to point out that, in this case, the assessment was not able to estimate the steepness parameter of the stock recruitment relationship. You may remember that we have dealt with this repeatedly in the past, that that steepness parameter allows us to more directly estimate the productivity of the stock, and we can produce then direct MSY estimates from the assessment. We were not able to estimate that in this assessment, and the result, stock status determination, is actually based on proxy reference points, which, in this case, are based on SPR 30 percent.

Here is the bottom line in terms of numbers and biomass at age of the current condition of the stock. We hear from stakeholders all over the Southeast that red snapper is really, really abundant, that they have rebounded very well, that they have responded very well to the rebuilding plan, and this assessment agrees completely with that. It actually shows very high abundance lately, over the last ten or so years. Sometimes the abundance levels are above the values that are estimated to have existed back in the 1950s, and so the stock is at very high abundance.

The biomass, however, of the stock hasn't really completely recovered to the level of biomass as expected for them to be at, in terms of the sustainable level. You can see here the different ages for this different abundance and biomass by year, and so you can see that the stock, since 2010, has really increased by quite a bit, and not just that, but the age composition of the stock has expanded. You can see here, by these colors, that we have more colors in these last several years than we've had for quite a while.

However, when you look at the spawning stock biomass at age for the stock, and this is the biomass of the fish that are sexually mature, you see here the biomass of the stock as a whole. This is all ages combined on the left, and here is the biomass of the fish that are sexually mature, the spawning stock biomass of the stock, and you can see that that's still much lower than the total biomass, because the age composition of the stock has been severely truncated over time, and, even though
it is recovering and showing very strong signs of recovery, it hasn't recovered to the level, to the age composition, that is expected to be there when the stock is at a sustainable level.

I put here some reference lines both for the total biomass and for the spawning stock biomass. Actually, this parameter, the biomass here, the SSB, is expressed in egg production, and so this is really, in terms of capturing, expressing the reproductive potential of the stock, it's expressed in egg production. Because older ages are expected to be producing exponentially higher rates of eggs, in this case, you have this much lower spawning stock biomass when compared to the total stock biomass.

Exploitation history of the stock shows a pattern of long-term overfishing. The SSC had a number of comments, if you go through our report. If you go through the SEDAR 41 review report, you're going to see that both the review panel and the SSC had a number of concerns regarding the exploitation status of this stock, issues that this increase here in the terminal years of fishing mortality couldn't be easily explained, even despite the changes in selectivity and the fact that the stock is estimated to be undergoing overfishing since the late 1950s. That was also difficult to reconcile with the history of fishing in the Southeast U.S.

The bottom line is the SSC had much more confidence on the biomass status of the stock, knowing that this species lives to be long-lived and that's in the first six year of a multi-decadal rebuilding plan, that this was much more credible than the exploitation status of the stock, and we have a lot more details of that in our report.

SSC discussion, there was a lot of discussion about this assessment. The assessment was accepted by the SEDAR Review Panel. This is composed of SSC members plus CIE members, and myself serving as Chair. This was accepted as the best scientific information available, but both the review panel and the SSC pointed out a number of uncertainties and limitations that have been caused by data deficiencies.

In particular, this moratorium that started in 2010 and the subsequent mini-seasons that have really generated the pulse fisheries that are episodic in nature is very difficult for you to get credible estimates of catch, effort, and discards from those fisheries when you have a generalized survey that is really set up to sample over broader time periods. That was a major source of uncertainty in the assessment, and you have more details of that in the review report.

Because of that, the SSC considered that the exploitation status, that's the overfishing status of the stock, was much more uncertain than the biomass status, and so the conclusions that the committee came up with were that that terminal fishing mortality rate there, which is the mean of those last several years in the assessment, most likely exceeded that 0.15 value. That is the reference value there of F 30 percent SPR. By how much, we don't really know. We couldn't determine it. We could not accept that the results of the assessment were unequivocally informing the amount of overfishing that was happening, and so the SSC basically limited its recommendation to the fact that F was most likely above the sustainable level, but we couldn't measure how much. Therefore, we recommended a reduction in that fishing mortality to the level of $F$ rebuild, which, in this case, is actually fairly similar to F 30 percent SPR. It's 0.14 .

The biomass status was less uncertain, and we have all the information about the age composition and the truncated age structure, and so it was easier to reconcile that result, those results, with the
assessment outcome. I am going to pause there, Madam Chair, because this concludes my presentation. I didn't put any catch level recommendations table in here, because you have that in your report in front of you, the SSC report, but the SSC did make catch level recommendations at F rebuild for red snapper for both management starting in 2016 and management starting in 2017. I will pause there, Madam Chair, to see if there are any questions from the council.

DR. DUVAL: All right.
MS. MCCAWLEY: Luiz, can you talk a little bit about what was driving the overfishing condition? Was it about the discards? Was that what was driving that?

DR. BARBIERI: Right. Primarily, it was the estimates of discards. Actually, when you look at this latest report that Mike just presented, and you look at those removals, the table of removals show, for 2015, that 99 percent of the total removals are due to discards and 1 percent is due to a direct harvest, and this was no different when looking at this exploitation over the last several years, beginning in 2010, where the vast majority of the removals, a disproportionate amount of the removals, are actually caused by dead discards.

MR. BOWEN: To further Jessica's point, could you explain maybe where those discards are coming from and when?

DR. BARBIERI: The discards come from the MRIP survey primarily. Those are the B2s. The MRIP survey reports results for different types of the condition of the catch. It's either landings, the unseen harvest, which is the B 1 . We have $\mathrm{A}, \mathrm{B} 1$, and B 2 , and the B 2 is the unseen discards, and so those estimates that Mike put up there on the board, that's where that estimate is. Do you have a follow-up?

MR. BOWEN: Yes, a follow-up. Thank you. I mean geographically. Do you know where those fish are coming from?

DR. BARBIERI: I do not. I think right now, the way the MRIP estimates are put together, that is applicable to the entire range of the stock in the Southeast.

DR. DUVAL: I think, based on the landings report that you just saw, Zack, it looked like the majority of those were coming from Florida, but I'm guessing that your question is can you attribute those to a specific area in Florida or southern Georgia or specific areas on the coasts of the different states. Is that really your question?

MR. BOWEN: Yes, ma'am.
DR. BARBIERI: To that point, Madam Chair, it is easy for us to imagine -- That's where the center of abundance of the stock is, and that's where a lot of fishing activity takes place on red snapper, that you would imagine, but, right now, the estimates that come out of MRIP do not present any specific geographic location for those discards.

DR. DUVAL: Again, that's not how the survey is set up.
MR. COX: Luiz, what is the age composition that we're looking for here to be considered rebuilt?

DR. BARBIERI: That's what we call the equilibrium age composition at the sustainable biomass level, and there is a -- I don't know if it would be easy for us to pull up the assessment. I can show you later, Jack, but, basically, you look at what ages you would expect to see at this stock when the biomass of the stock is at the level that you would obtain if you fish at a fishing mortality of 30 percent SPR, conducive to the 30 percent SPR. I know it sounds convoluted, but, at that biomass level, at 30 percent SPR, we expect to see a number of ages and proportions of ages.

MR. COX: Scientifically, it probably makes a lot of sense. What I'm looking for is, if we're averaging a little bit less than a six-pound fish right now, which is what I think I've heard, what pound fish are we looking for to be at equilibrium?

DR. BARBIERI: That would be a very wide range of that, but I think the nature of your question is size composition of a recovered stock or a healthy stock versus the age composition. I mean this assessment is really producing -- It's an age-specific model that's being used, and so it's actually reporting your results based primarily on age and not necessarily on size, and so those -I'm sorry?

DR. DUVAL: We do have the assessment on there, if you wanted to pull anything out of that.

DR. BARBIERI: Yes, but just to show Jack that, over here, the fact that egg production of those older females is considered to be disproportionately larger than for the younger females, that's causing the SSB estimate -- Myra, you are the bomb. Here is what we call the F 30 equilibrium age composition, and so it doesn't necessarily include high numbers of older fish.

It still expects that, like any kind of an age structure, any population, that you're going to have a larger proportion of the younger fish than the older fish, but, over time, you can see how the age composition has moved from being fairly close to the sustainable level here in 1970 to much further away in 1990, and it's getting quite a bit better. You can see how this proportion of older fish has gone up compared to what it used to be in 1990, but it still has a way to go to get into that age composition that's expected at equilibrium.

Now, another confusing factor, if I may, Madam Chair, is that red snapper show something that we call compensatory growth. At lower abundance levels, they really invest a lot into growth, and so you're going to have very large increases in size at age, where, when you look at the size composition out there, you really expect them to be a lot older than they are. They just seem to grow faster.

MS. BECKWITH: In the SSC report, on PDF page 20, you guys talked a little bit about the biomass status of the stock being less uncertain, because obviously we have this truncated age structure, but the caveat caught my attention. You guys said that one of the caveats to be mentioned here is that the model experts expect to see an extended age structure based on an age-specific estimate of M , but this age-structure has never been observed in the fishery.

You guys talked a little bit about how some different-shaped curves for the natural mortality at age might lead to some different conclusions, and can you go a tiny bit into a little bit more of that discussion, because I wasn't at the SSC meeting, and so I'm sort of curious what you guys talked about and if there was any discussion on exploration of some of these alternate curves and whatever you can sort of provide.

DR. BARBIERI: Sure. One thing is, and we had a lot of discussion about this during the meeting, is that, one, for a long-lived species like red snapper that has been depleted for a long time, and if the age composition has been truncated by quite some time, that the availability of older fish for you to actually sample the reproduction and estimate what that batch fecundity, number of eggs that they produce per batch, and spawning frequency, the number of times that they spawn during the year, for that to be easily estimable, and so there has to be a fair amount of error there, because we don't have a whole lot of empirical data.

I discussed this a little bit with Marcel at the meeting. Marcel actually pulled up the report and showed me that there were some larger and older females that had been sampled, but, being somebody who has come from a fish reproduction type of background, I can tell you those estimates are very difficult to obtain unequivocally when you have small sample sizes, and so that is a concern, is that the model, as configured, is really putting a lot of weight on those older ages, assuming an exponential increase in fecundity at age, but we do not have a whole lot of empirical data at this point to inform that relationship. It's just something that is based on basic guiding principles of how you expect older, heavier females to have increased fecundity, and so that's one.

Two is the fact that the natural mortality estimate that was used is -- This is a new estimate, and this was discussed extensively during the assessment workshop, the review workshop, and during the SSC meeting, and I, for one, have concerns about that estimate. It was accepted as the best available science, and I'm not trying to backtrack from that, but John Hoenig, who has proposed this new relationship, who is a professor up at VIMS, is a friend of mine. I have been discussing this with him, and I have been exploring a lot of the data that was used for how that new relationship was estimated.

The SSC is actually discussing, and Chairman Reichert has agreed for us to have Dr. Hoenig come to our October meeting and help clarify some of these issues, because there are some issues there about that new natural mortality function that are not completely adding up. After the gray triggerfish assessment workshop, I actually asked my staff to go into the VIMS database and do a diagnostic of all the data that went into that relationship, and we found a number of errors. They were inadvertent, of course, and we are working with Dr. Hoenig in trying to address that process and revisit it. My recommendation, at this time, is that we do not use this latest estimate for any new assessments, until we can have this resolved.

If you look at our report, we have there a couple of things. One is the age composition that is estimated to have been present in the 1950s is based on theoretical assumptions, because you run that as like a simulation model that rebuilds the age structure and then projects all of that forward, given natural mortality and fishing mortality.

Two, the fact that this increase in natural mortality that was caused by this new estimate of M is actually causing some depletion of the younger ages that we had not really seen before in previous assessments, and so that statement there was related to those two points that the SSC wanted to highlight as major uncertainties that still exist in this assessment.

MR. HAYMANS: That whole discussion of Anna's question was exactly what I noticed, just in looking at how pretty that slope was, that downward slope in the 1950s, 1960s, and 1970s, and knowing that it was assumed data, and so I guess my question would be why could you not start that series in 1970, to eliminate -- You still get forty-six years, approaching maximum age on that
fish, rather than including the assumptions from the 1950s and 1960s? Why do you have to go back that far? Then, as sort of a loaded gun, I guess, and you spoke to it just a moment ago there, but what do you think the overall comfort level of the SSC was with forwarding this assessment to us? But the first is about the 1950s and the 1960s.

DR. BARBIERI: I mean the first is statistical catch at age models, and the Beaufort Assessment Model is a forward-projecting statistical catch at age model. Those models are structured like this. They start early, as far back as you can, to go to a state where you consider that the level of fishing was either very low or irrelevant at that point, and so usually we go to some period after World War II, 1950, as a convenient place to start, a period that is estimated to be a fairly low exploitation at that point.

Now, the model has data over here in abundance and age composition and size composition, and this data anchor the trajectory that you see there, and so you're going to have different pieces of this assessment model that weigh differently given the amount of data that is available, and so, in this case, even though this started back here, this is what you call the burn-in period, so you can allow the model to run and actually multiple iterations and converge towards the part over here that's more data-rich. It's basically to find a path to go to where the model is better informed by data.

We did look at alternative sensitivity runs that started at different periods there, and the results are almost exactly the same. This is for the reasons that I mentioned, that, as you start to have more data, you anchor your results, to a certain extent, and so even though you start back here, they are going to converge to that data-rich portion of your distribution.

DR. DUVAL: We have Ben, then Mark, then Charlie, and then Jessica, and it's ten minutes after six right now. I'm going to let the discussion go until 6:30, and I realize that people may need to chew on this and we may need to come back in the morning. Dr. Barbieri, I assume you will be here, because you still have a slide left on gray triggerfish to go through.

DR. BARBIERI: Absolutely, yes.
DR. DUVAL: I just want to put folks on notice. I think we're starting to get a little tired, and so I just want to try to get through what we have right now, and then we will adjourn for hospitality.

MR. HARTIG: I think most of us forgot about the time, Luiz, when you came up and started giving your presentation. I appreciate the way you've given your presentation. I think you've captivated the crowd, and people have forgot about what time it is. The thing that I haven't bought into is this age versus size reproduction thing.

I mean, starting at age five, you have some animals that are starting to reach their maximum length, if you look at the age and length information. Then, from five to six to seven to eight to nine to ten to eleven to twelve, until you get to what I call the reproductive sustainability -- It starts at about, from what you're saying, twelve to fifteen?

DR. BARBIERI: Twelve to fifteen, yes.

MR. HARTIG: Okay, and so you've already got fish, starting at age five, that are the same size as fish that are at their reproductive sustainability. Those animals are large animals. They are producing a lot of eggs. There's a lot of fecundity being in the stock, but it's not showing up in the model, because it's all age-based. I mean we see pretty much a functional stock now that's producing large year classes with relatively low spawning stock biomass, and so that disconnect there, to me, points to somewhere there is more eggs in the population than we're giving it credit for, based on the size of animals at younger ages, between five and twelve.

DR. BARBIERI: I think that this is a concern. I mean the fact that we are trying to capture what are the factors that lead to higher egg production, and, in this case, I don't disagree with you. Age has been shown to be one factor where you increase egg production, you increase the quality of eggs, and, in many cases that we have documented, well documented, for the Gulf is that you have higher spawning frequency at older ages.

The post-Deepwater Horizon sampling that was conducted in the Gulf was really able to lift the sampling and get females over a broad range, over a broad range of sizes and ages, and those estimates are available. I mean, here, we are basically making the same assumption. This is still red snapper, and we would expect older ages to be producing more eggs, better quality eggs, and spawning more frequently. That's how the model was configured.

Personally, I agree with you that this is not being properly adjusted by size. Coming from that background, and I look at the variables that are better predictors of egg production, and, between age and size, I would definitely go with size. Any relationship that you look at age production versus age versus size, you get a much higher explanatory response from size than age. This is something us to look for the next assessment. We're definitely going to be still using an agestructured model, of course. We're still looking at the demographics of the stock, but there are improvements here to be made that would help adjust those fecundities at age as you add a covariate of size.

DR. DUVAL: Thank you, Luiz.
MR. BROWN: Ben actually asked the question that I was going to ask, because I was curious about that with the fecundity studies and everything, but, also, I would like to reference these PSEs with the discards from MRIP and how much influence that plays on the stock assessment, and I just don't -- I have never felt comfortable about how high of a percentage that is that is incorporated into the assessment.

DR. BARBIERI: This is another concern, serious concern. I mean you have seen me come here and give presentations on multiple stock assessments, and usually the SSC doesn't have as many concerns as we have voiced in this report, because the data-poor nature of what's going on since the moratorium came up in 2010 is making things more difficult.

In this case, because of the moratorium, because we had shorter seasons, we have such a large proportion of the total removals that are due to discards that the assessment model actually had to be configured with a fairly small coefficient of variation on the discards, on the order of 5 percent is what they had to do, because, otherwise, the model would not converge.

If we had removals, a large amount of removals that were due to landings, then we could tighten the removals on landings and loosen the confidence that we have on the discards, but, in this case, because we have such a small proportion of landings, the model still has to solve an equation. You need to know something to anchor your scaling of the population, and, in this case, it's removals, and so this is a problem. It's outlined in the assessment report as a major source of uncertainty. Both the review panel and the SSC discussed this and expressed concerns, but we didn't know how to get this resolved, given the fact that such a large proportion of removals is coming out of the discards, and those are poorly known.

MR. PHILLIPS: Luiz, I should have been counting the number of times I've heard "uncertainty in the estimates", and I wasn't. I think you all have done the best job you could possibly do with what you had, but I think you're building a house with not enough two-by-fours and not enough shingles and not enough hammers and nails. We could probably build a barn, but we can't build a house and have a good house, and I think that's an analogy I will use.

It seems like we're trying to build back to a biomass of the 1950s and 1960s that we assume, at an age structure that we assume, and we're pretty sure that there's not a lot of old fish out there, but yet, somehow, we have managed to grow the biomass back up to some really high levels, and, if I remember, I read in one place that the steepness that they were using, there's not a correlation, or very little correlation, between recruitment and biomass if you have a really high steepness, but, somewhere else, I read that we were down to 18 or 22 percent MSST, and so we need to pick the biomass up, so we can get some recruitment.

Then we end up with a fishery that is a choke species. I could see it if was speckled hind, but it's just hard to get my head around that we've got so many fish and it's a choke species. How many more fish can we put in the barrel? Help me.

DR. BARBIERI: Right, and this is another concern, the fact that, at this point, and this council had discussed this and the SSC has discussed this repeatedly. I mean we knew that the moratorium in 2010 was going to create data deficiencies that not having that landings stream available for input into the assessment would create problems, and you may notice that our report -- I mean we tried to explore this as well and provide some recommendations. We're going to have to ramp up some level of monitoring to be able to continue picking up the signal on this recovery, on the rebuilding plan. To be able to document it, we're going to have to have something there.

I agree with you, and this is what the review panel and the SSC were trying to deal with, that the assessment team, I think, the analytical team, did a fantastic job with the data that they had in hand, but, especially since 2010, the level of uncertainty in those inputs is very high, and it's just very difficult to deal with. I would not know how to tell you anything different, other than it's a problem that we're going to have to grapple with.

DR. DUVAL: Jessica, last word.
MS. MCCAWLEY: A couple of questions. Luiz, would you say that what we know about Gulf red snapper was used to inform this assessment model? Why did the Gulf use the SS3 model and the Atlantic used the BAM model?

DR. BARBIERI: If I said that data or information from the Gulf was used to inform this assessment, that's not what I meant at all. What I said is that there are information out there about red snapper biology and the increase in fecundity and the increase in spawning frequency at age that could be used, because that is based on a lot of empirical evidence from the Gulf, to support some of the assumptions that were made for the South Atlantic, which undoubtedly were not as well informed by data.

The use of the BAM model versus the Stock Synthesis 3 model, to be perfectly honest with you, I think this is completely irrelevant to the discussion. The two models are statistical catch at age models. I think that, looking at this latest implementation of the BAM model, it's -- It follows the same procedure steps, basically. It is implemented in AD Model Builder, and it's a statistical catch at age forward projection type model, and so its structure -- The guts are still solving Baranov's catch equation. It's the fundamental sort of numerical algorithm that you use for this, and so the Beaufort team has been comfortable, I think, with the coding and the fact that they have -- It's easy for them to adjust the model and change parameter inputs and data inputs and the weights and all of that and understand all the outputs than the SS3, which is a very complex model, but I honestly, having been exposed to both models, I don't think that is a relevant issue. It didn't concern the assessment panel, the review panel, or the SSC, for your peace of mind.

MS. MCCAWLEY: If I could follow up on that. The ASPIC model was used, and it determined that the stock in the Atlantic was not overfished and not undergoing overfishing, and that was not an age-structured model, and so can you talk about -- The ASPIC was used to calibrate the BAM? I'm a little confused.

DR. BARBIERI: Not necessarily to calibrate the BAM. I mean assessment scientists like to use different models with different inputs so you can look at the same thing from multiple perspectives. I mean it's just like you can look at this. It's the same thing, but if you look at it from this angle, it just looks a bit different. It's just more information about the same thing you're looking at. It's just a different perspective.

The fact that ASPIC is not an age-structured model actually helped us to understand the value of age composition and having information on the selectivity, the age-specific selectivity of the different fleets, which ASPIC cannot account for. Biomass, in that case, is really a blob of production in the stock that is not broken up into demographic components, and we know that real populations don't operate like this, and so it helped us get perspective on what the outcomes would be, had we not been able to integrate age and size composition and have those selectivity functions estimated.

DR. DUVAL: All right. I think we've talked about this probably enough for today. I know everybody's brains are probably swimming. We will pick back up with this tomorrow morning at 8:30. Luiz still has an additional slide to run through for the gray triggerfish portion of the assessment, and, if there any additional questions that come up with regard to red snapper, we can cover those in the morning, before going through Amendment 37 and Amendment 41. I thank everybody for their hard work today, and we recessed for the evening.

The Snapper Grouper Committee of the South Atlantic Fishery Management Council reconvened at the Hilton Cocoa Beach Oceanfront, Cocoa Beach, Florida, Wednesday morning, June 15, 2016, and was called to order by Chairman Michelle Duval.

DR. DUVAL: We are going to go ahead and pick back up with additional questions. We had some good discussion yesterday with Dr. Barbieri, our SSC Chair and Chair of the Review Committee. We are going to pick back up with questions from the committee regarding the results of SEDAR 41. We were somewhat in the middle of questions regarding red snapper, and so I'm opening it back up to the committee for additional questions. Luiz, I know I had one question. What spawning potential ratio is the stock at right now?

DR. BARBIERI: The short answer to that is I don't know. I didn't go look at the actual number, but it is in the report, and I didn't go look, but I know it's below 10 percent at this point, some value below 10 percent, and maybe Marcel or somebody can check the report, just to make sure that I'm not off track here.

DR. ERRIGO: It's 9.
DR. DUVAL: So 9 percent SPR, but we're still -- Under that low level, we're still having these apparently great recruitment classes. Is that correct?

DR. BARBIERI: That is correct, and, to tell the truth, to my own surprise, I am beginning to reevaluate my assessment of how red snapper fits into the pattern of long-lived species. It's really sort of an abnormality, because it lives to be old, over fifty years old, but it reaches sexual maturity very early in life and has very high growth early as well, and very high fecundity, and so it is not unusual for us to actually, when we have CIE reviews, to have the CIE reviewers, who come from other parts of the world, other countries, outside of the U.S., and they make comments about red snapper, because they don't see a species like that fitting anywhere in terms of our usual pattern of life history population dynamics and stock productivity.

Somehow, they have very, very high compensatory reserve, or they seem to, and those of you who have heard me talk to the Gulf Council repeatedly over the last many, many years, I have strongly advised them not to decrease the SPR reference point below 30, because that is the standard globally that we use, but having gone through, in detail, the process of SEDAR 41 and seeing the biological capacity of red snapper, I can't help, as a fisheries scientist, but to reevaluate my previous advice, and I really feel that they have phenomenal compensatory reserve and the ability to produce very strong year classes, even at fairly low levels of spawning stock biomass.

DR. LANEY: But, and you touched on it yesterday, I think. How does the age of the animal relate to egg viability and robustness, maybe for lack of a better term, and how does the SPR value that you set -- Is the relationship between the SPR value and the age structure of the stock?

DR. BARBIERI: For red snapper specifically? The short answer is we don't know. We don't have scientific research on egg quality of red snapper. We don't have research on the egg quality of red snapper that assesses the composition of the yolk or fat content or whatever it is, in terms of amino acids and proteins or whatever that they do -- I have read studies for other species, but we don't have that for red snapper. What we do know is that larger fish and older fish produce a disproportionately larger amount of eggs as they grow and they age.

DR. LANEY: If though, for example -- I am thinking of another long-lived species, which is striped bass, where I think we do have some information on that, and, generally speaking, and anybody can correct me if I'm misspeaking here, but I think, generally speaking, the larger, older
females are going to produce a higher quality egg, and you have a stronger likelihood of producing a dominant year class if you have a fair number of older females in the stock, and so, if the same thing were true for red snapper, there would be an advantage to having some number of older females present in the stock, I suppose, but you're saying we don't have that information right now, but it seems, to me, like that would be a valuable arena for research.

DR. BARBIERI: Right, and, in the case of striped bass, you have a very different life history pattern, and they are not multiple spawners, and they don't have what's called indeterminate fecundity, and so they cannot continuously during the spawning season recruit primary oocytes, those little oocytes, and turn them into eggs yolked for spawning, and so they basically are what we call total spawners, and they have a much shorter spawning season.

The way that they basically commit body resources, energy and fat, to egg production seems to be very different than some of these other species, and red snapper, I would say it's sort of like on the other end of that spectrum, in terms of their flexibility into pooling the small batches of eggs and maturing them over the spawning season, while at the same time they can invest into body growth. I mean usually you have that tradeoff between investing in reproduction versus body growth, and they seem to be able to manage both in a way that is poorly documented.

MR. BROWN: Luiz, I heard you say a minute ago that it was almost -- I know what you're saying, but it was kind of controversial, a sentence that you said about you have a lack of this information for the larger and older fish spawning-wise, but some of our conversation in the past has been that the older fish were supposed to be more productive, and so I'm trying to wrap my brain around this, what is the consensus on this, because we're seeing a lot of larger fish, but then we're being told too that sometimes those are not the oldest fish, but they're all podded out with roe, and this has been -- This past couple of weeks, I've seen a lot of them.

DR. BARBIERI: Well, think about this in this way. I mean there was plenty of evidence from other fishes, other teleosts, that older fish, older females, actually have higher egg production and the spawning capacity of those fish is better. For a species like red snapper, you don't really reach maximum egg production until they are about between fifteen and twenty years old.

In that case, rebuilding that age structure is positive for the population. It most likely will bring population stability and it will bring stability in terms of you avoiding having these sort of episodic peaks of recruitment that happen periodically, and you are bound to have, as you rebuild the age structure, a more constant sort of demographic structure for your stock, and so I'm not saying that it's not advisable to manage a fishery by rebuilding the age structure. I still think that this is a good idea, but, because red snapper seem to show such strong compensatory capacity, and, because this compensatory capacity is sort of atypical of species that have their longevity, they sort of don't fit that same pattern.

Now, also, I mean we know that when we look at fecundity as number of eggs, and we relay that to either length or age, the relationship between egg production and length is much tighter. The explanatory capacity of your relationship there is much tighter when you look at length than when you look at age. Actually, Clay Porch and colleagues from the Science Center did a study to that effect specifically in the Gulf, and they looked at the effect of length versus age, and they couldn't really find a very tight relationship for red snapper specifically between age and egg production, not as tight as they found for length. I will have to look for that paper, but it's there.

DR. DUVAL: Thank you, Luiz.
DR. CRABTREE: Michelle, I have several questions, and so is that okay? Will you bear with me for a while? Good morning, Dr. Barbieri, and it's good to have you with us this morning.

DR. BARBIERI: Good morning, Dr. Crabtree.
DR. CRABTREE: A lot of the big issues seem to be with the fishing mortality rates and the exploitation status of the stock. When I look at the assessment, in at least the recent years, it seems that the F rate pattern almost exactly tracks the MRIP discard patterns. Am I seeing that right? They're quite similar, and I guess that's because almost all of the mortality is coming from the discards. Did I understand you correctly -- You talked some about the CVs on the discards, and that those were changed for some reason in what went into the model. Could you explain that to me again?

DR. BARBIERI: What happens is, without getting too technical, but the way that -- All these stock assessment models still have the fundamental principle behind it is solving Baranov's catch equation, something that was published way in the early 1900s, but it's still the standard for you to relate landings with population productivity and be able to do that estimation procedure. You have to have -- The model needs to have some information about the magnitude of removals for it to be able to come up with that scaling of stock productivity. To give you one of my famous analogies, if I may --

DR. CRABTREE: Please do.
DR. BARBIERI: It's the equivalent of you, for example, when you look at somebody who buys fancy cars and dresses very fancy and lives in a big, fancy, expensive house. You can make an inference, based on that, that their income is actually high, and the opposite is true. If you see somebody living on the streets and without much income, obviously the income is -- That is the logical thing. In a figurative way, the model is doing exactly that. It's actually looking at the magnitude of landings and saying, for you to be able to produce this many fish in terms of landings, they had to come out of somewhere. It actually produces recruitment streams to feed into that, but here's the thing.

In the case of most assessments that we have, when we have a good idea of landings, and if we were to put the report here, you're going to see that the fit to landings has to be fairly tight for the model to be able to converge, because you have to have that idea of removals, but when you have a species like red snapper, where 95 to 99 percent of removals are assigned to discards, the model cannot rely on actual landings to anchor that productivity factor. If you don't tighten that CV around the discards, you cannot actually find a viable solution.

DR. CRABTREE: So the CV was tightened? I want to know specifically what they did. The CVs are around 0.3 to 0.4 , something in that neighborhood? What did they use?

DR. BARBIERI: No, the CVs were at 0.5 percent, 0.05 .
DR. CRABTREE: That's what was used?

DR. BARBIERI: That's what was used.
DR. CRABTREE: That's quite a bit lower than the actual CVs on the estimates.
DR. BARBIERI: About ten times, yes. The actual CVs reported at the MRIP website vary from 40 to 60 , with an average of about 50.

DR. CRABTREE: Have we ever done that with an assessment before that you know of? I can't recall one.

DR. BARBIERI: Well, recently, we had to do the same thing for goliath grouper, because we don't have a good idea of landings.

DR. CRABTREE: So we're effectively tricking the model into thinking we know something that we really don't know, by fudging the CVs?

DR. BARBIERI: Right. I mean we are giving that piece of information disproportionate weight in the objective function, yes.

DR. CRABTREE: That's done because the model can't come to a solution or a resolution if you use the actual uncertainty?

DR. BARBIERI: That way, we cannot estimate what the actual removals are. It can't find that figure.

DR. CRABTREE: But we don't actually know what the removals are. We're just pretending artificially that we do. Okay. You also brought up an issue with the natural mortality rate, and I know there was some new methodology that was applied in this assessment. We haven't used it before, and I thought I heard you say something about you had reservations with that methodology and that you would recommend it not be applied in a future assessment, until some of these issues are resolved. Did I hear that correctly?

DR. BARBIERI: You did. I mean, after the SEDAR 41 assessment workshop, and this is when it was -- I mean this paper was published maybe last year or the year before, and, to be honest, I hadn't read it until then, and so it wasn't until the SEDAR 41 assessment workshop, when I saw the values that were coming up, that it sent up a red flag, and especially for gray triggerfish, because you don't have as many ages in the fishery.

The natural mortality estimated by the new methodology was shooting up the productivity of the stock to a value that I thought was unrealistic, like that, at the terminal year of data in the assessment, 2014, that the gray triggerfish stock was at 90 percent of virgin biomass, and I don't think that's credible.

DR. CRABTREE: Are these reservations yours personally or are these -- I would like to know if the SSC feels like that methodology is not ready for prime time, so to speak, and to be applied to future assessments, because, if that is how you feel, I have real reservations about it being applied on this assessment. This is arguably the most significant assessment we have right now, and that
would cause me a lot of concern, and so I think that's something that needs some more discussion with the SSC, whether it's appropriate to --

DR. BARBIERI: The SSC hasn't had the opportunity to really look into this in detail. After the SEDAR 41 assessment workshop, and SSC Chairman Reichert was there as an assessment panel member as well, and we talked about it. After I got back to the lab and started discussing this with staff and we started -- I called John Hoenig and all of this, and so I reached out to Chairman Reichert and staff, John Carmichael and Mike Errigo --

DR. CRABTREE: Not to cut you off, but then I would ask Michelle that staff flag this as something that we need to have some more discussion with with the SSC.

DR. BARBIERI: We asked to have this discussion, really to have John Hoenig come to the meeting in October, so we can actually have a full discussion.

DR. CRABTREE: All right. Now, the steepness issue, so we have, in most recent assessments -I guess we somehow, through some analysis, it was decided that 0.84 was the appropriate steepness we were going to use for reef fish species. Is that right? That's what we've been doing recently?

DR. BARBIERI: Well, what we do is you apply a Bayesian approach that uses a prior, and the mode is 0.84 , yes.

DR. CRABTREE: Okay, and so, in this case though, we didn't do that, and we used a steepness of I think one, or very close to it. Can you tell me why that was done?

DR. BARBIERI: Well, we actually, during the assessment workshop, explored a range of values of steepness, and we evaluated the model diagnostics to see whether they were producing credible results or not that could be used, and we couldn't really find, and I will ask Marcel to add to that if there is anything else, but we actually decided not to go with a value of steepness, and I think this is an important point, that steepness was not estimated in the assessment. We basically decided that we would not use steepness, and we didn't have enough data, or the data didn't have the information content needed for estimating steepness, and so we used proxy reference points, SPR 30 percent, but we did not estimate steepness as part of this assessment.

DR. CRABTREE: Right, and I get that, but that is very common, and, when we've not been able to estimate steepness, we've been using 0.84 , but, in this case, you didn't do that, and I'm trying to understand why. Why didn't you use 0.84 as the proxy?

DR. BARBIERI: Right, and so there are two different things here that you can do. One is you can fix steepness at a value that is substantiated by some meta analysis or whatever, and you can fix it. In this case, we did not want to fix it at 0.84 . We decided not to use any estimate of steepness.

DR. CRABTREE: But why? That's what I'm trying to get at.
DR. BARBIERI: Because none of those values that we had explored produced productive outputs, and so all the --

DR. CRABTREE: So you're saying the model wouldn't converge or it was unstable if you used what we typically --

DR. BARBIERI: No, the model wasn't stable in some situations, and it was producing diagnostics, in terms of fits to indices, fits to the age and size comps, all the other diagnostics that we explore, that were not acceptable for us to consider that.

DR. CRABTREE: Okay, and so we have a situation then, where if we use the actual CVs for the removals, the model isn't stable or won't run, and if we apply the steepness, as we typically do, the model is not stable and won't run. In two cases, we had to essentially give the model the answers to get it to come forward with one.

Now, I am reading from the snowy grouper report, and I will quote. It says: Choice of X percent, referring to the SPR proxy, implies an underlying steepness, as described by Brooks et al. in 2009. Thus, choosing a proxy equates to choosing steepness, and I assume that that cuts both ways. Choosing a steepness equates to choosing a proxy. Is that right?

DR. BARBIERI: That is correct, yes.
DR. CRABTREE: In this case, a steepness of one was chosen, and what does that imply about what the reference point, if you follow that sort of logic?

DR. BARBIERI: Let me try to make this very clear, because it's a technical detail that is very important. Neither the assessment panel for SEDAR 41 nor the review panel for SEDAR 41 nor the SSC fixed or suggested any value of steepness for red snapper. Steepness values were not used for the red snapper stock assessment. We went to the proxy reference point. The value of 0.99 that was used in configuring the model is simply a way to generate a stream of average recruitments into the future that we can use for projections.

DR. CRABTREE: I get that, but you can't get around that in fact you did choose to use 0.99 as the steepness in the assessment, right? Someone chose to use it, because it was used.

DR. BARBIERI: Right.
DR. CRABTREE: So my question is, doesn't the choice of that steepness -- I mean, if you follow the language in previous, doesn't that imply something about the reference point? I am asking you, what would that reference point then be, if you buy that 0.99 was chosen as the steepness?

DR. BARBIERI: If we were -- By the way, we have all of this in writing as part of the record in the SEDAR report and in the SSC report, that a steepness value was not used.

DR. CRABTREE: But I thought you just said that it was 0.99 .
DR. BARBIERI: It was just to generate a stream of --
DR. CRABTREE: Right, but then it was used. I don't think we're getting anywhere on this one, and so I'm going to move on.

DR. BARBIERI: This reminds me, Dr. Crabtree, of some of the discussions that we've had in the Gulf about the same topic.

DR. CRABTREE: Yes, and in the Gulf, we use a steepness of 0.99 , and it is in fact estimated by the assessment there, and so it's interesting. The selectivities, the outcome is very sensitive to this change in selectivities since the last assessment, but most of the removals are discards, and we don't have size information on the discards, and so how do we know what change in selectivities has occurred in the discards? What was the source of information for that?

DR. BARBIERI: There were some survey information intercepts during the mini-seasons that were used to evaluate the age and size composition, estimate the age and size composition, of discards, but, for the vast majority, 95 percent plus of the year, we actually did not have that information on the size and age composition of discards, and so that is a major uncertainty. That selectivity function that was estimated for the recreational sector, for harvest and for discards, is a major uncertainty in the assessment.

DR. CRABTREE: Okay. Now, in the report, and I guess that, along with these other things, lead you to conclude that there is high uncertainty in exploitation status, and then you go on to say the SSC conclusions were limited to determining that the F in 2012 through 2014 exceeded 0.15 , and, when I look at the overfishing evaluation in here, it just says the ratio is greater than one, but so you're unable to tell us by how much we're overfishing, and does that imply then that you're unable to tell us how much we need to reduce the removals to end overfishing?

DR. BARBIERI: Absolutely. I mean we just --
DR. CRABTREE: Then my question is, if you're unable to tell us how much we need to reduce the removals to end overfishing, how are you then able to tell us exactly how much we need to reduce removals, because that's exactly what you then do, isn't it?

DR. BARBIERI: No, it isn't. I mean, if you look at the table of our catch level recommendations in our report, it does not provide any guidance on the amount of removals that needs to be reduced.

DR. CRABTREE: In fact, I don't see it that way. The current ABC is 114,000 fish, and the ABC coming out of it for 2017 is 61,000 fish, and so you're in fact telling us exactly how much we need to reduce by.

DR. BARBIERI: No, and let me clarify that. I think there's a misunderstanding there, and so a couple of things. What the SSC did is recommend a harvest level, a level of harvest and discards, removals, for OFL and ABC , at the F value prescribed by the rebuilding plan, and so that value is yield at F rebuild.

## DR. CRABTREE: Right.

DR. BARBIERI: Right, and so we don't know how much we're going to have to reduce the current harvest, if it includes harvest plus dead discards, to be able to reach there. We just prescribed that that's the only thing that we could say. Now, the value that you find there, the fact that you have a reduction in the actual harvest for ABC and OFL, is due to the fact that this assessment reestimated what your reference points, the biomass and exploitation reference points, were.

Because we had changes between SEDAR 15, SEDAR 24, and SEDAR 41 in the MSY estimates, of course the productivity of the stock has changed. That estimate of productivity has changed, and so our catch level recommendations do not imply any reduction from the current level of fishing. It simply implies a new catch level recommendation based on the re-estimated value of MSY.

DR. CRABTREE: Okay, but, and you understand this as well as I do. In these projections and all of this that your catch level is based on, the fishing mortality rates are in those for every single year, and it is calculating how much you need to reduce to get down to a specific fishing mortality. Inherent in your ABC recommendation is calculations of all of these fishing mortality numbers, which you earlier in the report say that you can't calculate.

We don't need to argue this any more, but it seems, to me, there is an inherent contradiction here, which I think is partly because there was -- I don't know how the timing was, but I think there were a diversity of opinions about this on the SSC, and I think, at the end of the day, you almost try to have it both ways, to say we don't know what the exploitation rate and we can't calculate it, but we're going to do it anyway, and here is the ABC that in fact does what we just said we couldn't do, and I would ask that you think about that some and talk about that a little more at the SSC meeting, because it does seem to me that you really can't have it both ways.

I guess the other real question here is have we reduced the fishing mortality rates under the moratorium? It's unclear to me, with this assessment, that we really achieved any fishing mortality rate reductions, yet, I'm seeing, as we saw in the presentation yesterday, this real substantial increase in numbers of fish and things that seems to coincide exactly with when we closed the fishery down, which at least, to my simple mind, tends to imply that the moratorium is working and we did reduce fishing mortality rates, but can you comment on that?

DR. BARBIERI: Based on the -- I mean here is the exploitation history, as estimated by the assessment, for red snapper since 1950, and you can see that fishing mortality rates have been estimated to be very high, and, since 2010, they have been lower.

DR. CRABTREE: It looks substantially lower.
DR. BARBIERI: Substantially lower, but, according to the assessment and the way that the assessment model was configured, there has been a shift in selectivity.

DR. CRABTREE: Right, which you said though is very uncertain and very poorly known.
DR. BARBIERI: Right.
DR. CRABTREE: The magnitude of the removals which affect that is very uncertain, and, in fact, the model wouldn't run if you put these in. I guess I just have one more question for you.

DR. BARBIERI: If I may just jump in for a second. This is the main reason why the SSC had such a problem actually coming up with a definite recommendation on the exploitation status, because there was so much uncertainty about this fishing mortality post-moratorium, and they were being based on such uncertain information that we didn't have a level of comfort in recommending the --

DR. CRABTREE: I see that in all of that, and, when I look at the lengths that you had to go to in order just to get the model to converge, it causes me to question whether the model should have been run to begin with and whether we wouldn't have been better off to find some alternative way of looking at this, because I know, when we closed this fishery back in 2010, the expectation of a lot of us was we wouldn't be able to do a standard stock assessment on this, because of all these problems, and there was funding provided to do more fishery-independent surveys, and the feeling was that's what we're going to base our conclusions on about stock status. Somewhere, that changed, and now we have, essentially, another model like we usually run for these things, and that's, I think, a little of what is giving me pause.

I guess my last question for you though is we're seeing increases in fish. We've seen reductions in fishing mortality. In your best judgment, are we making adequate progress towards rebuilding this stock?

DR. BARBIERI: To me, the progress in rebuilding is unquestionable. I mean you can see here, in the numbers of fish, by all metrics, in terms of numbers -- You know abundance, we're already there. In biomass, it's a different story, but you can see how much -- This is almost an exponential increase in stock biomass over the last six years. Not just that, but you have here the refilling of some older ages in the lower to mid-teens beginning to show up there at the terminal year. We have other data for 2015 and 2016 that actually could not be evaluated as part of this assessment, but that really documents the fact that the age composition has rebuilt, is rebuilding, very well.

DR. CRABTREE: Right, and so, just to be clear, you're saying that, yes, we are making adequate progress towards rebuilding. Is that correct?

DR. BARBIERI: Yes, unequivocally.
DR. CRABTREE: Thank you, and I do appreciate all of your time and your patience with all of this. I know it's a real drain on your schedule and your commitments to this SSC and the Gulf SSC, and I do thank you for that.

DR. BARBIERI: I appreciate that, Dr. Crabtree.
DR. CRABTREE: With that, Michelle, I'm done.
DR. DUVAL: Thank you, Roy.
MR. COX: My question is a little bit simpler. These fish that we're seeing in North Carolina, do we know if this is a strong spawning biomass in North Carolina, or are these fish coming up throughout the range? Do we have enough information to make that determination?

DR. BARBIERI: The short answer is I don't know. I mean, as far as the assessment is concerned, we are not making any inferences on this spatial distribution on the stock, but these gains in abundance and gains in stock biomass, to me, are very well documented, and they have -- The catch rates and other indications from fishery-dependent and fishery-independent have shown that the stock, the distribution of the range of the stock, is beginning to fill in over the entire range as expected. Does that answer your question?

MR. COX: Yes. I think what I get out of it is we don't have enough information to really make that assumption, that we don't really know. Thank you.

DR. BARBIERI: Right. Unfortunately, yes, even though we have indications that the range of the stock has expanded and they are distributing now very well over the range.

MR. HARTIG: The first thing is I don't want to throw you under the bus in what you said about the egg content, but what your wife indicated in her work was that, at least for the samples that she looked at, was that the egg content was the same across the ages, from the youngest fish all the way to the oldest ones. That's just what came out of that.

Now, however, that is not a full complement of the stock or the oldest ages, and so, based on the samples we had, that's what we got, and so I think your characterization is probably partly correct, but, anyway, to go on --

DR. BARBIERI: Can I just clarify that, Ben?
MR. HARTIG: Yes.
DR. BARBIERI: Sue's paper did not look at the biochemistry. She has other papers that she is working on for other species that are actually looking at the biochemical content of eggs for different sizes and ages of fish, and this is the protein, the amino acids, and the fat content. She hasn't done this for red snapper. All she was doing in that paper is actually looking at the age composition and looking at egg production at age.

MR. HARTIG: Great. The other thing, and I think this comes back to some of Roy's comments, and it's one comment from the review workshop. I mean all the selectivity runs were done. I mean you guys investigated this thing to death, and, of course, Beaufort always has a suite of selectivity runs already run, anticipating the questions that are going to be asked in a review, but all of the selectivity runs -- The results suggest that the population trends and the model results probably have as much or more to do with the model fit than they do with the trends in the abundance indices, and so, I mean, that, to me, is a pretty tough pill to swallow. When the mathematics of how you determine your fit, because your model won't converge if you don't do this -- The mathematics is driving the assessment results as much or more as the indices, and so that is pretty tough for me to deal with.

DR. BARBIERI: Honestly, Ben, I mean I share your concerns. I think that there are issues with this assessment that are very serious, and those are the points I was trying to make yesterday. As the Chair of the Review Panel, I tried to stimulate a bunch of the discussion with reviewers about those points, and we tried to explore as much as possible.

I think what the reviewers were trying to do is not reject the assessment outright, but simply say, okay, here are the results that this assessment was able to produce and here is our list of concerns, and we have a lot of concerns. I mean I actually, after Julia Byrd distributed the CIE individual review reports, I went back and I reread those reports, and I think they are very explicit about some serious concerns about this assessment, and so the idea was not to reject it outright. It was to say here as far as this assessment was able to get to, and I think this discussion, during the review and during the SSC -- The analytical team from Beaufort felt the same way. There's only so far that
we can go with this, but here is where we got to and here are all of our concerns, a list of concerns, that are brought up, to let the SSC and you, as the council, evaluate that and contextualize that in terms of management advice for red snapper.

DR. PONWITH: I will confess that being down on the list makes the responses challenging, so they're not overtaken by events here, and so I've got an accumulation. We're talking about a fish that's odd in its behavior. It's not R-selected and it's not K-selected in the way it functions in the ecosystem. It's more like a periodic described by Rose and Miller in its behavior, and, even there, there are some of its characteristics that are different than that, but what we're seeing is a fish that, when it was at a very low biomass, was still capable of creating spikes in recruitment.

When we see those spikes it's like, woo-hoo, there are fish out there and let's catch them. The spikes get trimmed, and, hopefully some of those spikes survive long enough to enter the breeding population and contribute to bringing that population up a little bit, as opposed to a lot, if the whole spike were to survive. Living from spike to spike is a way to look at this fishery, trimming down those spikes and using those as income-based harvest, but the challenge is the spikes are periodic. They don't happen every year. Sometimes there are five years and sometimes there are ten years between them, and, when things are spaced like that, it makes it difficult to watch for patterns in those spikes.

You could end up having to wait for three spikes to suddenly realize that, wow, those spikes aren't happening at the same level they used to anymore, and they're actually trending down. The worry is that, if you allow that population to amble along at very low levels, you still will get big recruitment spikes, but it gets harder and harder to detect whether the trend in those spikes are that the spikes are getting shorter and shorter, and so I think there's a risk in living off the spike.

Bigger fish produce more eggs, generically, across taxa. It's because the containers are bigger. A bigger container holds more eggs. Two things influence those eggs relative to the size of the population, the number of them that are out there, number one, more is merrier, and how many of those eggs actually survive and reach breeding age. You can have all the eggs in the universe, which we do frequently have very high egg production, and it's a year where the environmental circumstances were not conducive to survival, and, if you have low survival, you don't get a spike.

The worry is that it could take a really long time to realize that not only are those spikes, the top, are trending down, but that the breeding population is trending down too, and that creates the risk for the long-term vitality or sustainability of that species.

Dr. Crabtree talked about the progress, and this is encouraging, to see this progress. We are seeing larger numbers of fish, and that's good. We're seeing an increase in biomass, and that's good. We're seeing a rounding out of the age structure of that stock, and that's good, but we knew five years ago, when we ended up having to shut down this fishery, that this wasn't a five-year job, and it's because the fish you allow to survive by closing this fishery would enter that population, the breeding population, two years later and produce progeny that would add to the numbers of fish, add to the biomass of fish, but those fish you created by this closure aren't going to hit what Dr. Barbieri described as sort of that peak productivity as an individual until they hit right around twenty years.

It shouldn't surprise us that the stock is not rebuilt five years later. There is a difference between progress and adequate progress. We're on a rebuilding plan, and that rebuilding's plan purpose is to rebuild, and so what we're looking for is progress, but we're also looking for adequate progress to rebuild, and so I think that that's an important distinction.

We've had conversations also about the uncertainty around the removals. There is uncertainty around removals. There will always been uncertainty around removals. It's a very difficult parameter to build a high level of statistical accuracy and precision in. It's just the nature of the parameter.

Now, the way that was handled in the assessment is not uncommon, and that is that the discards were fixed tightly in the model to get the model to function properly, but then, once that happened, when they did the Monte Carlo bootstraps, the original uncertainty values, the original measures of uncertainty, were put back into it, and so the bootstrapping was done with the original CVs in it, if I understand the process correctly, and so, again, the model was set up with the tight CVs because, again when you have very low landings and very high discards, you have to do that to get the model to function properly, but then you release those CVs again when you're running the bootstraps.

DR. BARBIERI: To that point, Dr. Ponwith, is you were right that the Monte Carlo bootstraps -That's a very good uncertainty assessment procedure that the Beaufort Laboratory has developed, and I think it's solid. It's the best that we have in the Southeast, really. I like it a lot, and I wish it was used more often in the Gulf as well, but the issue about the MCB bootstraps is that they still, because they are using a Monte Carlo procedure, they still have to assign a distributional range for your draws, and so, as you go into that population and you draw to bootstrap, you actually assume a normal distribution, where there is a mean and a mode that overlap that have a much higher probability of being picked in the Monte Carlo bootstraps than the tails of that distribution, and so it is an improvement, having a broader range of CVs there for those draws in the MCBs, but they do not solve that issue of accounting properly for all of that uncertainty. That's my interpretation.

MS. MCCAWLEY: I wanted to ask more questions about discards. It seems that the amount of discards is driving the overfishing determination, would you say?

DR. DUVAL: That was a nod, for the record, a nod yes.
DR. BARBIERI: Yes, and I'm sorry. That was a yes.
MS. MCCAWLEY: Okay, but I heard, in the discussion with Dr. Crabtree, that we're not sure what the magnitude of the discards are, and so, if the council has to take management action, we don't know -- Are we trying to reduce by one fish or are we trying to reduce by 100,000 fish? I wanted to hear a little bit more about the MRIP information that's getting to the discard numbers. Can you talk a little bit more about that?

DR. BARBIERI: Yes, and I put here the exploitation history, for you to see this increase in fishing mortality since 2010, and, yes, we've had a big reduction in fishing mortality from before then, and that's responsible for the rebuilding that we are seeing, the progress in rebuilding that we are seeing, but the moment that we closed the fishery, that we imposed a moratorium in 2010, we really inadvertently created a data collection issue, because the MRIP survey is not really well
designed to sample those rare events, and when you have a fishery that is either completely closed or is open for six to eight days, you really don't have the likelihood of catching any of those dockside intercepts that you would have with an open fishery that has a real season, and the MRIP staff has been working diligently at this. They have been looking at alternative processes.

We have, for the last four or five years, been working in the Gulf, in developing jointly with the Gulf States, a number of pilot projects that are actually trying to address, -- To add additional surveys that overlap with the regular MRIP, but are focused on those events that are considered rare events, and so I don't think that the MRIP staff would disagree with the fact that the survey, as conducted, without any additional enhancement, for a fishery that is going through what the red snapper fishery is going, is not able to produce estimates that are very accurate or precise.

MS. MCCAWLEY: Is it true that the main estimate for the discard estimation came from four trips, one private trip and three charter trips?

DR. BARBIERI: I don't know. I didn't look at the actual discards. I know that the harvest estimate for 2015 was actually based on -- Dr. Larkin, in his presentation yesterday, talked about those three intercepts that were used for the harvest estimate for 2015, but you can see, if even for the harvest, you are having three intercepts, it's a very small number of trips that are intercepted, and you are forced to expand that factor to the stock as a whole.

MS. BECKWITH: I think I have about three questions. The BAM model, is that something that if you guys were to do an additional assessment, at whatever point the opportunity becomes available, is the BAM model something that you would pursue as the assessment model, or would you guys seek an alternate assessment method?

DR. BARBIERI: I mean that's to be decided by the assessment panel. I mean, usually, we have the assessment scientists participating in the SEDAR process and making decisions of what models are to be used, and I know that some people have concerns about the BAM model, but I'm telling you there is -- As far as I can tell, there is nothing wrong with that model. I mean the model is very, very well developed. It has been tested extensively under simulated data and real data, and, as far as I can tell, it's a very reliable model. I don't have any concerns with the use of the BAM model.

MS. BECKWITH: But for -- Right, the BAM model itself has been tested, but is it appropriate for this species, for red snapper, with all the concerns that came out of this assessment?

DR. BARBIERI: Are you asking whether we should be using an age-structured? Well, again, that's to be decided, and that's a point of contention. In this case, we know the population demographics matter, and so not being able to account for the age composition of the stock, not using an age-structured model, really creates an information gap that is even larger than what you would get with this model result, and so that's why the assessment panel recommended continuing with the BAM model and using that as the base model for this assessment.

MS. BECKWITH: Okay. Thanks, because that does answer it. Then this one is for Roy. You chatted yesterday about how the Mid-Atlantic and other councils sometimes use sort of updated indices to make annual catch specifications, and, while we don't do that, we may be able to develop
a procedure with the SSC that we might be able to go through and approve catch limits on an annual basis.

Is there any opportunity to take the information that is most valid out of this assessment and sort of pair that as a methodology with the SSC with the updated indices of abundance or, in general, the information that's sort of most appropriate out of this model and look at alternate ways to consider catch limits?

DR. CRABTREE: I don't know. That would depend on the reasoning behind it, the rationale behind it. Right now, we have catch levels that have come from the SSC that they have given us. Now, I believe the council has already requested, from the Science Center, runs that look at Fmax and F 20 percent, and there are clearly a host of questions here, and so I'm guessing all that is going to go back to the SSC, and we will see what comes out of it. I don't have an answer to that question. There may be other ways to look at this, but it's going to depend on what the science advice is, and I don't know how that may or may not change.

DR. DUVAL: Anna, let me just let Bonnie jump in and provide some context here.
DR. PONWITH: Thank you, Madam Chair, because it's to that point. Yesterday, we talked about using updated indices to sort of set annual specifications, and I appreciate the opportunity to kind of revisit that, because there was an inference that you would do that in lieu of a stock assessment, and this is in addition to a stock assessment. You do a stock assessment so you know the status of the stock, and then you update those indices and use those as an indicator that any management measures you put in place are having in achieving the desired outcome, and you can use those annual updates of the indices of abundance to monitor your progress and be confident that the measures you put in are doing what you wanted them to do and heading in the right direction.

In some cases, I think that other councils are using those, along with the management advice they developed during the stock assessment, to modify the harvest levels more frequently than once every time they do a major assessment. I can look into how they do that from a science standpoint and carry that to Dr. Crabtree from a management standpoint, to make sure that we're comfortable with what they're doing in other regions could be mimicked here with the type of species that we have and then talk about the implications of an approach like that.

It is a different approach. We're not doing it, but I am certainly willing to discuss that with the council, but you don't do that in lieu of, and so the thing I want to be careful of is that we don't confuse that approach with doing a data-limited stock assessment approach, and I've heard Dr. Crabtree suggest that, because of the closure, we are more data-limited. We've lost a grasp on the removals, because we used to remove fish in terms of bag limits were the majority and the bycatch was the minority. That's been flip-flopped, but we have added the fishery-independent assessment. It does create challenging and different circumstances under which to do a stock assessment than we had before the closure. It's different, and so, again, don't confuse the index approach with switching to a data-limited style of a stock assessment.

DR. DUVAL: Thank you for that, Bonnie. Anna, you had one more question?

MS. BECKWITH: Yes, I had one more. On page 18 of the SSC report, you guys made a note that the council may consider revising the rebuilding approach, but is not obligated to do so. Can you go into a little bit of where that discussion went?

DR. BARBIERI: Actually, that statement was part of the overview document that staff put together as a way to instruct the SSC of all the possible scenarios, and so the rebuilding plan has a rebuilding target of biomass at 30 percent SPR, and, the last time around, the SSC had used a $\mathrm{P}^{*}$ of 30 percent for red snapper and had provided catch level recommendations that had a 70 percent instead of a 50 percent probability of rebuilding. At this last time, because we made recommendations based on yield at F rebuild, that probability is actually 50 percent instead of 70, and so that is implicit in the -- It's just the way that the probabilities work when you are working with F rebuild instead of some other value.

DR. DUVAL: We have Chester is next on the list and then we have Mr. Sanchez and then Mark, and I just want to let folks know that I would like to wrap this up about 10:00. I think, between yesterday and today, pretty much everybody has had the opportunity to go around the table and ask questions, and so, by around 10:00, I would like to bring some resolution to this discussion. Dr. Barbieri has one more slide with regards to gray triggerfish that he can go through briefly, and so I just wanted to let folks know.

MR. BREWER: For fun, I race sailboats, and when you don't know what the wind is going to do and you don't know where the next puff is going to come from and you have a high level of uncertainty, you set your rudder at neutral and you let your sails out a little bit and you wait. You stay the course.

I am not able to get down into the weeds with regards to fisheries science. I don't know it. I have got a different expertise, but I am very concerned though that SEDAR 41 has a finding that overfishing is still occurring. I am more concerned when I hear that the level -- That that is dependent upon the bycatch mortality and that there is a high level of uncertainty associated with that. Yet, we have this finding of overfishing occurring, which has other implications.

You knowing a lot more than I do about fisheries science and understanding the graphs that we saw with regard to biomass and how it's increasing, do you feel like, if we stay the course and do exactly what we have been doing, that we can expect reasonable -- Have reasonable expectations of success in rebuilding this fishery? That's a question.

DR. BARBIERI: The short answer is yes, and I think that that recommendation made by the SSC implicitly attests to this very point, that there is a reason why we made a recommendation of yield at F rebuild, and this is why we said that the biomass status of the stock is less equivocal. We know that this is a long rebuilding plan. I personally have been through the duration of the Gulf red snapper rebuilding plan, all the way from its inception and before, and I have seen the success of that stock, the same species, but different fisheries and different conditions there, but the same species and how they have responded to that rebuilding plan. I think that the SSC did not disagree with the trajectory of the rebuilding plan, and I think that our recommendations, in terms of the fishery being at yield at F rebuild, is explicit to that point.

MR. BREWER: A follow-up question. Do you think that there would be -- Let's say that we just say, okay, we don't have management advice and let's just continue on with what we're doing, at
least from the standpoint of this council, and ask that the SSC take another look at this report, because of all of the different concerns that have been raised, both by you and around this table, and do you think that that is a way to go or that it would be profitable to do that?

DR. BARBIERI: I think that it would generate -- First of all, I cannot speak for the committee, but I can tell you, being an SSC member for as long as I have been, I think that the committee would be more than glad -- We work at your pleasure, and we take seriously our task to evaluate the science products that are supposed to come before the council and provide you advice based on that review.

I don't see any problem, personally. I would defer to Chairman Reichert in terms of how the committee may react, but my interpretation is that the committee would be more than glad to revisit this. Whether we would end up with a different outcome, it is unlikely, I would say. It is unlikely, because the informational content is -- To use your analogy about navigation, I mean when you have a deep fog, there is very little you can do to overcome it, and so we can try to keep looking harder and harder, but that fog is still there.

This is why, even though it may not seem very helpful to you, that we provide some advice that is, in tone, somewhat equivocal, as Dr. Crabtree pointed out. We did not really provide any specific advice on the exploitation status of the stock and we just said it's likely to be overfishing, but we don't know by how much, because we want to be very transparent and explicit about the fact that there's a lot about this fishery that we do not know, and that is very, very difficult for us to get to the bottom of.

DR. DUVAL: To that point, Roy?
DR. CRABTREE: But I think some of the confusion, Luiz, is I heard stay the course and all of that, but you've given us a catch level that's less than half of the status quo catch level. I am having difficulty reconciling that advice with some of the other advice. I understand the information is equivocal and cloudy and that's not going to change, but it's all a matter of what we need to do now, and I think there are some inconsistencies in all of that that are making it hard for me to see the path forward, and I guess some of that is what a little more clarity on would be useful at the next meeting.

DR. BARBIERI: To that point, Dr. Crabtree, I mean I think the issue is on whether this latest estimate of MSY or its proxy is credible or not, to reflect -- I gave a little presentation at the SSC meeting talking about how there were changes in the estimate of MSY from SEDAR 15, 24, and 41 that show that our estimation, our idea of the productivity of the stock, is very equivocal at this point.

We have three assessments, three benchmark assessments, with three different estimates of stock productivity, and so the refresh recommendations at F rebuild, unfortunately, are coming out of this F rebuild values that came out of this last assessment, and, if you don't believe that those are credible, that's a different story, but that justifies why the actual value is different, even though it's still yield at F rebuild.

DR. CRABTREE: Yes, and I think the whole issue here is, given all of that uncertainty, have we explored fully what the management response ought to be in the face of all of that uncertainty, and

I think that's what the council wants to explore in more depth, because it has serious implications on how we manage the entire snapper grouper complex.

DR. BARBIERI: Just briefly to that point, Madam Chair, and to repeat what I told Chester, I mean I don't think that the SSC would refuse or have a problem addressing a question that you can ask to reevaluate this assessment in the face of potential ways forward for management and how much uncertainty in the catch advice is there. I mean this is such a complicated issue with so much uncertainty that I don't think it is atypical or unexpected that there would be some iterative process between the SSC and the council to find a common solution.

DR. CRABTREE: I appreciate that, and I'm sure that's going to happen, and I welcome your willingness to work with us on that.

MR. SANCHEZ: Luiz, this contradicts traditional MSY theory, as I have always understood it. More fish and larger spawners and more recruitment down the line. Any idea what are these uncertain factors that are seemingly affecting a strong recruitment scenario?

DR. BARBIERI: No. The short answer is no. I mean we don't know what are the biological or environmental components here, and I think Bonnie made some good points earlier. I mean there is a lot of uncertainty here also on what's to come. I mean if we consider that the recent past is a good representation of the near future, we expect, as an episodic strategist that red snapper is, that we're going to continue having good pulses of recruitment and abundance.

The fact that the stock is showing now just increases in biomass, but refilling of that age structure, to me, is very reassuring, and so this is why I responded to Chester that I think that the SSC is confident that the rebuilding plan will accomplish what it was meant to accomplish and that it will generate a very productive fishery. Was that the nature of your question? I may have misunderstood you.

MR. SANCHEZ: I guess that's the medical equivalent of an autoimmune diagnosis.
DR. BARBIERI: That's beyond my pay grade, I guess.
MR. SANCHEZ: It seems like we don't know what these ocean factors are yet. Everything, in terms of the fishery, seems to be -- You've got larger fish. You would assume that would result in better spawning, more recruitment, yet it doesn't seem to be going that way, which contradicts our MSY traditional approach to understanding how these things work, and so there's this unknown ocean variable out there that's affecting this somehow, and the question really was straightforward. Is there any insight into what that may be, so that we can get our arms around that and maybe understand where this is going a little better, because, right now, that has the waters completely muddied.

DR. BARBIERI: I mean, right now, as a fishery biologist, and I can only speak to you from that perspective, my main point is that red snapper has a very high compensatory reserve. It's a species that can really tap into egg production and body growth very efficiently, and, even at these very low levels -- You know, when you're below 10 percent SPR, you are at a very low biomass level with a juvenesced age structure, and you still can produce very high abundance and very high peaks of recruitment. It's just the biological capacity of this stock, of this species, seems to be
higher than what the pattern that we have, from looking at all of these other species globally, seems to show.

MR. BROWN: I will be brief. Bonnie, you made a comment about the eggs and the larvae and hoping that a lot of them survive. I assure that a lot of them are surviving. All of our reefs are just covered up with red snapper right now. They have moved beyond the range, their normal range. They're way up the coast. I have even heard reports of them catching them in Virginia.

We're at this point that I really feel like that this fishery is rebuilt now. We have gone way out and above everything that I can ever remember from the past. These estimates of biomass and numbers from back in the 1950s and 1960s, I have a hard time swallowing this, knowing what I see now, because, from the past, we did not have the effort as it showed, but I still don't know as I can believe that the estimates on numbers and the biomass is that much larger than what we're seeing now.

We see more red snapper than we've ever seen before in the past, and they're in areas where we've never even seen them before, and so, when we're talking about the discard ratios and the MRIP numbers and the PSEs and the variables and everything -- You talk about being in the fog. Looking at this assessment, I feel like I'm looking at this assessment through foggy glasses. The clarity, for me, is what I see out at sea every day. I see it boat-side. I see what we're seeing, but, when we talk about these numbers and trying to make these estimates off of so much uncertainty, I'm struggling with this. I cannot accept this.

DR. BARBIERI: Just to that point, Madam Chair. Mark, the assessment, and this is one of the things that I went into during my original presentation yesterday, but the assessment is being able to capture the high abundance. I mean you can see here that some of these peaks in abundance are actually very, very high compared to historic abundance levels, and so this is being reflected in the assessment.

The pulses in recruitment are unprecedented. In 2014, and this is estimated by this assessment, we have the highest recruitment ever recorded in the history of us monitoring red snapper recruitment, and so it's unprecedented, and, in talking to the MARMAP folks, they actually documented, in 2015, that that was a true pulse in recruitment. It wasn't just an artifact of the model generating a peak that may or may not be real. I mean those fish were there, and that abundance was high.

MR. BROWN: One more thing that I wanted to bring up too is I've inquired many times about the fecundity studies, and there seems to be a limitation on that. I am trying to understand why that we don't put more emphasis on understanding what actually the production is.

DR. BARBIERI: Yes, there is -- We have a lot less going on in the South Atlantic than we've had in the Gulf, and it's something that we need to address. I think that the discussions yesterday and today, to me, as an FWC FWRI fisheries biologist, I am taking mental notes to get back and meet with the staff and start enhancing some of those studies, because, right now, we have holes in knowledge that are really -- They need to be filled.

DR. REICHERT: Very briefly, to that point, we are continuously collecting data, especially on the fecundity issue. The problem there is that the number of older fish obviously are not as
abundant as the number of younger fish, and so getting data from those older fish is more complicated.

If you look at fecundity, you need to catch a female in the right developmental stage in order to do that analysis, and so we are gathering all of that information, but it's just that you need a lot of data to get a handle on the questions that were asked, and so we are working on that collectively with partners, but it just takes a while to get that data, but, hopefully, not too long from now, we will have much more information to inform the model and the fecundity information.

DR. DUVAL: Thank you, Marcel.
DR. LANEY: I have two questions and maybe an observation. Speaking to Jack's question about the fish to the north, I am wondering if we have any sort of data at all that looks at the recruitment patterns of red snapper. To Jack's point, are those North Carolina fish originated as eggs and larvae coming from off of the east coast of Florida? To me, that's a research arena that we need to delve into.

The second observation is an ecosystem one, and that is I'm sitting here thinking about what's changed in the same period of time as the pattern in red snapper abundance and recruitment here, and, despite the fact that recruitment appears to be huge in 2015, one other big factor that's changed is another red species out there, which is the red lionfish species.

To my understanding, at least my perception, based on what amount of reading I've done, is that that species is occupying the same habitat as perhaps some of the red snapper juveniles that are settling out, and predation by a new species, a novel species that we have here that wasn't present historically, may also be having an impact on red snapper recruitment, and so, to me, that's another arena that we should investigate. We heard from Joey's presentation yesterday that that species is starting to show up in more abundance in the index as well, and so that's another factor that I think we shouldn't ignore, along with any environmental factors that may be affecting the survivability of the eggs and larvae.

DR. DUVAL: Great points, Wilson. I think all of us would agree with that, particularly in this day and time, that those environmental considerations are becoming more and more important, and the sooner that we can find ways, and I know that Bonnie's staff is working on this, to incorporate those types of environmental impacts and ecosystem considerations into models, the better off we'll be.

I want to thank Dr. Barbieri for his patience and willingness to be here and answer our questions. I think the bottom line, before moving on to gray triggerfish, is that there are a lot of uncertainties associated with this assessment, particularly in the latter years, just given that we have been under mostly a moratorium.

I think, based on the questions that have come from around the table, there's a few things I think on the to-do list for the SSC, and some of this we'll probably get into a little bit this afternoon, as we discuss sort of an alternative path forward with regard to management, but one thing I have on the to-do list, and Dr. Barbieri has already spoken to this, but adding a discussion at the October SSC meeting on the new method of estimating natural mortality.

I think, given some of the uncertainties in the assessment and the changes that have had to occur, reevaluation of the appropriateness of our overfishing reference point, that maximum fishing mortality threshold -- Right now, it's at F 30 percent SPR. That's a value that was a reference point that was selected by the council. I would hope that we could work with the SSC to reevaluate the appropriateness of that reference point, just given the uncertainties in particularly the latter years, since the fishery has been closed. Is that reference point consistent with some of the decisions made with regard to assumptions in the model?

I put those out there for the committee to consider, and I don't think anyone thought that we would rebuild a fish that lives to be fifty years old with a six-year moratorium. I mean that's just biologically impossible, and I would just remind the committee that we do have other species that are overfished that are under a rebuilding plan, and I think snowy grouper is a good example, where you can continue to have harvest when you are under a rebuilding plan.

I think the issue that folks are struggling with, as Chester brought up, is the overfishing designation. I think that's where folks are really having a problem, because our current strategy that we thought would get us out of this overfishing designation was to not allow harvest, or at least very limited harvest, but it just doesn't make sense that by not allowing harvest that we're actually killing more fish than we're supposed to be, and so that speaks to a need for a different strategy, in order to do what Dr. Ponwith referenced, which was allow some of those young fish to get to be teenagers, where their reproductive output is greater, and so those are just, I think, some wrap-up points that I wanted to leave the committee with. We will have more discussion this afternoon, I think, on tasking with the SSC and alternative approaches forward, and so I thank you, Luiz, for your patience with our questions, and I would like to ask Dr. Barbieri to move on with his final slide on gray triggerfish.

DR. BARBIERI: Thank you, Madam Chair. The gray triggerfish assessment, which was also part of SEDAR 41, had what was perceived as even more severe problems, and there were some concerns about the model results and diagnostics that were discussed extensively during the assessment workshop, even more so during the review workshop, and then, on top of that, there was an error in the chevron trap survey age composition, and this was discovered during the review workshop. At that point, the review panel was already struggling with this assessment, because, as I mentioned earlier, the metrics of stock productivity were just so high that they were not really credible, and then this was adding insult to injury, because there wasn't enough time that week to really reconfigure the model and get the diagnostics to show that we had a better configuration.

Because of that, the assessment was rejected. The SSC agreed with that determination from the review panel and recommended that, on an interim basis, that the current ABC for gray triggerfish be continued at the current level and recommended that some additional research, which I believe is ongoing and has been expanded over the last several years, be completed regarding aging of gray triggerfish. Those issues, as you know, have been lingering for several years, and so the committee recommended that the next SEDAR assessment process for gray triggerfish be revisited beginning no earlier than 2019. By that time, when we restart that process, that we have some of these aging issues finally resolved. That, Madam Chair, completes my report.

DR. DUVAL: Thank you, Luiz. Just to remind everybody, currently, the ABC for gray triggerfish has been determined through the ORCS approach, and so that was what the SSC committed to maintain, and I think the age validation study is ongoing right now, if I'm correct.

DR. BARBIERI: Yes, it is ongoing, and I know that Marcel and his staff has been working with the Science Center in trying to get that validation study finalized, and we should have the results in the next couple of years.

DR. DUVAL: Are there any questions for Luiz on the gray triggerfish assessment?
MR. COX: The chevron traps are -- We need to include some citizen science with the chevron, the MARMAP, because these triggerfish that we've noticed are moved. They're not in the same areas, and so fishermen would like to be involved in that placement of the traps, to get better information. We hear that a lot. We see them setting traps in places that we don't catch the trigger anymore, because they move, and so they questioned where those traps are being placed and what kind of results we're getting from them. Thank you.

DR. BARBIERI: I think that's a good recommendation. I know Marcel and staff would welcome the opportunity for applying for a joint cooperative research program type of grant that can allow involvement of the industry in conducting some of these additional surveys.

DR. DUVAL: Jack, I think there's always opportunity for fishermen to provide input to the MARMAP Program staff regarding possible sampling points, but, again, with a sampling program, with the fishery-independent sampling program, the design is very important. You don't just go to where the fish are and throw a trap.

I mean it's just as important to know where the fish are as where the fish are not, but if they're shifting their distribution and you're seeing them in depths and in places where you haven't seen them before, it's important information for Marcel and his staff to know, so that they can include that in the universe of potential sampling points, but you don't just go hunt down the fish and throw a trap and that's what you do, because the chevron trap survey is designed to sample a suite of species. It's not just one, and I mean it probably -- The efficacy of those traps in sampling certain species is greater than for others. I mean there is no one perfect survey for any one species, but I would encourage you to talk to Marcel and provide input on where you're seeing those shifts in gray triggerfish, so that that universe of sampling points can be included.

Any other questions for Luiz? Okay. Thank you very much. You have certainly earned your paycheck this week. We are going to switch gears and move on to hogfish. This is Amendment 37. We are not taking final action on that, but Myra is going to walk us through the decision document. She does need some input from the committee. I think there's been a few language changes and I think some additional rationale for some of the preferred alternatives that we have, and so this is Attachments 8a through 8d in your briefing materials, and I think you're going to work from the decision document, Attachment 8a.

MS. BROUWER: Thank you, Michelle. What I'm going to use to walk you through this amendment is the decision document that's been slightly revised from what is currently in the briefing book, and, as Michelle mentioned, I just wanted to get a little bit more rationale for your selection of preferred alternatives for a couple of the actions, and so it should go rather quickly. I also should update you on the status of the amendment. This is an environmental impact statement, and so the draft environmental impact statement was filed with the EPA last week, and so that's going to start the forty-five-day comment period, which will end sometime in August. When you
look at this again in September, we will have, hopefully, a summarization of those DEIS comments for you to consider.

Before we get into the actions, just to display, for the record, the purpose and need for this amendment is on PDF page 4. Unless there is any desire from the committee to make any changes, then this is what you have approved for Amendment 37.

Action 1 is on PDF page 5. This is the action that modifies the FMU and splits it into two separate stocks. Your preferred is to set that boundary at a line just south of Cape Sable, running due west at 25 degrees, 9 minutes North latitude. There is a map that displays where this boundary would be, and it's up on your screen. It's the bold line.

There was a little bit of revision to the language in the DEIS that was filed. That is currently not included in your decision document. Monica revised the document before we filed, and she just wanted a little bit more clarification as to why that boundary had been chosen and what the advantages were of choosing it and why it was recommended.

I looked through the minutes and inserted some language in there referring to the fact that it coincides with the current boundary to define the pompano, I believe, management zones in Florida, and the FWC law enforcement has suggested that as an appropriate boundary, mainly to simplify regulations. However, the way that the landings are tracked and monitored for ACL purposes will not change, and so that was clarified in the document. Unless there is any desire to revisit this action and change a preferred, there is really no action the committee needs to take.

MR. BOWEN: Myra, I am working a little slow this morning. Can you tell me, and I'm looking to try to find it, so I didn't have to interrupt you, but can you tell me the latitude line where that northern boundary of that stock split is again?

MS. BROUWER: The coordinates are 25 degrees and 9 minutes North latitude, running due west from Cape Sable. That's the description that we've included in the document.

DR. DUVAL: Zack, if you look at PDF page 6 on Attachment 8a, the decision document, there's a chart there, and that thick solid line shows that boundary.

MS. BROUWER: Your Action 2 specifies the MSY. Again, this is -- We only have the two alternatives, and so there's really no need to revisit it. It's just a benchmark that got chosen through the assessment, and, of course, that value will remain unknown for the Georgia/North Carolina stock, because the assessment was not deemed applicable to that stock. Then the MSY would be specified for Florida Keys/East Florida, and that value is up on your screen.

Action 3 would specify the MSST for both stocks. Again, your preferreds are to set that level at 75 percent of the spawning stock biomass at MSY. The value for Georgia/North Carolina would remain unknown, and the value for Florida Keys/East Florida for this stock is specified under Preferred Alternative 4. Unless there are any questions or any desire to discuss any of the actions, I'm going to keep moving along.

MR. BOWEN: Madam Chair, I'm sorry to keep hanging up on this, but that 25.9 doesn't seem right to me at the Georgia --

DR. DUVAL: Are you talking about the boundary line?
MR. BOWEN: Yes, ma'am, at the Georgia/Florida line. That is not 25.9, but I'm wanting to know -- What I was asking earlier is the northern boundary line to split the stock, and, again, I apologize for hanging up on it, and it might seem miniscule, but, to me, it's -- I just would like to know the northern line.

MS. BROUWER: The boundary between the Georgia/North Carolina and the Florida/Florida Keys stock would be at the state boundary between Georgia and Florida.

MR. BOWEN: Right, and so I'm asking what that latitude line is.
MS. BROUWER: I'm sorry, but I don't have those numbers in front of me. It's just the state boundary line, and so that would not change.

MR. BOWEN: Okay. Thank you.
MS. BROUWER: Moving on to Action 4, this one establishes the ACLs for the Georgia/North Carolina stock. Your preferred is to set the ACL at 95 percent of the ABC. You have a table, Table 4.4.1, up on the screen that shows how this value was determined, and this is based on Level 4 of the ABC control rule, which uses the Only Reliable Catch Stocks approach. Your proposed ABC is 35,716 pounds whole weight. We have Table 4.4.3, which then breaks it down into your sector ACLs, and the recreational ACL is expressed in numbers of fish.

Again, nothing has really changed here. I'm just making sure that everybody is still okay with your preferred, and, if that's the case, we will move on. Action 5 sets up the rebuilding plan for the Florida Keys/East Florida stock. SEDAR 37 determined that that stock was overfished and undergoing overfishing, and your preferred currently is based on the SSC's recommendation for the rebuilding schedule and the rebuilding strategy, and so that is displayed up on the screen.

Preferred Alternative 3 uses the $\mathrm{P}^{*}$ that the SSC recommended, which would rebuild the stock in ten years with a 72.5 probability of rebuilding success, and year one being 2017. Then you've got your projection for the catch levels for the next ten years in that table. I will remind the committee as well that we talked about a methodology that the SSC reviewed and approved for how to specify the recreational ACL in numbers of fish for this stock, and so the table that you see has the OFL in numbers of fish as well as the ABC in numbers of fish, which deviates from the approach that we've taken with other stocks, and that was to make sure that we followed a methodology that would maintain your preferred allocations and allowed us to specify that recreational ACL in numbers of fish in a better approach that would take then into account any preferred changes to minimum size limit. Any questions on Action 5?

Action 6 then establishes the ACLs for the Florida Keys/East Florida stock, and, here we had originally included language in your preferred alternative which reads that ACLs will not increase automatically in a subsequent year if present projected catch has exceeded the total ACL. This is language that was initially approved when you did the rebuilding plan for red grouper in Amendment 24. To my knowledge, and I checked with the Regional Office, but this has not actually been triggered, and the Regional Office said, well, this is more of an accountability measure, because you are preventing and increasing the ACL based on your landings level, and so
we talked about it in house, and there were a lot of questions and uncertainties as to how this would work.

We tried to figure out how to figure out how to come up with a scenario that would trigger this sort of thing, and our recommendation would be that we not include this language in the preferred alternative and that if you are still interested in pursuing it and looking at this method of accountability for other species that we then go to the SSC and maybe work it out with them, to see if this is something that really would work and that you really want to pursue.

DR. DUVAL: Myra, I just noticed that further down, both in the decision document as well as in the full amendment, some of that language is still there and discussing -- I think it's below the tables, below Table 4.6.2, about halfway through that second paragraph. It says Preferred Alternative 2 and its subalternatives would also act as an accountability measure, in that if the combined commercial and recreational ACL, as estimated by the National Marine Fisheries Service, is exceeded, then, during the following fishing year, an automatic increase will not be applied to the commercial.

MS. BROUWER: Right, and that language is still there, because we needed to get approval from you first to remove that language, of course, we have flagged it in the document. If you do indeed approve removing that language from the alternative, we will take that language out.

DR. DUVAL: So for what other species -- I know we've done this. We've had this language included for some other species, and maybe Jack can speak to that. I see he had his hand up.

DR. MCGOVERN: I know we have done it for other species, and I know red grouper was an example, and I think there are others as well, and it's in the regulations, I believe, that the ACL won't increase in a rebuilding plan if we exceed the overall ACL, but I'm just not clear what you're -- You're taking out an alternative, but it's still going to be in the regulations? Is that what you're saying? I think it's important, if we're in a rebuilding plan, that if we exceed the overall ACL that we don't increase it the next year, so that the stock still can rebuild, but I'm not sure how this is being accomplished here.

MS. BROUWER: Right, and we discussed with folks in the Regional Office, the regulations writers, and they said, well, for red grouper, that language was captured under the accountability measure, and so, if the council wants to continue to include that, they suggested that we include it in the accountability measures action, because that's where it should be.

I went back and looked to see if the council had included this for snowy grouper and other species that are under a rebuilding plan, but the only one that seems to include that language is red grouper. We don't have it in place for snowy. We talked about, and we will get to this when we talk about mutton snapper, is it doesn't need to be there, and so there doesn't seem to be consistency.

The council hasn't consistently chosen to include this language when they've set ACLs for other species, including those that are under a rebuilding plan, and so I said, to the IPT, is this something that we really need to have and do we need to flesh it out a little bit more to show how this would work? We went back and looked to see if it has occurred in the past, and, with red grouper, it has not.

I don't know if other folks on the SERO staff or our folks here want to chime in, but we just thought that if it really hasn't been fleshed out to a level that we know how this is going to work, perhaps we need to get the SSC to weigh in on it and then decide if it does need to be included or not. It's up to the committee to decide if you want to leave it in there or if you want to take it out. I think, if we leave it in there, what will happen is we may have to simply change, perhaps, the title of the action for the accountability measures to include that language in there. I'm not sure.

DR. DUVAL: It seems like, if there was a species for which this might actually be triggered, hogfish is it, and so, when we get to the action on accountability measures, which is like Action 11 or 12 , then I assume the IPT has gone through and this language that we would be taking out here, have you all -- I can't remember if you all have put that in. You haven't?

MS. BROUWER: No.
DR. DUVAL: What's the committee's pleasure? Do you want to take this language out? I mean I think Jack makes an important point that if a species is under a rebuilding plan and a total annual catch limit is exceeded, you certainly don't want to jeopardize that rebuilding by allowing for an automatic increase the following year. I don't know if there are some additional parameters we would want to put on that, in regards to allowing some latitude for the Regional Administrator or what.

MS. BROUWER: I think part of the issue is that your accountability measures would already trigger a payback, and so you're not only -- Not only would there need to be a payback if the total ACL is included for whatever amount of the overage, but, on top of that, you also wouldn't get the increase in the ACL, and so it's one of those double-jeopardy situations, and there were a lot of questions around what would this really look like, and we couldn't really work out a scenario that we could show you and say this is exactly how it would work and is it advisable to have that double payback, I guess.

DR. DUVAL: Now I see the double penalty, which we don't necessarily need to do, and so I guess my inclination would be to take it out.

MS. MCCAWLEY: My inclination would be to take it out, but what we could do is look at the accountability measure action and double check when we get to that. I think it's Action 12, but my inclination would be to take it out as well.

DR. DUVAL: Is that a motion?

## MS. MCCAWLEY: Yes, it is.

DR. DUVAL: I think the draft motion is to approve the suggested edit to Alternative 2. It's seconded by Doug. Any other discussion? Any objection? Seeing none, that motion stands approved.

We're halfway through the decision document. I don't think it's going to take us that much longer to get through it. We've been here for a couple of hours, and so I'm going to suggest that we just take a fifteen-minute bathroom break and come back. Thanks.

DR. DUVAL: We finished with Action 6, and so we're moving on to Action 7, which I believe is on PDF page 48. Myra, let's go ahead and start walking through this.

MS. BROUWER: Action 7 establishes the recreational annual catch target for both stocks. Your preferreds are to set that at the 85 percent of the recreational ACL. Again, this is done in numbers of fish, and you have Table 4.7 .1 which shows you the ACT for the Georgia/North Carolina stock, and then Table 4.7.2 shows you what the ACTs would be for the Florida Keys/East Florida stock.

Here, again, unless you want to change a preferred or provide more rationale for your selection -The document does include language to the effect of the council hasn't used ACTs to trigger accountability measures for snapper grouper species, but they have chosen to take action to establish these levels in case that becomes a management option in the future. Unless there is any more rationale to provide at this point, then we would move on to Action 8.

This is where we start getting into the management measures. Action 8 addresses the minimum size limit for both stocks. Your preferred for the Georgia/North Carolina stock is to set that at seventeen inches fork length, and, for Florida, the minimum size limit would change to sixteen inches fork length.

Again, nothing has changed in this action. You have similar tables to what you saw back in March. As we talked yesterday briefly, the decision tools that were used to predict the level of landings with these various management measures were revised, were discussed by the SSC. There was a revision that addressed the uncertainty in these estimates, but the numbers that are included in the document are the same that you saw back in March, and even though, if you go back and attempt to put these same numbers in the decision tools, you will get a slightly different predicted landings, but, as I mentioned yesterday, those are within the levels of uncertainty that are acceptable. Any questions on Action 8?

Action 9 addresses commercial trip limits, and your preferred for Georgia/North Carolina is to establish a trip limit, a commercial trip limit, of 500 pounds whole weight. For Florida Keys/East Florida, your preferred is to set that at the twenty-five pounds whole weight. Here, again, the same figures, the same tables that you saw, the same predicted reductions in harvest.

I would like to get maybe a little bit more discussion on the record as to your rationale for the preferreds, especially for Georgia and North Carolina, where there doesn't seem to be -- There isn't a need to really constrain commercial harvest, but my understanding is the reason to establish a trip limit is to make sure that the season stays open longer. I would welcome any other comments the committee might have in order for me to put together your council conclusions for the amendment.

DR. DUVAL: I think, just to remind the committee, the projections show that the commercial harvest would not be -- The entire commercial ACL would not be harvested even without a trip limit. My recollection is that the selection of a 500-pound trip limit at least constrains the fishery somewhat, should there be changes in fishing behavior due to the application of these management measures, not just within Georgia through North Carolina, but potentially there was some concern, I know especially on the part of the advisory panel, that there might be a shift in effort from Florida up to North Carolina, and so sort of precautionarily putting in a trip limit that isn't overly
constraining on the commercial fishery, but would still allow for a longer season was something of the rationale, but I welcome any additional comments from the committee or agreement.

MR. COX: We don't know a whole lot about this stock. I know that boats do fish for it are at the southern end of our state. There's not a lot of commercial boats fishing for them. A lot of the method of catching is diving, and, in the commercial industry, when they go target species like that, they're out for two or three days and they need a certain amount of fish to come home to be profitable, and a 500-pound trip limit is certainly that. Anything less than that is not really going to work. I think it's something that we're going to need to monitor and pay close attention on if we start seeing an increase in the vessels that participate in the fishery. I don't know how much the stock can sustain, but I think it's reasonable at this time.

MS. BECKWITH: We also considered it precautionary because these fish are most accessible when they are aggregated. Having a trip limit might deter from localized depletion.

DR. DUVAL: I will just remind folks that these fish are less accessible in the area off of Georgia through North Carolina, just simply due to the depths at which they're harvested and how far out boats have to go. Does that help you, Myra?

MS. BROUWER: Yes, and thank you for that. Action 10 establishes or modifies the bag limits for both stocks. Your preferred for Georgia through North Carolina is to put in a bag limit of two fish per person per day. For Florida, you're looking at a one fish per person per day. Again, there are no changes here. No, I'm sorry. You will see, under Alternative 1, some highlights in there, and that's because we had to slightly tweak the no action alternative. We had language in there, or we had considered including language, about the state bag limit off of North Carolina, and then General Counsel said there is no need to include that, and so we basically just had to kind of tweak that. We're looking at, of course, a bag limit in federal waters.

I will remind you that, back in March, you approved a motion to give us editorial license to adjust the language of no action alternatives, and so you don't need to have a motion to approve those changes, and, as you see, they're very minor. Basically, it just states that the recreational bag limit is five fish per person per day in federal waters off the east coast of Florida and there is no recreational bag limit in federal waters off of Georgia, South Carolina, or North Carolina. Any questions on that? Then the last action in this amendment is Action 12, which is the one that addresses accountability measures. Here, I would need a motion to insert the language that you see.

DR. DUVAL: Did we skip Action 11, the recreational fishing season for Florida Keys/East Florida.

MS. BROUWER: Yes, and I'm sorry. Action 11 establishes a season for Florida. Your preferred is July through October.

MS. MCCAWLEY: I would like to, after using the decision tool and looking at if there was going to be leftover quota during that July through October preferred season, and it looked like there was, and so, after working with that decision tool, I would now like to also suggest that we select Preferred Sub-Alternative 2a as an additional preferred on this action, on Action 11.

DR. DUVAL: There's a motion by Jessica. Is there a second? It's seconded by Ben. It's to select Sub-Alternative 2a as a preferred as well as Sub-Alternative 2d. Is there discussion? I think Jessica has laid out the rationale for why she wanted to select this as an additional preferred, basically not leaving available fish on the table.

Myra, maybe this is some stuff that has already been fixed, but I noticed that just a few language changes right above -- When you get into the economic effects section, it references Preferred Alternative 2d and then Preferred Sub-Alternative 2c, when the actual preferred alternative was 2d, and so I just wanted to make sure that those got cleared up.

MS. BROUWER: Yes, they did, and like I said, there were some minor revisions that were made to the decision documents as well as the main document that was submitted.

DR. MCGOVERN: We have 2 a and 2 d selected here?

DR. DUVAL: Yes. Well, so, we have not yet voted on the motion. That's what I was going to call for. Based on Jessica's use of the decision tool, it looked like, with a season of July through October that there would still be available quota on the table, and so that's why she's selecting May through June as well. Basically, it would really be May through October. Any other discussion on the motion? Is there any objection to the motion? Seeing none, that motion stands approved.

MS. BROUWER: Now for the last action, Action 12, as I was saying, we have inadvertently left out the language that you see highlighted, which reads that the bag and possession limit applies in the South Atlantic onboard a vessel for which a valid federal commercial or charter $\mathrm{vessel} /$ headboat permit for snapper grouper has been issued, without regard of where such species are harvested. We need a motion to go back and re-insert that language that we inadvertently left off, which actually figures in the accountability for other snapper grouper species, as modified through Amendment 34.

DR. DUVAL: I'm just making sure that everybody has had a chance to see that language up on the screen. This is consistent with language in our other accountability measures. It was just inadvertently left out, and so, if I could get a motion from the committee to approve the edits to Preferred Alternative 2, that would be great.

## MS. BECKWITH: I move we add the language that was inadvertently left out.

DR. DUVAL: Motion by Anna to approve the suggested edits to Preferred Alternative 2. It's seconded by Charlie. Is there any other discussion? Any objection? Seeing none, that motion stands approved.

MS. BROUWER: Then, lastly, just to remind you of the timing. This has been revised a little bit, but the DEIS comment period, however, will end before the September meeting. Our hope is to have the comments summarized for you in September, and then you will be scheduled to approve the document at that meeting. It would be submitted to the agency, and, of course, the statutory deadline is February 17 of 2017.

DR. DUVAL: Any questions for Myra on the deadline? This will come back to us in September for formal review. The next item on our agenda is mutton snapper, and so this is Snapper Grouper Amendment 41, and I think we're scheduled to approve this for public hearings that will take place in August. That is Attachments 9 a and 9 b in your briefing book, and I'm assuming we're going to be working from 9 a , the decision document?

MS. BROUWER: Yes, and, again, there were very slight revisions to the decision document that I'm going to show up on the screen. Just to bring everybody up to speed, this is the amendment that responds to the latest stock assessment for mutton snapper. Here is your purpose and need that you have already approved, and, unless there's any revisions, I think it captures what your intent is. We're not suggesting any changes there.

Action 1 is on PDF page 4, and this is to specify the MSY. We've got the table showing you just the two alternatives, no action and your preferred, which is to adopt the value from the stock assessment, which you see up on your screen.

In this amendment, we have very slight revisions to the titles of the actions throughout, mainly just to address capitalization and make it consistent, and so I would request a motion to go ahead and allow us to make those very minor changes for all the titles of the actions, as opposed to going one-by-one. As I said, they're just very minor capitalization changes.

## MR. HAYMAN: Madam Chair, I would move that we approve the suggested editorial changes to the titles of Actions 1 through 7 in Amendment 41.

DR. DUVAL: There's a motion by Doug and seconded by Charlie. Any discussion? Any objection? Seeing none, that motion stands approved.

MS. BROUWER: Action 2 is on PDF page 7. It specifies the MSST for mutton snapper. Your preferred is to set that level at 75 percent of SSB MSY. That is Preferred Alternative 3, and the value you see there adopts the estimate from the assessment. There are no changes to any of the alternatives, and, unless you have questions, we can move on to Action 3.

Action 3 revises the ACLs and the OY for mutton snapper in the South Atlantic. Your preferred is to set the ACL at the same level as the ABC. You have Table 4.3.1, which gives you average landings, commercial and recreational, over the last five years, so you can get an idea of where those landings are in relation to the proposed ACLs.

You see here Table 4.3.2 has your values based on your Preferred Sub-Alternative 2a. For 2017, you're looking at a commercial ACL of a little over 100,000 pounds and a recreational ACL in numbers of fish of 116,127 . Then, as you see, we have projected values through 2020, and that value would remain in place until modified. Again, no change is needed here, unless you want to change your preferred alternative.

DR. DUVAL: I am not seeing any takers.
MS. BROUWER: Okay. Action 4 revises the ACT. Again, the same thing as hogfish. You have chosen a preferred of setting the ACT for the recreational sector at 85 percent of the recreational ACL, and you have a table here showing you the numbers. Over here, highlighted in blue, for

2017, that level would be at about 98,000 or 99,000 fish. Any questions or desire to change anything here? Okay.

Action 5 designates the spawning season during which commercial and recreational management measures for mutton snapper should apply in the South Atlantic region. Currently, you don't have a preferred. We have analyzed three sub-alternatives: April through June, April through July, and May through July.

The Snapper Grouper AP recommended no action for this. They would prefer to keep currently the May through June as spawning months, and the revisions that I made to this decision document include preferreds or recommendations, I should say, from FWC staff, and so the intent -- Recall that we're trying to make sure that whatever management changes are made at the federal level are compatible with how mutton snapper are going to be managed in state waters, and so the FWC would like to see April through June as the spawning months and July through March as the regular season.

## MS. MCCAWLEY: I move that we make Sub-Alternative 2a the preferred under Action 5.

DR. DUVAL: There's a motion by Jessica, and it's seconded by Doug. Is there discussion? Jessica, do you have any discussion that you might want to add to this?

MS. MCCAWLEY: Yes. During the public workshops and the additional comments that we've gotten since those public workshops, it seemed that, number one, lengthening that season, and so not just being May and June, but April, May, and June, and so we're lengthening that season and making it the earlier portion of the season, was preferred by the anglers that we talked to.

DR. DUVAL: Thank you, Jessica. Any other discussion on this motion?
MR. HARTIG: I mean I think the season -- Not lengthening the season, knowing that most of the catch, at least from the commercial side, and from the recreational side, to some extent, does occur in the spawning season, if you lengthen that spawning season that much, you're really going to have a severe impact on the catches on mutton snapper for the year.

The additional considerations that I have is that there are a lot of closed areas in that area of South Florida and the Keys. You have Riley's Hump, which has become a major spawning aggregation site and looks to be, at least anecdotally, supplying a large number of recruits all the way up into the area where I fish in South Florida. I think that the combination of just the two-month spawning season and the additional closure we have is enough to still allow some fishing on each end of the spawning season and not expanding it farther than it is.

DR. DUVAL: When you say the additional closure, what are you referring to?
MR. HARTIG: When I say the additional closure months, they would have been the additional months that we would have included in the spawning season in the other options in the document. Do you understand what I'm saying?

DR. DUVAL: No. Maybe I am in a fog, but that's okay.

MS. MCCAWLEY: To respond to that, the reason that we wanted to add April, which would be the beginning period, is because those fish are spawning multiple times during that spawning season, and so, if they're already fished out during the month of April, then they likely haven't had the ability to spawn multiple times during that season, and so that's why we -- That was some of the input that we got from folks that are fishing in the aggregation, long-time fishermen that were suggesting that the spawning closure be shifted over towards April and also include May and June. I also want to note that the main closed area is Riley's Hump, which is in the Dry Tortugas. There are other areas where they are spawning in the Keys that are not closed, and so there are other aggregation sites, just like the AP discussed, for example the site at Western Dry Rocks, and, at this time, FWC staff are not recommending that Western Dry Rocks be closed.

MS. BROUWER: Just to clarify, currently, the months that are designated as the spawning season are tied to regulations that affect the commercial harvest of mutton snapper, and so there really isn't, currently, a closure or any other kind of regulation that affects recreational harvest during the spawning season.

DR. DUVAL: Is there any other discussion on this motion?
MR. HARTIG: Just to Myra's point, the regulations are the same for the commercial and the recreational fishery during the spawning months. The bag limit is the same for mutton snapper in the spawning months currently. There is a ten-fish recreational bag limit for the recreational fishery, and there is a ten-fish bag limit for the commercial fishery. What you're saying is that the commercial fishery is constrained further by the bag limit during the spawning season, while the recreational fishery is not constrained any further.

DR. DUVAL: Okay. Anything else on this motion? Is there any objection to this motion? Seeing none, that motion stands approved.

MS. BROUWER: Action 6 addresses the bag limit for mutton snapper. As Ben just --
DR. DUVAL: Jack, I'm sorry.
DR. MCGOVERN: I had a question on Action 5. It was actually for Myra, and it was about the no action alternative. The spawning season is designated as May through June, and I'm looking at the decision document, but I don't see the rationale for why that designation is made through June, and I'm guessing it's because there's a trip limit of ten fish during May through June, but, anyway, I was just wondering about that.

MS. BROUWER: You know, that designation -- I went back to the original amendment that put that in place, which was sometime in the early 1990s, and I did not find any rationale, other than this is when the aggregations are very apparent and when most of the harvest was happening, and it was, like I said, tied to further restrictions for the commercial sector, but there wasn't any additional information to designate those two months as the spawning season. I don't know if that gets at what you're asking. I just don't have any more.

DR. MCGOVERN: My question more was is that an appropriate no action alternative, whereas there is a designation of a spawning season?

DR. DUVAL: In other words, I think Jack is asking that is the wording of the no action alternative really appropriate, since there is -- The only thing that has been done is that there's just a difference in the commercial regulations during the months of May and June, and so I don't think there's any regulations on the books that say there is a spawning season of May and June. It's just, previously, when those commercial regulations were put in place, the rationale was that you were restricting commercial harvest during the time of year that the fish were assumed to be spawning, and so it's really, I guess, a language thing that maybe the IPT probably needs to work on, I guess. Does that capture it, Jack?

DR. MCGOVERN: It does, and I just feel like -- It's not in the decision document, but we need rationale in there for why that is the designated spawning season for the no action or that there is no spawning season that is actually designated, but I think we just need more text in there.

DR. DUVAL: So really clarifying the existing regulations that we have in place. It would be good to do that before public hearings. Anything else on Action 5, before we move on to Action 6 ? Okay.

MS. BROUWER: Action 6 was a bag limit action. Here you have a table showing landings by wave, and you can see that mean landings are highest during Wave 3, which spans the current spawning months for mutton snapper. This is landings per angler, and it's broken down by MRFSS and headboat, and you see that folks aren't really getting anywhere close to that ten-fish limit that's currently in place. The majority are landing less than three mutton snapper.

Then here is some percent reductions in landings. This is information that needs to be updated. It includes the years 2011 through 2013, but you can just sort of get an idea. This is information that was originally included when mutton snapper actions were part of the South Florida Amendment, and so you can see what the percent reductions in landings, based on those years of data, would be for MRIP and for the headboat sector under the various bag limit options.

The Snapper Grouper AP recommended Sub-Alternative 4b, which is a limit of three fish per person per day year-round. They did not -- They discussed this at length. They didn't feel like there needed to be any constraints put in place just for the spawning months. Folks are catching, on average, three or less mutton snapper per angler per day anyway, and so they felt that that limit year-round would be appropriate. Then they reiterated -- They had a lot of discussion about aggregations and fishing on aggregations, and they approved a motion to recommend to the FWC and the Sanctuary to address the issue of harvest of mutton snapper on spawning aggregations, specifically at Western Dry Rocks.

The FWC staff have recommended reducing the bag limit for the recreational sector also to three fish per person per day within the ten snapper aggregate, and so that also corresponds, it's my understanding, to Sub-Alternative 4b. Here, if you wish, you could narrow down the range of alternatives. That always helps with analysis, to make it a little bit more concise, and then, again, you would need to select a preferred.

MS. MCCAWLEY: To offer a little discussion on this item and how we arrived at this particular recommendation, the bag limit discussion was probably the most popular or the most frequent discussion that we heard at the public workshops. Almost everybody could get onboard with reducing the bag limit by some amount. Most people, it was at least to five fish.

You can see that, outside the spawning months, people are not taking, necessarily, more than one mutton, and so it doesn't get us a lot of bang for the buck by reducing the bag limit, and we went back and forth between five fish during the regular season, two fish during the spawning season, and then three fish year-round. Ultimately, we chose to recommend to the commission -- As Myra mentioned, it's Sub-Alternative 4b, three fish per person per day, and so that would be a yearround bag limit.

I am not convinced that when we go to our commission meeting next week that the commission might choose one that is say five during the regular season and two during the spawning months, and so I don't want to remove other alternatives here at this time, but I would make a motion to select Alternative 4, Sub-Alternative 4b, under Action 6 as a preferred.

DR. DUVAL: There's a motion by Jessica and a second by Doug. Any further discussion on this? Any objection to this motion? Seeing none, that motion stands approved.

MS. MCCAWLEY: Just one more thing. Myra mentioned about the Table 4.6.2. We noted that this particular table was calculated using pounds, and all the other tables in the document, I believe, are based on numbers, and so maybe that could get fixed as well.

MS. BROUWER: Yes, and thank you for bringing that up. I haven't shown you very many numbers just yet, and that is because the analysis that was done basically takes all of these various management measures and incorporates them into an analysis similar to the decision tool that you used for hogfish that was put together by Mike Errigo in our office, and so we have generated a bunch of tables that are at the very end of the document, because they address preferreds for every action, up until that last one, which pertains to the size limit.

When we get to that, we can get into what the numbers look like, the projections in landings under these various management measures, and we can also -- Mike Errigo is here to show you the decision tool and show you how it works. It's been updated from the numbers that are currently in the decision document. It's basically the number that you have in the decision document did not include the headboat data, because those were not available at the time that these tables were generated.

The decision tool that you're going to see here in a few minutes does include the headboat data, and it also has a function that allows you to see if there's any predicted closures under the various sub-alternatives, and so we'll get to that after we walk through all the various actions, and, yes, to your point, it will all be updated to only use the years 2010 through 2014, which is what the IPT has recommended using for all the analysis in this amendment.

DR. DUVAL: 10-4.
MS. BROUWER: Moving on to Action 7, this one addresses the commercial trip limit. Currently, during May and June, the commercial sector, as we've said, is restricted to ten mutton snapper per day or ten per trip, whichever is more restrictive, and sale is allowed, and there is no trip limit for the commercial sector in the South Atlantic the rest of the year.

Your Alternative 2 would establish a commercial trip limit during the regular season, and so we're talking about the non-spawning months, and you have a range from 300 to 500 pounds. Alternative 3 looks at a commercial trip during the spawning months, and your sub-alternatives range from two fish per person per day to twelve fish per vessel per day, and there's also a sub-alternative for no retention during the spawning months.

Here, you have a breakdown of commercial landings by gear. It spans the years 2004 through 2013, and so obviously hook and line is the predominant gear there, and then you have a figure that shows you landings over time by wave for the commercial sector. Again, mean landings are highest during Wave 3, during the months that correspond to Wave 3. Then, here, you have the monthly distribution of landings from the logbook. This uses data from 2009 through 2013. Again, May and June is where you're seeing the majority of the landings occurring, also for the commercial sector.

Here is a breakdown of pounds per trip, and your Snapper Grouper AP discussed this again recently at their meeting in April, and they recommended no action for the trip limit. The FWC is recommending a possession limit of three per person per day during April through June and 300 pounds during July through March, which corresponds to Sub-Alternative 2a.

MS. MCCAWLEY: Also, based on the discussions that occurred at the workshop -- There was a lot of discussion about keeping the commercial trip limit the same as the recreational bag limit during the spawning months, and so that is why we would be suggesting that Alternative 3, Sub-Alternative 3b, under Action 7 be a preferred for the commercial trip limit during the spawning season. That is a motion.

DR. DUVAL: There's a motion by Jessica. Is there a second? Second by Ben. The idea here is really to provide parity between the two sectors during the spawning season.

MS. MCCAWLEY: Correct, and to keep kind of the same structure that we have now, where the commercial limit is dropping down to the recreational limit during those spawning months. Since we've selected three fish as the recreational bag limit, we are selecting three fish here as the commercial limit during the spawning season.

DR. DUVAL: Any other discussion on this motion? Is there any objection to this motion? Seeing none, that motion stands approved.

MS. MCCAWLEY: During the regular season, there was considerable discussion about this, at the workshops as well, and we are suggesting -- One of the trip limits that people could seem to get behind, mostly because most people currently take less than 300 pounds on a trip outside of the spawning months, and so most people could get behind the 300 pounds. At this point in time, it looks like the average landings would make it so that we -- It doesn't appear that we would have to reduce commercial harvest a lot to stay below that line, and so it doesn't appear that we would have an early closure, but we're suggesting this 300-pound trip limit for the regular season in case the fishery starts to expand or more people get into this fishery, so that it doesn't close early. I would make a motion to select Alternative 2, Sub-Alternative 2a, as a preferred under Action 7.

DR. DUVAL: Motion by Jessica, and seconded by Chester. Is there further discussion on this motion?

MR. HARTIG: I appreciate Jessica's comments. I mean I'm looking at the table that Myra had put together, and just about every commercial trip would be covered by the 500 -pound limit. There are some trips out there under the 500 pounds. My concern was for the people who make multiday trips west of Key West down there, and that they will not be able to do that anymore, based on -They wouldn't be able to keep their higher mutton snapper catches on those multiple-day trips.

Given that that three-fish bag limit during the spawning season already decreases the commercial catch by a significant amount, and I can't remember what it is, but it's a substantial amount, I don't think that having a trip limit that has any real impact on mutton snapper is needed, but the 500 pounds will cover everything. I would prefer -- I think the 500 would be a better way to go, looking at the data.

DR. DUVAL: Is that a substitute motion? Ben, are you simply speaking against it, or is that a substitute motion?

## MR. HARTIG: I would make it as a substitute motion.

DR. DUVAL: There is a substitute motion by Ben to select Sub-Alternative 2c as a preferred. Is there a second to that? It's seconded by Charlie. Ben's rationale is that the three fish per person per day limit during the spawning season would already reduce commercial harvest enough such that a more restrictive trip limit outside of that April through June timeline would not be required. Is there anything else, Ben, or anybody else?

MR. HAYMANS: Why is that a substitute motion? Wouldn't that be complementary, because one is regular and one is spawning? Am I missing something?

DR. DUVAL: You're missing it. The motion that was offered by Jessica was a 300 -pound trip limit during the regular season, and so outside of the spawn, and Ben has made a substitute motion in that regard to have 500 pounds outside of the spawning season.

MR. HAYMANS: I fell asleep for a minute. I'm sorry.
DR. DUVAL: Understandable.
MR. HARTIG: I just would add that's a 35 percent reduction in the spawning month closures.
DR. DUVAL: Okay. Any other discussion on the substitute motion? Could I please see a show of hands of those in favor of the substitute motion? I count three in favor. Those opposed. Five opposed. Abstentions? Two abstentions. The motion fails.

We're back to the main motion, which is Sub-Alternative 2 a, 300 pounds. Could I please see a show of hands of those in favor of the motion? Six in favor. Those opposed. Three opposed. Any abstentions? One abstention. The motion carries.

MS. BROUWER: The last action in this amendment is to modify the minimum size limit, and this is an action that you added back in March. The alternatives range from seventeen inches to twenty. Currently, the minimum size limit for mutton snapper is sixteen inches total length, and so here is where we get into these predictions of projected landings.

Table 4.8.1 looks at recreational landings in numbers of fish for the various bag limit and size limit combinations under a year-round season, and so that's what those numbers reflect, and the PP is per person. Then there's a series of tables that begin on page 39 , and there is four tables per page, and each page corresponds to a minimum size limit, and so the very first page corresponds to the current sixteen-inch, and then you have the various alternatives for bag limits during the spawning season and outside of the spawning season, and your projected landings, as was mentioned earlier, is in numbers of fish. Here is where I'm going to suggest that we let Mike Errigo come up here and show the updated version of the decision tool that would create these tables as an output, if that's okay with you.

DR. DUVAL: That would basically incorporate all of the preferred alternatives that we have selected thus far for management. All right, Mike E.

DR. ERRIGO: This is basically an interactive way of looking at the mutton snapper alternatives in Amendment 41, since there are so many different interacting alternatives for size limits and bag limits and seasons and different bag limits, depending on if you're in the spawning season or outside of the spawning season, and so, up here in the corner, you just fill in what you want. You have the size limit up here, the bag limit, and so you have the bag limit for the spawning season, and then you put in if you want it per person or per vessel.

Then this is for outside of the spawning season, for the rest of the year, and those alternatives are only per person, and so there's no choice for that one, and then the spawning season start month and end month, and then, what it does, is it calculates the average landings and then it compares it to the status quo, and so the red is status quo and the blue is the average projected landings from 2010 to 2014 , with the $5^{\text {th }}$ and $95^{\text {th }}$ percentiles. I also have the cumulative landings, so you can see how the landings increase over the course of the year, and then this would be the percent reduction from status quo up here in the corner and then any projected closure dates.

Under status quo, you would see, under the new ACL, if you set the ACL equal to the $A B C$, you would not expect a closure. If you set the ACL equal to 95 percent of the ABC, you would expect a closure at the very end of December. If you set it equal to 90 percent of the ABC , you would expect a closure sometime in the early part of December, but there's a lot of uncertainty around those estimates, as you can see. As you get towards the end of the year, the uncertainty gets larger and larger. What were the preferreds for spawning season and bag limit?

DR. DUVAL: It's April through June.
DR. ERRIGO: If you set these two equal, that comes out to year-round. I don't know why my percentiles went away, but the average came out fine. You will see that that made almost no difference to the projected landings at sixteen inches. Actually, I found out that, unless you close during the spawning season --

DR. DUVAL: Mike, you put in an April, May, and June spawning closure and a three-fish per person recreational bag limit year-round?

DR. ERRIGO: Yes, and I found that, at sixteen inches, the only alternative that makes any real significant impact for landings is if you close during the spawning season completely. Everything else makes a very, very small -- You will see this is a 1 percent reduction in landings. That's at sixteen inches, at the current size limit. Any increase to the size limit has a significant impact to the landings, so if we go back to -- If we go to status quo, and we simply go up to seventeen inches, you get almost a 65 percent reduction in projected landings.

MR. HARTIG: What was that increase to? I'm sorry, but I missed it.
DR. ERRIGO: That went from sixteen inches to seventeen inches minimum size. Of course, this assumes that there was no change in fisher behavior, no increase in the number of trips and no increase in trip length to search for those bigger fish, and this is only the projected landings for the next year, 2017. As the stock grows in size and there are more seventeen-inch fish available, those landings will increase.

DR. DUVAL: With our preferred alternative, in terms of the annual catch limit, there's like 116,000 fish or something like that on the recreational side, I think. When you put in an April through June spawning season with a three-fish per person year-round, there was no projected closure at ACL equal to ABC , correct?

DR. ERRIGO: The only time you start to see any closures is if you choose one of the ACL alternatives where you're reducing from ABC .

DR. DUVAL: Jessica, did you want to plug in a different size limit and see what comes out of it?
MS. MCCAWLEY: Yes, eighteen inches.
DR. ERRIGO: Then the three and year-round? You have an almost 74 percent decrease in landings from status quo, but it's pretty constant across the months. You don't really get a bump.

DR. DUVAL: It really takes out the harvest from during those spawning months is basically what that does. Are there any other alternatives that folks would want to see in terms of anything else? I mean you can see the impact that the size limit has on the projected harvest.

DR. ERRIGO: I know why the percentiles aren't calculating. It's simply because this computer has an older version of Excel, and so the formula that used isn't working right. I can fix it. It's no big deal, but --

DR. DUVAL: But there would be a cone of uncertainty around those.
DR. ERRIGO: Yes, and it's pretty wide. If you look at the cumulative monthly landings, it gets wider and wider as the year goes on, because you're adding more and more uncertainty as you add estimates, and it's very wide. It's actually narrower during the spawning season, when you have more of the landings information, but they still range quite a bit.

DR. DUVAL: All right, and so that was informative. Back to the action, which is Action 8, modify the minimum size limit, no action right now is sixteen inches. Jessica, I don't know if you would like to speak to the staff recommendation from the FWC.

MS. BROUWER: The AP recommended Alternative 3, which is a minimum size of eighteen inches, which is the same as what I understand the FWC staff has also recommended, and then, also, I should mention the analysis that you just saw that Mike conducted are taking into account the change to the size limit first, and so we would, in order to keep it consistent with how the data were analyzed, we would ask that you consider moving the minimum size limit action to before the action that would define the spawning season, just to make sure that we're consistent in how we're treating the data.

MS. MCCAWLEY: At the public workshops, increasing the size limit was one of the things that was talked about a lot, and eighteen inches was the most popular increase suggested. I can tell you that, in looking at the average landings over the past few years and what the projections are, it looks like we need a reduction on the recreational side, in order to prevent an early closure. As you can see from the decision tool, increasing the minimum size limit really gets us that bang for the buck, and so that's why we're recommending going to an increase in a size limit, to get us that necessary reduction, number one, and, number two, we chose eighteen, because that was the most popular one suggested at the workshops.

DR. DUVAL: All right, and so we need a motion for a preferred then.

## MS. MCCAWLEY: I move that we make Alternative 3 under Action 8 the preferred.

DR. DUVAL: Motion by Jessica. Is there a second? Second by Jack. Is there further discussion?
MR. HARTIG: I don't know if I can support a motion that decreases the recreational fishery by 74 percent by going to eighteen inches. That's a major, major reduction in the fishery. I know there is some interest in not having a closure, but maybe a better way to do that is through a bag limit decrease, if you're getting close to having some way to step down the bag limit at some segment of the season for the bag limit, but that's a major, major, major cut for the recreational fishery.

MS. MCCAWLEY: Thanks for those comments, Ben. Yes, because of the fact that most people are not taking more than one mutton outside the spawning season, unless you basically close it during certain times of the year, you cannot get the necessary reduction with the bag limit decrease. However, the bag limit decrease, just by itself, was probably the most popular thing that we've heard at workshops.

We've been hearing that at FWC workshops for about the past three to five years, that people want the bag limit reduced to at least five fish within the ten snapper aggregate, just because they think ten mutton is way too many, and so they've been asking for these proactive regulations, but the only way to prevent an early closure for mutton or exceeding the new quota, to really get that bang for the buck, you've got to go to the size limit change to get that.

You can't get it with the bag limit, and FWC prefers to have that access to the resource. It's more important than closing it early, and so they want to maintain that access without having to have say a spawning season closure, and so we're going with an increase in the size limit to get us there.

DR. ERRIGO: Just directly to the bag limit issue, when looking at this, in order to determine how to do the bag limit analysis, I needed to look at all trips that counted mutton snapper that also hit the snapper aggregate bag limit. Of all those trips, I found only three that were intercepted that actually reached the snapper aggregate bag limit. Of those three, the dominant species on the trip, the reason why they hit the bag limit, was yellowtail snapper.

Mutton snapper, there were like two or three on that trip, and there were no other trips in the dataset that encountered mutton snapper that reached the aggregate snapper bag limit, and so there was very, very, very little -- Of those trips that encountered mutton, very, very few people are coming anywhere near even -- When I cut it down to five, it made almost no difference. It was less than 1 percent difference in landings.

MR. BREWER: That 74 percent reduction, is that just in the first year or does it --
DR. ERRIGO: Yes, and so size limits are an interesting analysis to do. All of the analyses are done looking at what's going to happen in 2017, or next year, but, when it comes to a size limit change, as the stock grows, more fish will grow into the new sizes, and, as years go on, there will be more available to landed, and so that's the benefit. That's why you would increase the size limit, so that there's more larger fish. There should be more available in years to come, but the first year, the first couple of years, will take a big hit.

MR. BREWER: That reduction sounds like it's drastic, but, as a recreational, what we want is more available fish and bigger fish. I think that people might be willing to sacrifice for a year or two to get to that goal, and I understand Ben's concerns, I really do.

MS. MCCAWLEY: Eighteen inches is the size at 50 percent maturity for females as well.
MR. HARTIG: I have some philosophical concerns about discard mortality. I mean I know what's caught in the southeast coast of Florida, and they are not big fish. They catch a lot of small fish, and there's going to be a tremendous number of discards in that fishery. Most of them are caught in the ninety to hundred-foot range. You may expect some kind of decent survival in those depths. However, the predator situation in that area is so high that I doubt that many of those fish that are released are going to make it, at least where I am. The additional thing is that it impacts the assessment whenever you change the size limit. It impacts MSY, and, unless you have a really, really good rationale for doing it, I would stay away from it, but I will quit.

DR. DUVAL: Any other discussion on this motion? Is there any objection to this motion? The motion passes with two opposed. I think the next motion we would need is just a motion to move this size limit action ahead of I guess it would be the spawning season action, which is Action 5.

[^0]DR. DUVAL: Motion by Jessica, and it's seconded by Chester. I think Myra has explained the rationale behind doing this, so that all of the analyses follow -- It's so that the actions follow the order of the analyses. Is there any other discussion on this motion? Any objection? Seeing none, that motion stands approved. Now we would just need a motion from the committee to send this document out to public hearings.

MS. MCCAWLEY: So moved.
DR. DUVAL: Is there a second? Second by Chester. Any discussion? Any objection? Seeing none, that motion stands approved.

That takes care of mutton snapper, and I'm going to be nice to you all, based on your hard work last night, and let everybody go for lunch a little bit early, and so please come back here at 1:30, and we will dive into an overview of Snapper Grouper Amendment 43. Thank you.

DR. DUVAL: The first thing I would like to do is bring Dr. Barbieri back up here. The next item on our agenda is an Overview of Snapper Grouper Amendment 43, but we just received a letter from several congressmen, I believe twelve or thirteen congressmen, that was sent around by Dr. Crabtree. It was sent to his office, and he asked Mike Collins to send that around to council members. Roy, I don't know if you want to go ahead and review that, and we'll bring Dr. Barbieri up here to hopefully try to answer some of these questions.

DR. CRABTREE: I got this letter, which was sent to Dr. Sullivan, who is the NOAA Administrator. I got it late yesterday, and so thirteen members of Congress, and most of them appear to be from Florida, but not all of them, and they wrote expressing some concerns about red snapper harvest. They're asking us to address some of these before we vote on anything, and so I thought it would be good to do that.

The gist of this seems to be their perception of some discrepancies between NOAA and the Florida Fish and Wildlife Research Institute's statistical evidence regarding the red snapper population, and, of course, Dr. Barbieri, as you're aware, in addition to being on our SSC, is the Director of Fisheries Programs at the Fish and Wildlife Research Institute. Luiz, particularly, they ask about FWC statistical evidence with respect to age truncation and discards, and they have a reference also to some institute data that supports allowing a harvest that was excluded somehow, and so I wonder if you could address some of the concerns in the letter. I know you've seen it, and I sent it to you earlier.

DR. BARBIERI: Right, and I am aware of that discussion. I actually have communicated with some congressional staff. I received calls and correspondence from several congressional offices requesting that information and clarification on those points, and I think there is a level of perhaps misunderstanding or misconception about actually the data that was used versus not, and we appreciate the congressmen's concern regarding the use of our data, but, considering that the assessment, the terminal year of data in the assessment, was 2014, the vast majority of data from the FWC data collection programs were included in the assessment.

Now, some of the things that were not included were data collections that happened during 2015 and 2016 that continue to document the increase in stock abundance and continue to document some of these age classes that are growing, the older age classes that we have discussed before,
when I had that color graph of the age composition, the biomass at age, but that doesn't mean that the assessment did not include all the data, the inputs that we used for the assessment.

I mean if somebody can be more specific about how the data was not included, I mean I can go into the assessment document and try to clarify those issues, but, as far as I know, and I have discussed this extensively with my staff, there is absolutely no doubt that all the data was used in SEDAR 41 as of the terminal year of the assessment, 2014.

DR. CRABTREE: Luiz, with the information that's come in I guess after 2014, because I know this work is going on, would there be a way for you to go over some of that information at the next SSC meeting, and I don't know if there's any way any of that new information could be incorporated into your deliberations over what the appropriate catch levels and all are, but I would encourage you to bring whatever more recent information you have and get it before the SSC and try to take that fully into account as you go over some of the concerns.

DR. BARBIERI: That's not a problem. Obviously I'll be discussing this with staff and with Chairman Reichert in terms of adding that discussion into our agenda for October, but keep in mind that we do this all the time, actually talking about that very high recruitment pulse that shows up in the assessment in 2014. Marcel may remember that, during the review workshop, one of the questions was how much are these patterns that we see now an artifact of the model, because that was the terminal year, and most of the uncertainty is associated with the end of the assessment estimation period, and so how much of that actually materialized, in terms of recruitment pulse in 2015.

Marcel was able, and Joey, to draw from the MARMAP sampling program and tell us that, actually, those fish did show up in the MARMAP survey, and that supports, really, those strong year classes, in the end, and so this would be the same kind of thing. Data collection continues, but assessments have to have a terminal year to be included. There is nothing that says that we cannot use subsequent data to validate some of the issues that have been brought, and I imagine that the SSC would be more than glad to go through that process at our October meeting.

DR. CRABTREE: That would be great, and then there was other issue raised in the letter, where they asked that non-NOAA scientists be given a more active role in the Scientific and Statistical Committee, and so I wanted to ask John -- John, how many people do we have on the SSC currently?

MR. CARMICHAEL: You have eighteen members currently on the SSC, and three are NOAA employees.

DR. CRABTREE: Okay, and so eighteen members, fifteen of which are non-NOAA, and so we certainly have a significant non-NOAA participation on our SSC. Okay. Thank you.

DR. DUVAL: Anything else regarding the letter from members of Congress?
MR. HARTIG: I am trying to pull up the letter, and I think I've got it, of the questions that we sent to Beaufort after the SSC meeting, and one of the questions was about that data. Question 2 is there was considerable discussion at the SSC and the review workshop regarding catch estimates and age samples collected by the FWRI during the brief open seasons during the 2012 mini-season
and -- Okay. Luiz had said that that information was used, and I agree that it was used, but how it was used is my beef, how it was used in the assessment.

When we went into this moratorium, we had no idea we were going to have a mini-season. We didn't know we were going to be able to get some landings information outside of the trap survey, and so we had put on a full-court press, and I had got with the fishermen in the north, saying, listen, we have to do this cooperative research to be able to at least inform the trap catches as far as ages are concerned. I said that will be the only information we have. Whether it's right or wrong, that will be it.

They did that. They followed it up, and I said the next thing you have to do is make sure that these samples that are collected are able to be used, and I'm talking specifically about the age comps. These samples have to be used in the assessment, because the age comps are going to be critical when you start comparing the age comps between the two gears, the hook gears and then the trap gears, and so, to my knowledge, they did that.

The proposals I looked at and the working papers I've read from the assessment about all of this fishery-independent work, yes, the hook gear survey was, number one, done as a potential, in the future, way to sample to fishery to inform the trap survey as well, to have something to balance out the traps.

That was number one, but number two in that was the collection of the demographic information on red snapper, all the age structures and everything else to go into the assessment. Now I'm sitting here, and we've had a -- Since that time, we've put on the full-court press. We had all this fishery-independent information done, but none of that information, Luiz, was used to inform the age structure in the assessment, none of it.

Yes, it was used to inform selectivity. Now, none of the fishery-independent information. The mini-season data age structure was used, at least from Florida, but I mean I was -- I'm sitting here putting on a full-court press for fishermen to get all this done. They set up these programs and had them scientifically reviewed, so the data can be done in a usable manner, randomized samples, the way the gear is done and everything, and then we can't use the age structure from the assessment, and we actually see, at least I see, and I don't know if it's correct or not, and we have to go through the SSC, but I see, in that work, I see a difference in the proportion of ages, older ages, collected by the hook gear versus the chevron trap.

Now, would that have made a difference in the assessment? That's not what's driving the age structure, I'm going to tell you right now. It's not driving the bus on the age structure, and it clearly shows that we don't have many fish over age nine. However, going forward, if you have more of those fish in those older age classes, it seems, to me, to inform management going forward, that if you have more of them going forward and you have this big biomass, you can look at this and have some way to determine some form of landings from the productivity of the larger ages going through versus the productivity abundance of the smaller ones.

When you compare them, and you know what came through with the first big year class we have, that we're continuing to get a higher proportion of ages moving through the fishery, and then we've got this other one, you could inform your judgments somewhat between the two, between the new productivity of abundance and the other year class we had when we closed the fishery that could
inform you going forward on what productivity you could possibly get out of the stock. It's just one way to look at it.

My disappointment, extreme disappointment, with the fishermen going into this thinking that the age comps were going to be used, and the time and effort that they made for this, and giving up resources as well to do this research, was disappointing, to say the least, and so, yes, you are absolutely right that this information was used to inform selectivity from the fishery-independent studies from FWRI, but those age structures were not used in the assessment, and that is my beef.

I followed up with a letter to Erik. I followed up with an additional question, and you know. I sent it to you, and they made a big deal about how the FWRI fishery-independent information was so important in the reproductive work that went into the assessment, and so my response was, if it was so important in the reproductive work, why weren't the age structures as equally important in moving forward in the assessment?

The way I framed usage was maybe you go to the different fleets. They had done that with the Georgia for-hire information, where three boats in Georgia, three charter boats, had collected a whole bunch of red snapper ages, and they went back and they looked at those in comparison with the other data, and they were comparable, and so they went ahead and used them, and so why wasn't something like that done to use the ages that we were able to collect through that work?

The other question is if it informed selectivity, the selectivity seems to be somewhat different, based on the hook gear surveys versus the chevron traps, and so, if it informed selectivity, I don't see where it did, but I'm just -- That's the beef I have with the way things were done.

DR. BARBIERI: Thank you for that, Ben. The thing is, and we're not going to have time to go into all the details. I know you have a full agenda. You and I know that we have been corresponding on this issue, and that I have written a number of emails that help document all of this, step-by-step, and that I copied all those graphs and I provided a full rationale of each one of those questions, verbatim, in writing, explicitly in those emails.

What I'm going to do is I'm going to save, in the interest of time, Madam Chair, I am going to save those emails as PDFs, and I'm going to distribute that to staff, so it can be distributed to the council. I ask you to please read through those emails and evaluate those graphs.

When you look at the sample size, Ben, of the hand line, the amount of samples there, and you compare with the FWC, you're going to see that the FWC data was not used as a fisheryindependent source of data for age composition, but it was used as a hand line source of data, simply because of that captain's choice, and the fact that it wasn't conducted completely according to a random sampling program like the other fisheries-independent -- It was included even to inform, and you see that the maximum ages -- Again, I have all of this in writing that has all the graphs there and can help document all of that. We could discuss this over here, but I just feel that it would take too long, but I think that this will help reassure the council about how those pieces of information were integrated, and I can be here tomorrow, if there are additional questions from the council regarding the use of that data, and we can go into more detail, if necessary, Madam Chair. I think that will help.

DR. DUVAL: Thank you very much, Luiz, for coming back up to the table again and providing some answers to the questions that were raised in the letter from the congressional representatives and also for sharing those emails, where you have explained in further detail how those data were and were not used and documented that, and so I very much appreciate that.

DR. BARBIERI: Thank you.
DR. DUVAL: The next item on our agenda is an Overview of Snapper Grouper Amendment 43, and so this is Attachments 10a and 10b in your briefing book, and I think Chip is going to take us through Attachment 10a, which I believe is a synopsis of red snapper data, and so we've seen -We saw a version of this at the March council meeting, and it's been updated since then, and so I will turn it over to Chip.

MR. COLLIER: Since the March meeting, it's been updated with some -- Most of the figures and tables have been updated with 2015 landings, and the first landings you will find -- In Table 1, you will find the ABC. That's the old ABC from SEDAR 25, and so that's going to change down to 58,000 fish if SEDAR 41 is approved, and so that's going to change that ABC value for 2016.

The big thing that's here today is the discards in 2015. That was estimated at 274,000 fish, using the old MRFSS estimates, and that was dead fish, and so that greatly exceeded the ABC. Therefore, the season for 2016 is not going to happen, as Rick had described yesterday.

Going into a little bit more detail on the breakdown of the estimated harvest, it's in Table 2, and you can see 2015 landings. The majority of the dead discards had come from the private recreational boat fishery. If you guys have any questions on this data, please let me know. I'm going to fly through it, since you've already seen it.

The other information that was added is towards the end. It's basically data on breaking down the recreational fishing effort and number of discards and percentage of discards, and that begins on page 8 or 9 . The description begins on PDF page 12, and then you have a table of recreational landings and discards and proportion of landings by sector from 1981 to 2014, and that came directly from SEDAR 41. Those are going to be MRIP estimates of landings, which are going to be slightly different than the MRFSS estimates of landings.

Some things I want to point out from this is you can see that discards began to generally increase about 1999. That's when the second occurrence of over 100,000 discards occurred in the recreational fishery. The first one occurred in 1987. Then, since 1999, estimates of discards is generally over 100,000 fish since then. There was one exception in 2011, or two exceptions, in 2011 and 2005, and so discards have been substantial for a pretty long time in the red snapper fishery.

Then, looking at the proportion of where the discards were from 2004 to 2015, the majority of discards in the charter boat fishery are occurring from Florida, and then, if you look at the private recreational data, once again, the majority is coming from Florida as well. Then there is a figure of the average discards from 2015. That has county of intercept, and that's on page 15. It's colorcoded by state. Once again, that just displays that the area where most of the discards are being intercepted occurs in Florida counties, generally in the northern Florida counties. I will take any
questions on that. I know I flew through it, but it's just background information as you guys begin to make considerations for Amendment 43.

DR. DUVAL: Any questions for Chip on any of this?
MR. BOWEN: It's not a question, Chip, but just a statement. I appreciate the work, and it definitely shows where the abundance of snapper are. I appreciate it.

DR. LANEY: Chip, does the graph there on Figure 10 take into account the misidentification error that Michelle pointed out to us earlier?

MR. COLLIER: It does not.
DR. DUVAL: Anything else for Chip? Okay. Thank you, Chip. I think, next, we're moving on to Attachment 10b in your briefing book. This is something that was prepared by Ben, and Gregg compiled these ideas for Ben, as he put this together. Ben, do you have a presentation that you're going to be making to sort of walk the council through this paper?

MR. HARTIG: Yes, I do, Madam Chair. There's a PowerPoint presentation, and I hope that's going to be up on the webinar. It should have went out today. There it is.

DR. DUVAL: Is everybody ready? I will turn it over to you, Ben.
MR. HARTIG: Thank you, Madam Chairman, for the opportunity to bring this before the council today. Howe we got here -- The first thing you will see is this is a living document. As you can see, red snapper comprehensive adaptive management approach. It was ecosystem management approach, but it didn't really fit that terminology, and so I mean the name has changed already. There are a number of contributors to this effort, staff and other council members, but I would like to thank Robert Johnson for his letter from a couple of months ago that gave me the template to begin.

How did we get here? I mean there was excessive frustration from the council members and fishermen who participated in SEDAR 41. Most of these fishermen also participated in the fisheryindependent cooperative research projects, one of which the tagging work was partially funded by industry. These fishermen have given up substantial time and resources to participate in both the assessment and the research process. On a personal note, as you heard yesterday, I contemplated leaving the council, as I could no longer explain the red snapper assessment results in a credible manner to constituents, but, as you can see, I am still here, doubling-down on a new way forward.

Slide Number 2 is the intent of the options paper, we'll see if Amber corrects me about goals and objectives, but there are five goals and seven objectives. Develop a comprehensive adaptive management approach, which would convert some discards into landed catch, improve data collection, improve future assessments, increase fishermen satisfaction while ending overfishing.

The next is to cap for-hire effort, cap mortality of the for-hire sector with sector separation and closure. The other thing I will say, before we get too much farther, is I'm going to try and ask you all to ask questions at the end. If not, I will never get through it, and then Michelle will never be
able to stop the time in a reasonable fashion, and so, please, as we go through the slides, jot down what slide number you had for a question, and I will take them at the end.

Goal three was to cap private recreational red snapper mortality with a snapper grouper fishing season, and then you would include the headboat and charter vessels in a season if there no sector separation. Goal four is to cap the commercial red snapper mortality with a limited commercial opening under a low red snapper quota. The last goal was improve data collection through citizen science. The topics of this include using citizen science to address data challenges, and the flexibility in the approach will become apparent later, and then the nuts and bolts of the comprehensive adaptive management system.

As you can see, there is extensive effort in the South Atlantic. While all of this effort you see is not in the EEZ, there are still 1.5 million private recreational trips on the ocean greater than three miles offshore. For the for-hire fleet, 449,000 angler trips, based on MRIP, for the ocean greater than three miles. Then the allocations between the two sectors, commercial and recreational, is 46.6 commercial and 54.3 recreational.

Some of these slides have come from the Quest Webinar that our staff had given a couple of weeks ago through the NOAA system, and they actually fit very well right into this presentation, and I would like to thank them for that.

You see the map of the South Atlantic. It has diverse resources, plus patchy distributions, plus structural affinities create significant challenges for fishery and population monitoring, and you all know this, but that's a critical problem we have in the Southeast. Quantitative information for management under Magnuson-Stevens is often lacking. We have a lack of fishery-independent surveys, although SEAMAP, MARMAP, and SEFIS, and we're thankful for the addition of SEFIS monitoring. However, northern North Carolina and southern Florida, south of St. Lucie Inlet, are not surveyed through these programs.

We have poorly defined stock boundaries and high catch uncertainty. MRIP PSEs are commonly above 30 percent, and we have significant discard removals. As Chip mentioned, a significant number of the discards in red snapper come from the recreational fishery. In fact, 78 percent of the red snapper removals are from discards, dead discards, in the recreational fishery. There are few observers in these programs. Headboat has some observer trips at the federal level, but the private recreational fishery has no direct observations, and discards are self-reported and unverified. We have no lengths, ages, or depths for this sector's discards.

On the same thing, lack of population survey or indices, and then increasing regulatory actions diminish or remove the ability to use fishery-dependent indices of abundance, and this is an everincreasing problem for the stock assessment scientists, to be able to use the fishery-dependent indices. Now fisheries-independent information becomes much more important. However, the funding has been reduced for some of that fishery-independent work.

Species misidentification and unclassified landings, even at this time, it's still a problem in some of our species. Basic life history information is lacking for many species, and, for some of these, we do have needs for updating the life history information. Habitats are not fully mapped. Movement patterns and migrations are poorly understood.

This brings us to data challenges and data gaps. The data gaps, we need better information to characterize discards in all sectors. Discards are increasing for the red snapper since 2010, and they're increasing in some of our other fisheries as well. 72 percent of the recreational catch in 2014 was discarded. We need better catch and effort data from private and charter sectors. This council is working on the charter logbook amendment to try and address this issue. We need more biological sampling from the private and charter sectors needed to characterize catch and changes in distributions over time and so on.

Fishery-independent sampling for deepwater species, there is limited fishery-independent sampling that occurs throughout the region. Again, we're lucky to have the SEFIS program. However, MARMAP short and long bottom longline samples were curtailed a few years ago, although the short bottom longline has been reinstated, but there are still problems with fully reinstating the long bottom longline information that was so critical in the tilefish assessment.

Habitat distribution and suitability, we lack a full understanding of habitat distribution, species habitat suitability and the impact of environmental factors and how they interconnect. This becomes increasingly important as climate change alters species distribution and habitat preferences. Examples of those, as you well know, are blueline tilefish and black sea bass, as we see those populations possibly change with climate change.

Data processing is a tough nut to crack, in some situations. Any of you who have attended a SEDAR assessment have some understanding of the work our data providers accomplish associated with an assessment. Other data streams, like the video data from cameras and chevron traps, as Bonnie mentioned yesterday, is very labor intensive for evaluation.

The last item under data challenges is there has been a long-standing tradition within many existing programs where scientists have been working with fishermen to collect data to fill data gaps. Fishermen have provided numerous sampling sites that have been programmed into the randomized SERFS, Southeast Reef Fish Survey, sampling base.

A number of fishermen have worked with MARMAP and others to provide biological samples outside the sampling seasons for reproductive information, and collaboration with fishermen has spanned many years, and we need to build on this cooperative effort, in a comprehensive and organized manner, through our citizen science initiative.

Red snapper data and assessment issues and concerns, you have heard plenty of those yesterday and today. Recreational catch estimates from private and charter vessels continue to be extremely uncertain, despite substantial investment of time and money for improvements. Composition and magnitude of recreational discards are uncertain during the 2010 through 2014 moratorium. Recreational discard estimates are one of the most important, but most uncertain, sources of information in the red snapper assessment.

Red snapper discard data is self-reported, and I mentioned this before, and unverified and prone to recall bias. Most of the red snapper catch, and this is a quote from one of the CIE reviewers, Michael Armstrong, is most of the red snapper catch is now discarded, and the inherent errors in discard estimates, based on limited observer trips and fishermen recall, means that the quality of the total fishery removal estimates may therefore have deteriorated significantly, which will impact estimation of stock size and fishing mortality.

The next bullet there was chevron traps missing older fish, and we just had some substantial discussion about that. I don't think I will belabor that anymore, because Luiz has said we're going to find a way forward to do that, but there is a discrepancy in the ages when you compare the hook gear surveys with that of the chevron trap.

The use of a bottom longline fishery-independent index I think is critical. Lack of a bottom longline fishery-independent survey in the South Atlantic is a critical omission. The Gulf has a NOAA fishery-independent bottom longline survey, and commercial longlines also provide samples as well. The age composition provided by both of these longline gears provide older ages from deeper water. It anchors the older age compositions in black grouper, mutton snapper, and the Gulf red snapper assessments.

In the Gulf red snapper assessment, this is documented through the calculation of $Z$ values. $Z$ values were greater than one among commercial hand line and the recreational sector. Z values were 0.1 from the longline samples, fishery-dependent and fishery-independent, from the western Gulf. These age comps confirm that older red snapper in the western Gulf and the susceptibility of older ages in deeper waters to longline gear. We may never know the full age composition of red snapper in the South Atlantic without a bottom longline survey.

Discard mortality estimates, trends are not the same in the recreational and commercial sectors. In fact, they are inverse. The highest recreational discard mortality occurs in the lowest year for the commercial fishery, and the lowest recreational discard mortality occurs in the years of the highest discard mortalities.

How do we move forward to collect the necessary information we need to address the data gaps and to improve our assessments? Through our visioning input, we received support for citizen science. In our visioning process, science was a major goal, with data collection, cooperative research, and citizen science as priority objectives.

A red snapper cooperative project conducted by the State of Florida provided critical data for SEDAR 41. Cooperative research is a form of citizen science and our visioning process, and a White House Citizens Science initiative and legislation have pushed citizen science to the forefront as the number one need for the South Atlantic region to address our data needs.

As you are aware, the council conducted a citizen science workshop. From that workshop, a blueprint for a snapper grouper citizen science program was developed. Citizen science, while it can be cost effective, is not free, and there are funding needs to administer the program and fund projects. Two of the key elements of this citizen science initiative are to improve fisheries management through collaborative science. More collaboration plus more data plus more trust equals better management.

We have provided this table with a number of items to address the data gaps, and a number of them I have already read, I've already identified, but you can see, in this table, that a number of them are citizen-science related, and I would even check maybe one or two more of these where we could have citizen science input in that, but there's a number of different things that we need to modify for increased sampling. Some of that is compliance and dealer and commercial headboat electronic reporting, but the rest of that are needs that we can address through citizen science.

One of the new ones is recreational fishermen electronic reporting, which I will mention more as we go through this process. All of these will be mentioned more as I get into the meat of the intent of what we're trying to do.

The flexibility in approach, due to resiliency and relatively low biological risk to red snapper -Now, Luiz talked a lot about this. He talked about the resiliency of red snapper. He talked about some of the life history traits that red snapper possess that are relatively unique to that species, and why we may possibly look at a different way of managing red snapper.

The South Atlantic red snapper stock has been making well-documented rebuilding progress. That's increases in spawning stock biomass and improvements in age structure. The stock has shown significant increases of abundance and unprecedented pulses of recruitment. Life history characteristics, such as long-lived, but very early sexual maturity, and high egg production, are unusual when compared to other members of the snapper grouper complex, and it suggests that red snapper do not fit the pattern of low productivity associated with long-lived species. The very high recruitment pulses and high increases in abundance observed in the last ten years appears to reinforce this suggestion. There are no signs indicating the stock has stalled rebuilding and will not meet anticipated rebuilding timelines, and so, yes, it hasn't stalled, and it's anticipated that it will meet its rebuilding goals.

There also has been some flexibility in approach relative to MSA. Flexibility does exist within the current MSA, as illustrated by the Mid-Atlantic and secretarial actions on blueline tilefish, where overfishing was reduced, but allowed to continue under the Mid-Atlantic Council's emergency rule, as approved by the Secretary of Commerce. Flexibility was also exercised during the summer flounder phase-in of reductions to end overfishing over three years, and recent actions by the Mid-Atlantic Council on blueline tilefish that continued a seven-fish recreational bag limit in 2016 that will allow the recreational sector to exceed its ACL.

There is also flexibility that the council controls, and, based on the previous discussion, the high catch rates, large increases in abundance, and strong recruitment pulses, it would suggest that the current spawning potential ratio proxy that the council adopted for red snapper is more conservative than the proxy SPR needed to produce MSY. MSY is the limit reference point that defines overfishing thresholds and rebuilding targets.

We propose a change to the MSY proxy to 20 percent static SPR. Optimum yield for red snapper will change to the amount of harvest that can be removed while maintaining SPR at or above 20 percent static SPR. The overfishing definition will be the fishing mortality rate exceeding F 20 percent SPR, and the overfished designation would occur if the fishing mortality rate is greater than F 10 percent static SPR.

Another way of characterizing this is MSY for the red snapper is unknown. The council is specifying 20 percent static SPR as the MSY proxy for red snapper. Currently, MSY equals the yield at FMSY equals the yield at F 30 percent SPR. If a stock recruitment relationship is identified, then the MSY would come from that stock assessment.

Overfishing for red snapper here is defined as the fishing mortality rate in excess of the fishing mortality rate at 20 percent static SPR, which is the MSY proxy, which would be the MSY proxy. Currently, overfishing equals F greater than F 30 percent spawning potential ratio. The overfished
status will be determined in the future, when biomass-based parameters can be determined with the acceptance of the council, AP, SSC, and the public. In the interim, the council is defining the overfished proxy as the fishing mortality rate in excess of the fishing mortality rate at 10 percent static SPR. Currently, the overfished definition is biomass less than MSST.

It's important to recognize the difference between the targets and the threshold. Changing from a target of F rebuild, 98 percent F30 percent static SPR, to a threshold of 20 percent SPR for overfishing and 10 percent SPR for overfished determinations. The council's intent is to keep the red snapper stock above 20 percent SPR and then evaluate the stock performance and modify it to optimize yield. Red snapper have produced large year classes, as you've seen in the last couple of presentations, large year classes at SPR levels below 10 percent SPR.

Now we get into talking about the major options that the council would have to consider in moving forward. Option A would be no action, continue to prohibit harvest and retention of red snapper. Option B is large areas closed to all snapper grouper fishing or long times when fishing for snapper grouper species is not allowed or continued no retention of red snapper and a prohibition on all snapper grouper fishing beyond some depth.

The third major option is the comprehensive adaptive management approach, and we feel each item is a necessary component of the overall package to end overfishing and continue rebuilding red snapper. The following measures are proposed to provide protection to generate sufficient spawning to continue improving the stock status of red snapper and address the data shortcomings.

The size limit, now no size limit we could have, to reduce discards and gain some information on recruitment. You could educate and encourage fishermen to keep the first fish caught and to take actions to move to reduce catches above the bag limit. You could also expand this to encourage recreational fishermen that intend to fish in depths greater than 125 feet on a trip to fish these depths first. If the red snapper limit is reached, move into waters less than 125 feet, to target other species where red snapper discard mortality is reduced. Another size limit is you could have the eighteen-inch recreational and commercial or the twenty-inch commercial. Those are different options.

Under the bag limit, one snapper per person per day recreational bag limit, a private trip limit of four or five or six per day. It may be lower than four. Those will have to be determined. A charter vessel trip limit of six per day, and that may be lower as well. Those are all subject to discussion based on the amount of fish that we have. Headboat limit of XY per day, and I'm not exactly sure how to deal with headboat trips. We could look at the information in the past of what headboats have produced to possibly inform what we could use for a headboat day maximum, much as what Mike had shown us some of earlier.

Commercial regulations, I don't think the commercial trip limit of one snapper per day is a viable option, but, similar to what we've had during the short mini-seasons, a short commercial season with a trip limit and quota, similar to past short openings.

Use of a descending device or venting to increase the survival of all red snapper caught above the bag or trip limit applies to both the recreational and commercial fisheries. Now you can encourage use or require use. Use of one hook on each recreational rod and reel, to reduce the number of red
snapper caught. If the bag limit is one, there really isn't any need to use multiple hooks. Again, encourage or require use.

The federal grouper fishing stamp, now we would require it for private anglers to fish or possess a snapper grouper species harvested in or from the Exclusive Economic Zone. The intent is to include state and federal waters or limit it to the EEZ, and that would be the intent in federal waters only. Work with state partners to apply it in state waters. The stamp would not be required if on a federally-permitted for-hire vessel. NMFS would issue the stamp, and then watching a fishhandling video could be a requirement before applying for a stamp, something in a best practices type of format.

A certificate would have to be printed off at the end of the video, and that's something I think similar to what's being done in iSnapper. I think there's something like that, or at least they said that they could do something like that. Who do we require that for, all snapper grouper species included in the fishery management unit of the snapper grouper plan or deepwater species only? Those are decisions we'll have to make.

The electronic logbook that is currently used for headboats and proposed for charter vessels, require all or a percentage of private recreational vessels with a federal snapper grouper fish stamp to electronically report their trip, regardless of where such trip takes place. It's the same as required for headboats and charter vessels, such as no fishing reports, compliance, and a provision for catastrophic events. The other is to report trips for snapper grouper species or targeting species with zero catches. Those are important as well, to know that you had a targeted trip where you didn't catch any snapper grouper species.

You could select a proportion of the recreational fishery, some percentage, or you could also alternate years, where you tried to get a full complement, depending on what percentage you picked. You could get 100 percent reporting, in theory, if you required the whole fishery to report.

Limited entry for the for-hire sector, this would set a control date of March 11, 2016 for the fishery management plans noted below. You would begin a separate amendment to establish a for-hire limited entry program for the following FMPs: Snapper Grouper, Coastal Migratory Pelagics, and Dolphin Wahoo.

Permits must remain in the same category in which they were last renewed. That was something that came from Zack when he was thinking about the difference between charters and headboats, where somebody, at the last minute, if they saw they could catch more snapper with a headboat permit, they could change their permit category, but that's why we put this part in.

Sector separation could also be part of this. You would evaluate sector separation, private recreational, charter vessel and headboats, in the same amendment, looking at a limited-entry program. This would address the different needs and goals of each sector. Allocation could be based on landings and participation. This would allow the charter and headboat sector operators to determine how to manage their sector ACLs. The for-hire sector, track the charter vessel and headboat catches using the weekly logbook data and close those sectors when that sector's ACL has been met or projected to be met.

Federal private recreational snapper grouper season, it would allow much better coverage and monitoring of recreational effort, give managers the ability to turn some of the dead discards into landings. This would greatly reduce discard mortality by getting hooks out of the water, thereby benefiting many important species that we manage. Some seasons that have been suggested, May 1 through August 31, May 1 through October 31, but you could actually look at those when you actually looked at some of the numbers that corresponded to those seasons.

The federal private recreational snapper grouper season, as I said, others could be determined, or different dates for different areas. The different areas concerns -- You know, with South Florida, even part of this, with their red snapper catches being so low. Shallow-water, we mentioned that you could possibly have a shallow-water depth contour, where, after you caught your red snapper in deeper water, or if you wanted to fish in the sixty to seventy-five feet, maybe this area is open year-round.

Maybe it's a little deeper than seventy-five feet. I mean there are a lot of information that has been in the Gulf about discard mortality by depth, and they have a model that you can actually look at, and so that could inform our decisions on what depths we could possibly leave open year-round, so you wouldn't have to close the entire snapper grouper fishery just by depth contours. There would be no retention of red snapper outside of the open recreational snapper grouper season. You wouldn't need any venting, and descending devices would not be required in those shallow depths, because you don't need them there.

In conclusion, you would increase the red snapper biomass and subsequent spawning/recruitment while ending overfishing. You would provide a sampling base for red snapper hook and line catches, and I will elaborate on that a little bit now, because, right now, we don't have the fisheryindependent information coming in like we did when we had the first moratorium. To me, it's going to be critical to have some kind of sampling base, that we have some kind of fishery for red snapper, so we can get the samples that we need to be able to plug into the next assessment to compare to the chevron traps, since there's already been some discussion about whether or not that provides the full complement of age comps for that survey. Going forward, you actually need some way to sample with hook and line that we don't have in a fishery-independent fashion now.

Involve recreational and commercial fishermen in collecting data through the citizen science initiative. That's critical in moving forward, and I think it's the only way that we're ever going to improve our data in the Southeast. This hopefully will improve voluntary compliance. This way forward would allow achievement of OY from the snapper grouper fishery.

We have an evaluation plan. The council reviews catches at the September meeting and proposes changes, and then we get public comment. The Joint AP and SSC evaluation and recommendations would occur in October. We would get updated SPR values at our December meeting. The council reviews catches and SPR at the December meeting and approves changes to season, bag limits, size, and approves a framework to implement the changes.

NMFS implements the changes by May $1^{\text {st }}$, and updated biomass values could be produced with a new stock assessment within three to five years of data. The council uses framework or amendment to implement the necessary changes. That concludes my report.

DR. DUVAL: Thank you very much, Ben. A huge shout-out to Ben. This is something that he has been working on since the end of the review workshop for red snapper, since the final report was published. He spent a lot of time on it and a lot of effort and asked questions of other council members for input and thoughts and ideas, and so I very much appreciate you putting this together and presenting this to us.

MR. HARTIG: Thank you.
DR. DUVAL: So a launch pad for discussion. Are there questions or thoughts?
MR. BOYLES: I would just like to echo -- Ben and the other council members, Robert and others, who have put clearly a lot of thought into this. Ben, it strikes me that we started thinking about this right after Amendment 17A. I mean this has been in the works for a long time. There's a lot to think about here. There's a lot to digest, but I just wanted to say I think it's great that, as the council is coming out of this initial phase of visioning, that this is really thinking outside the box, and I would just like to salute you for that. I've got more questions later, but thank you.

DR. DUVAL: Thank you, Robert, and I think one of the most important points Ben made, and Robert brought us back around to, is that many of the ideas that have been presented here are things that we heard from port meetings when we went out to visioning, and I think if folks have looked at the additional attachments regarding the visioning amendments that we've discussed and the items in there and different ways we could move forward with that, these items are all in there, and so I think the way that we've structured the agenda here today -- By going through this first, I think this is going to inform our discussion of how to move forward with future visioning amendments as well and what we might want to include in those and how we want to structure them. What do you all think? Are there questions?

MR. HARTIG: It's a lot.
DR. DUVAL: I think probably one of the first steps in moving forward, prior to considering any of these suite of management options that we might want to take out, is really, I think, looking at the reference points, because that's really going to inform us, I think, more what we can do moving forward, and so reexamination of reference points, our overfishing reference points, which right now, as Ben indicated, is based on F 30 percent SPR, and so I think, given what we heard yesterday afternoon and this morning from Dr. Barbieri with regard to the difficulty in conducting this assessment, given the limitations of the data, the uncertainties in the data -- There are a lot of uncertainties in the terminal years of the assessment, but we've seen some great recruitment under very low SPR values that I think certainly provide a basis and a rationale for potentially requesting additional projections at F 20 percent SPR or F 10 percent SPR, Fmax, and going back to the SSC with a request that they reevaluate or evaluate and provide us with some advice on the applicability of our existing reference points and their thoughts on possibly modifying those, and so I think that's probably the initial step, and then we can have some discussion about what of this suite of options that Ben has reviewed we would want to include in a framework amendment.

MR. HAYMANS: I am glad you couched it that way, because, Ben, there's a lot of good points here. There's some things that I like and some things that I don't like so much, and for it to be an all-or-none, which is the way you've presented it, I don't know that I can live with that, but,
because there is a suite of things in there, I think there's some good pieces that we can examine, and so I appreciate what you put into it.

MR. BREWER: I told Ben that I was amazed, really, at the amount of work that he and staff had put into this, and there's a lot of stuff here, and I mean we sort of have to eat an elephant one bite at a time. I think maybe, here at first, we could be focusing on, just as you suggested, those things that we could perhaps get done fairly quickly to present different options to the SSC for their meeting in October, and those would be are we going to be looking at an extraction rate or whatever that would give you 10 percent, 20 percent, or whatever. Those numbers, to me, by the way, make sense, and, to me, that would be something that we could do rather quickly.

Some of the things that are included in this suite of proposals will take years before I think you could actually accomplish them and would be extremely, extremely controversial, and I would hate for all of this work to get buried and set aside because we have moved perhaps too quickly to put them in play. I'm not going to get into the specifics of what those are, but you probably know what I'm talking about, and it just seems like those thing that we can get before the SSC before their October meeting should be given preference here in our deliberations.

DR. DUVAL: I appreciate that, Chester.
MR. COX: I just wanted to say this whole meeting has been extremely hard to hear. I don't know what's been going on, but if you guys will just get a little bit closer to the mic, me and Wilson would really appreciate it. Thank you.

MR. BOWEN: Zack would appreciate that, too. Thank you.
DR. DUVAL: What's the committee's pleasure? We need to take some step forward. I have tried to, I think, lay out some rationale for some requests that we could make of the SSC in regard to our reference points. These are proxy reference points chosen by the council. Ben has provided some examples of how we could move forward in reconsidering those and asking for some advice from the SSC on that. Obviously that would require new projections to be run.

## MS. MCCAWLEY: I make a motion that we ask for additional model runs at Fmax and $\mathbf{F}$ 20 percent SPR and that those runs be ready to go to the October SSC meeting.

DR. DUVAL: There is a motion by Jessica and a second by Charlie. The motion is to request additional runs at Fmax and F 20 percent SPR.

MS. MCCAWLEY: I'm sorry, but what was the question?
DR. DUVAL: I am just clarifying the motion.
MS. MCCAWLEY: Yes, F 20 percent SPR. If possible, I would love to have that for our September council meeting, if that's possible.

DR. DUVAL: When you say potentially have ready for the September council meeting, so that we could see them and then have a chance to look at this and inform specifically the requests that we might make of the SSC, I'm assuming is your rationale for that? Okay.

MR. PHILLIPS: Just a question on clarification, for me. Fmax, I've heard Luiz talk about F rebuild, and so are these one and the same or are these two different numbers?

DR. DUVAL: Those would be two different numbers. My understanding, and someone is going to correct me if I'm wrong, is Fmax is really the maximum yield that you can get. It's not maximum sustainable yield, but it is the maximum yield. F rebuild is actually, I think, 0.14, coming out of the assessment, and so those are two different things.

DR. PONWITH: I am encouraged that your first stop is to go to your SSC to consult. I am worried about generating these projections and presenting the results to the council. I am worried about generating the projections and presenting those results to the SSC. I think the first question to the SSC is to weigh in on the appropriateness of Fmax or F SPR 20 percent as a proxy for MSY for this stock, regardless of what the projection says, because, from the Science Center perspective, that is ill-advised.

What I'm hearing, over and over and over again, is frustration with the uncertainty in the stock assessment. I am frustrated by it, too. It's not a good experience to do a stock assessment when the data are thin. It's not a good experience. We all long for a robust set of data that we can apply modern stock assessment procedures to to get a trustworthy, reliable result, where the word "uncertainty" is -- You characterize it, but the uncertainty is small. That's the era we're longing for, but I have heard that word "uncertainty" many times today.

When I hear the word "uncertainty" in the same sentence here, changing your proxy for MSY to something that's more aggressive, that seems cross-threaded to me. In a situation where uncertainty is replete, that seems like it's going in the wrong direction, and that worries me, and so I'm concerned about these proxies. I am concerned about looking at the results before even the sagacity of that as a proxy for MSY is considered, and I just am worried about doing this in a time where uncertainty has been a common theme in the conversations today.

DR. DUVAL: Thank you, Bonnie.
DR. CRABTREE: Just back to the F rebuild. If you change the reference point, then you would be changing the rebuilding target biomass that you're rebuilding to, and you would change $F$ rebuild and virtually everything, and so you probably would end up getting -- You would have to determine what $F$ rebuild is and then do another set of projections for that.

MS. MCCAWLEY: I would like to speak to that F 20 percent. It's my understanding that that's a management decision, and, based on the life history of red snapper, the fact that the stock appears to be highly productive, and we seem to be rebuilding at a quick pace, and I believe we're at 26 percent SPR as the goal in the Gulf as a management decision, and I'm fine with F 20 percent.

DR. DUVAL: Thank you, Jessica. Are there other thoughts around the table? The motion is to request the SSC review additional runs at Fmax and F 20 percent SPR, potentially to have ready for the September council meeting.

DR. CRABTREE: I mean what would we do with them in September really? I mean, what it hinges on is getting a new set of ABCs out of the SSC, and Dr. Barbieri maybe could comment, and so we would get these runs done, but then the SSC would have to take them and apply them
to the control rules and those various things and tell us what the ABCs would be, and so I'm not real sure what -- I mean I would be curious to see them myself, but I'm not sure what we would do with them in September, really.

MS. MCCAWLEY: That's why I began this motion with the runs being ready for the October SSC meeting, so I could go back to the runs being ready for the October SSC meeting.

DR. DUVAL: How does the maker and seconder of the motion feel about that? Are you okay with that? So if we can go back to the October SSC meeting.

MR. CARMICHAEL: I think that's good. The SSC is best, and I wonder, given what we heard about the Gulf and Bonnie's concerns about 20 percent, is that getting down pretty low, how about also doing 25 percent? I mean there's no magic to going in increments, but at least, if you consider how red snapper normally goes, there will be some question of the Gulf is using that and so -Maybe use 26 percent or something that's a little bit closer there, in splitting that 20 or 30 percent difference.

MS. MCCAWLEY: I believe that the Gulf is contemplating decreasing from 26 percent to 20 , and so I believe they're in the process at looking at lower numbers as well.

DR. CRABTREE: We've looked at Fmax, which is pretty close to 20 percent, as I recall, in the Gulf, and we've seen projections and seen all of the information associated with that, but, at least at this point, the council over there hasn't gone down that path, and there's not really an amendment in the works to do that. Of course, we're harvesting fourteen-million pounds in the Gulf, and we didn't see that big of a difference in the yields to go through all of it in the Gulf, and so they've looked at it, but there is no amendment in the works changing that over there.

DR. DUVAL: Any other discussion on this motion, which now reads move to request the SSC review additional runs at Fmax and F 20 percent SPR at their October meeting. I mean do we want to also have any consideration in that motion for them to provide feedback on the appropriateness of these as reference points? I am seeing heads nodding. Okay.

MR. BREWER: Just a quick question. This is not to the exclusion of other points that we were -- This morning, we were talking about having some other points that we might ask the SSC to have further discussion on, and this will be in addition to?

DR. DUVAL: That is correct. That was my understanding. Okay. The motion is to move to request the SSC review additional runs at Fmax and F 20 percent SPR at the October 2016 meeting and provide advice regarding the appropriateness of these as reference points for overfishing. Maybe, just to be appropriate, MFMT?

MR. CARMICHAEL: Regarding the risk, perhaps, would be better than appropriateness. We often hear from the scientists that say, well, what is appropriateness mean? I think risk might be better.

DR. DUVAL: Good point. Everybody take a good look. Is there any other input or comments on this motion? I will just read it one more time, since we've perfected it. Move to request the SSC review additional runs at Fmax and F 20 percent SPR at the October 2016 meeting and
provide advice regarding risk of these as reference points for overfishing. Is everyone ready to vote? Is there any opposition to this motion? Seeing none, that motion stands approved.

MS. MCCAWLEY: I have another motion, another request, for the SSC. I would ask that the SSC evaluate the ability of MRIP, as currently implemented on the east coast, to provide quota monitoring of red snapper and provide inputs for stock assessments.

DR. DUVAL: Motion by Jessica. Is there a second? Second by Charlie. Is there discussion?
MR. BOYLES: I don't know that I can support the motion, because I'm not quiet sure what the endpoint is. MRIP is being evaluated by the NRC now, and I'm not sure what tasking the SSC with this particular objective is going to get us. Thank you.

MS. MCCAWLEY: I am trying to get at the discard information and the uncertainty around the discard information, and so I'm trying to get at that. If you have another suggestion, I am willing.

## MR. HAYMANS: I just wanted to add, to that, as long as that includes the discussion of the PSEs and how they're -- I guess that's where you're going with that.

## MS. MCCAWLEY: If you want to add that in, I'm good with that.

DR. PONWITH: As the motion reads right now, it is, in my mind, dangerously vague. If this instruction were to come to the Science Center, I would have to play twenty questions to understand how to do this, and what I'm hearing is that it is to evaluate specifically MRIP's ability to estimate discards, and, if that's the intent, then I think that would be valuable to be in there, because, right now, it's difficult for them to know whether you mean the discards or whether you mean landings, when there are landings, and the answer to that would be very, very different. Discards, right now, happen on an annual basis. They happen throughout the course of the year. The seasons that you've had for targeted red snapper are really short, and the answer would be very, very different.

DR. DUVAL: Jessica, do you want to add any detail to this motion, given Bonnie's comments, and then I will go to Luiz and then Chester? Then Luiz first.

DR. BARBIERI: Thank you so much, Madam Chair, and I am butting into your meeting here, but, since I've been involved in this NAS review of MRIP, and I have been involved in similar efforts that we are trying to get accomplished in the Gulf -- I like this motion, because I think it explicitly presents the council's intent to get data collection processes in the southeastern U.S. that have to do with collection of recreational fishing data improved.

Due to some similar efforts that we've been accomplishing in the Gulf, we have been able to get the MRIP staff to involve a lot of their analytical staff plus engage a number of their professional statisticians that they have as consultants to work with us and test a number of pilots in the Gulf that are providing improved methods for sampling this type of fishery that have a short duration and perhaps are dominated by reef fisheries.

The meeting that we had in Charleston to discuss the issues in the Southeast, I mean John Carmichael gave a presentation, and it's the pattern that we see throughout. About 90 percent of
the saltwater fishing trips in the Southeast U.S. are actually focused inshore. Only about 5 to 10 percent of those trips are actually focused offshore, and so unless we have a specific sampling frame that can better focus on that offshore component, we're not going to be able to have the level of precision and accuracy needed to provide the inputs that we need.

To me, this would clearly outline to the agency that this is something that the South Atlantic Council thinks is very serious and that any assistance that they can provide, and they have been more than willing to work with us in the Gulf and provide a lot of help, and we have been able to move forward, I think that this could lead us to the same place. That would be my input into this. Thank you, Madam Chair.

DR. DUVAL: Thank you for that input, Luiz. I was able to attend the recent meeting regarding the NAS review with John in Charleston, and it was very educational. Dr. Ponwith has expressed some concern about I think some lack of specificity in the motion with regard to whether or not this should specifically focus on discards or I think in order to just frame the discussion. I don't know if the committee would like to add some additional detail to that. Do you feel comfortable with this as it is? I know Robert expressed some concerns. I think Jessica has clarified her intent with this motion.

Given what Dr. Barbieri has said regarding providing sampling frames, I mean certainly one of the items that has come out of visioning, one of the options that Ben presented and something that the advisory panel has been recommending for a while, is implementation of a snapper grouper stamp, which would provide a frame for sampling for the program. I will just throw that out there.

MR. BREWER: You just touched on what I was going to mention. As I said before, there are things in here, in this suite, that I find very exciting, and one of the things that I find very exciting is a real vehicle for us to go forward with citizen science. As Luiz mentioned, the people that actually go offshore to go fishing in deep water, bottom fishing, is a relatively small population. It's a relatively small part of that recreational fishery, 10 percent, or it may be actually a lot less than that, because, offshore -- Most of the people where I live, when they go offshore, they're fishing for pelagics. They're out there fishing for sailfish and wahoo and that sort of thing.

You've got this small population that is going out, and they are the ones that are prosecuting this fishery. They need to be identified, and a way to do that, a pretty effective way to do that, is through a stamp, and so I'm very much in favor of that. Also, as we go forward with this, and I certainly hope that we do, on the citizen science, we need to be advised by Bonnie and by the SSC -- What data is it that you need? Where will we get the most bang for the buck as we get these folks to volunteer and go out there and get on the water and collect data?

A stamp helps to identify those people that are going to be doing that. It also helps us in trying to design what it is that we are going to be doing out there, what priorities we're going to have, so that we can get that information from the scientists of what's going to be the biggest thing for you insofar as valuable data, and I'm real excited about that. I think we can form some partnerships, and I really think we can get that done. I know that there is great interest in that in the recreational sector.

When I have talked to other folks about it, since Ben's paper came out, there is big support, and there is a great deal of interest. In fact, there's some excitement about being involved in something
like that. For those reasons, and I understand from Luiz that those types of things, the data that would be important and whatnot would be included in this motion, and, for those reasons, I would be very supportive of this motion.

## MS. MCCAWLEY: I would be willing to modify that motion so that it would say to provide quota monitoring and discard information.

DR. DUVAL: I think Charlie was the seconder. Are you okay with that addition? Okay. Is there any other discussion or thoughts on this particular motion? It reads: Request the SSC evaluate the ability of MRIP, as currently implemented on the east coast, to provide quota monitoring and discard information of red snapper and provide inputs for stock assessments.

MR. BOYLES: Jessica and Chester, thank you for those clarifying comments, and, Luiz, yours as well. I think my hang-up is the way this is worded. This is going to be -- This could potentially be a day or two or five or two hours of the SSC talking about the insufficiencies of MRIP. I think the way, Chester, you described building something that Ben talked about, but I just wonder if what we're really trying to get here is recommendations from the SSC on a more robust data collection mechanism that might include the stamp. Just the way I see this is we'll hear about the insufficiencies and the deficiencies, the well-documented deficiencies and insufficiencies of MRIP, and I don't know where that's going to leave us, at the end of the day.

DR. DUVAL: No, and I see what you're getting at now, Robert, in terms of providing more specific questions to the SSC, to extract from them what improvements would be needed to maybe increase the confidence in that information that we would be getting.

MR. BREWER: To Robert's point, understood. I had asked Luiz earlier today if that was something -- The input from them on what most data would be most valuable to them, how it could be collected, et cetera, and we even had set up a little secret deal, where I was going to ask him a question that would lead into that, but he assured me that this language gets done what needs to get done to get that information back from the SSC. With his assurance that he understands that and that that's at least part of what we're going to be getting back, that's the reason I favor the motion.

MR. HARTIG: John, I see this almost as a research project, almost. I mean I am fully supportive of this. Don't get me wrong. I am fully supportive of the SSC looking at this. I mean it seems like they almost have to have TORs. You almost have to have a set of a questions that you're going to ask specifically and have them framed and have the information ready to provide to the SSC to be able to do this. Discard mortality and the number of intercepts, all of these different things that you would have to put together in order to get the answers, it seems like an awful lot of work, but I'm still supportive of it.

MR. CARMICHAEL: Yes, and I think Robert sort of alluded to that as well. It could be a brief discussion and it could be a week of work. The NAS is spending six months or more doing a bit of this, evaluating the MRIP program as currently implemented, to provide the information that we need, and so that was sort of mentioned earlier. Marcel and I have been sitting here sort of puzzling over this and thinking about what would come up and what we would need to request in terms of analyses and how long it would take, and questions we might put to the SSC.

Is the intent to ask the SSC for some comment on the reliability of the estimates you have in hand now, or is it more about the program? It says the ability of the program, and that really doesn't get at do you think say the discard estimate for 2014 and 2015 is reliable, because those are kind of separate questions.

I think it is some risk of being so broad that it could tie them up forever, or they could give you a comment that would be like, well, wait until the NAS review gets done, or the estimates were used in SEDAR and that went through a rigorous evaluation process and so they were considered okay for stock assessments, and, unless we have something else that contradicts them, what do we have to override that?

I think there's some risk that you don't get what you want back from this, to some extent, because it is rather open-ended. Maybe asking the SSC for other ways of monitoring the fishery would be a better direction, asking them for some direct comment on the estimates you have, say for 2015 and future years, would be helpful to them. The ability of the program really depends on your management program. If you do something like is suggested in your paper, where you go back and have more of a fishery, than obviously the program can do a better job of monitoring the fishery than it can under a nine-day season type of scenario, and so I think there's a lot of moving pieces out there, which might stand in the way of you really getting maybe what you're looking for.

MS. MCCAWLEY: My short answer is both. I want to know the reliability of the past or most recent estimates as well as moving into the future, and so my short answer is both.

MR. CARMICHAEL: Then I think, if you want to know something about the estimates, the motion should reflect more of whether or not the SSC considers the current estimates of discards reliable and adequate for monitoring the fishery and evaluating the management program.

## MS. MCCAWLEY: I would be willing to add that in.

DR. DUVAL: Can you repeat that again, John?
MR. CARMICHAEL: You want the SSC to evaluate whether the current estimates are reliable and adequate for evaluating the council's management program.

DR. DUVAL: And these are specifically estimates of red snapper.
MS. MCCAWLEY: Can we add "and for management"?
DR. DUVAL: That's what I'm trying to get to. So, it reads: SSC evaluate the current red snapper MRIP estimates to determine if they are reliable and adequate for management. Was it for management, Jessica? Then, would the remaining language about "as currently implemented on the east coast" go away? Yes? Okay. Charlie, as the seconder, this motion has changed a bit. Are you okay with that?

MS. MCCAWLEY: Michelle, I think you took away too much. The whole quota monitoring and discards I think need to be back in there.

MR. CARMICHAEL: What I had said was whether or not they were reliable and adequate to evaluate the council's management program, which is kind of broader, and I think it allows them to consider all aspects.

MS. MCCAWLEY: I think we're going in the wrong direction.
DR. DUVAL: If we want the SSC to evaluate the current red snapper MRIP estimates to determine if they are reliable and adequate to evaluate the council's management program, it seems like we need to start a second sentence there to get at the reliability of the information for quota monitoring and the reliability of the discard information.

MS. MCCAWLEY: I think we need to get rid of "to evaluate the council's management program". I don't think that's what we're trying to do with that first sentence.

DR. DUVAL: Okay. But reliable and adequate for --
MS. MCCAWLEY: The SSC evaluate the current red snapper MRIP estimates to determine if they are reliable and adequate for management, including for quota monitoring and discard information.

DR. DUVAL: Then you would get rid of "of red snapper and provide inputs for stock assessments"? Okay. So this reads: SSC evaluate the current red snapper MRIP estimates to determine if they are reliable and adequate for management, including for quota monitoring and discard information and provide inputs for stock assessments.

MR. BROWN: Jessica, wasn't there some -- There were some issues with comparison between MRIP and FWC discard estimates, wasn't there? Wasn't there some problems there, or there was some reason why they went one way or the other? Should there be anything in there about doing a comparison between the two or some sort of rationale?

DR. DUVAL: I think, for 2015, the only information that we have is MRIP estimates, and so the FWC's program that they run is when we have an open harvest weekend, and so that's different, and that's when those FWC estimates are considered and used, but, because there is no harvest, they're not running that program.

MS. MCCAWLEY: I still think everything after -- The "and" everything else should come off the end of this.

DR. DUVAL: Okay.
MR. BOWEN: I think I understand what Jessica is trying to do, but I also feel like that's already been done. The SSC reviewed the assessment at their last meeting, and I feel like that's already been done by the SSC. I might be wrong. Maybe I need some clarification, but I mean maybe Marcel can answer that question, but, like I say, I feel like they've done that already.

DR. REICHERT: John, you can chime in, but I think this gets to a slightly different question than what we have discussed at the review. We did obviously talk about the MRIP estimates, and so I
think there's a little overlap, but this may get to some different questions than we have asked. Luiz, would you agree with that? I mean there is overlap.

MR. CARMICHAEL: I would agree with what I think is the key part there, that it says "current". The assessment is looking at MRIP overall as a long time series input to the assessment, versus this gives the SSC a chance to focus some on more the recent situation with the management that we have, the focus on discards, which free them up some to comment on what you see right now.

DR. DUVAL: I still think it's key, the point that Robert brought up, about we would be looking for recommendations from the SSC with regard to ways to improve confidence in that information, I think specifically for red snapper.

MR. CARMICHAEL: Is that something that should happen say in October, or is that something that should happen as you work on an FMP to address Ben's overall adaptive program that's been forth, because I definitely agree the SSC should do that, but the question is when do you want to start them down that path of talking about how best to manage red snapper, in particular, or deepwater snapper grouper, in general?

We have an issue, as we've noted, with the snapper grouper being such a small proportion of the MRIP trips. I hope our comments that we gave at the NAS review compel the reviewers to help us somewhat in that direction as well, but we kind of don't know the timing of that.

DR. DUVAL: I mean I'm fine with giving the SSC that direction as we move down the path of developing an amendment, but I just wanted to make sure that we weren't leaving something out that might be necessary to any discussions they have on this topic in October, and that's all. Okay. Have we about beat this thing to death?

MR. HARTIG: What about the APIS estimates? Is that something that --
DR. DUVAL: I think that's included in this. I mean if it's MRIP, that includes -- You don't get one without the other. The motion reads: The SSC evaluate the current red snapper MRIP estimates to determine if they are reliable and adequate for management, including for quota monitoring and discard information. Is everybody ready to vote? Is there any objection to this motion? Seeing none, that motion stands approved.

How do you all want to move forward in terms of inclusion of any of these items for consideration in an amendment? I mean I think this is what staff is looking for, is some direction from the council about -- Among this menu of items that's been presented, things that you would want to see included in an amendment and not -- Some of this is probably going to be predicated on the response we get from the SSC , after their October meeting, with regard to their input on reference points.

MS. BECKWITH: Our first steps for every amendment is take stuff out to scoping. I would say if we want to get some feedback, and there's been a lot of thought put into this, then we can certainly have it go out to scoping and see what the public likes and dislikes and if they have any opinions on it.

MR. COLLIER: With that being said, we start off with three major options. We have the no action, we have the Option B, which is large area closures and potential time closures, and then Option C. Do you want all three of those options?

MS. BECKWITH: I mean clearly what we're doing isn't working, and nobody wants to go back down the route of huge area closures. I think the council has explored that and realized it was not a viable option, and so, to me, the only option would be Option 3, in some version, or bits and pieces of what is explored under that.

MR. COX: I think if somehow we got some fish back to the fishermen and you have a -- I don't know about large area closures. I think certainly if they're hot spots where people know there's a lot of red snapper and we want to try to stay off of those hot spots, it would be worth putting a smaller area closure in.

MR. BREWER: This is something that I was -- After I read Ben's paper, I was really concerned, because I wanted to know, from sort of my constituents, which of these things they would like to have happen or would encourage. Do you want to just leave it like it is right now and not catch any red snapper, but keep the seasons for the other species about like they are, or would you -- I didn't really talk to anybody about big closed areas, but I did talk to them about potentially having, quote, one season, without determining exactly what that season would be, but have a season in which they could keep red snapper. People's opinions varied on that, and so I think Anna's idea to send this out for scoping and get some feedback as to sort of like they where would like to go, or maybe get suggestions, is a pretty good idea.

MR. HAYMANS: To Anna's point about Option B, we've looked at large area closures and we've looked at small closures, but we've never looked at, to my knowledge, large area closures that are seasonal, and so I would like to leave Option 2 in . Secondly, to the point I made a little while ago, I think, if we're going to send out the Option 3, or C, I guess it is, I would like to see removed sort of that all-or-none phrasing that says each item is a necessary component of the overall package, because I don't know that they all are.

Finally, I am assuming that this whole idea is going to reframed into a public scoping document that looks more like our traditional document, right? That will happen before the August round of public hearings, or are we talking about beyond that?

DR. DUVAL: In terms of timing, has there been any discussion at the staff level of including something for the August public hearings in this regard? I am seeing Gregg and Brian shake their heads no, and so it looks to me like we still have a few months' worth of work that we could do on this, and I agree with Doug, in terms of organization.

You would want to see this broken out a little bit more, because there's quite a few data collection type of things in here, and some of these we're already working on in other amendments, and so I think you could make mention of them, and there are some things that, again, have come out of visioning, in terms of improvements to data collection, that could be included in here or could be included in the visioning amendments that are the next thing on our agenda to discuss, and so I would want to see some restructuring, certainly.

MR. BREWER: Again, I agree with Doug. I think that that language in there about essentially all or nothing would be very counterproductive, because there are some things in here, I can tell you, that there's going to be very vocal and very strenuous objection to. My thought was that -- I thought what Anna was saying, and maybe I'm wrong, was that we take the major options portion of this thing, and maybe modify it a bit, and put that out for scoping, to get opinions back on those options that we're talking about, because I mean that's what -- You're talking about really a fairly radical change in the way that we do business, and I didn't know how folks were going to react, quite frankly, because it hadn't come up before.

That's what I was really interested in finding out, and I sort of tried to do on my own, and I found out that there were a lot of different opinions, and, before we start, as Charlie says, running this rabbit, I would kind of like to know what the general population out there would find the least objectionable, might be the way to put it, and I have some guidance from them on that.

MR. BOWEN: As far as this paper, I agree with a lot of it. Actually, Ben and I and Gregg and I had sat down, and I even brought forth some ideas for it, but I still have a question, and maybe somebody here at the table can answer it, but the question that I have is how do we move forward with this paper when we have a stock status that is still listed as overfished and overfishing is occurring? How do we turn that into a directed fishery? I don't understand.

DR. DUVAL: I think we -- In terms of moving forward, we would not move forward until we have some response from the SSC regarding these two motions that we passed previously. I mean that's going to inform, I think, some of the suite of actions that would be included in something that we take out. I think what we're doing right now, not allowing any harvest and killing more fish than we're allowed, that isn't working.

MR. BOWEN: I totally agree with that, but I still -- I guess my follow-up question would be, when we send that to the SSC, is there a chance or is it possible that they change the stock status, so we can move forward with this amendment?

DR. DUVAL: I don't have a crystal ball, and so I think you're just going to have to wait until the SSC discusses it.

DR. CRABTREE: To Zack's point, I mean there are some things in this paper -- If you're willing to close the whole snapper grouper fishery down for enough of the year and reduce discards enough, then maybe you could have a directed fishery for a very brief time, but whether that tradeoff makes any sense or any of that, there's no way of telling. It's never been analyzed, and so I don't know.

We normally have a scoping document, and we look at it and approve it to go out to scoping, and I don't believe -- I mean what Ben has put together is a great effort and a good starting place, but it's not really a scoping document, and so my preference would be to ask staff to put together a scoping document for us to look at and bring it back to us at the September meeting, and then we can look at that and decide where we want to go with it, but, right now, we really just don't have a scoping document, and it's not clear to me, Zack, what we're going to do yet, whether any of this gets us where we need to be. Whether changing the reference point changes the status of the stock with respect to overfishing, I don't know. No one has calculated any of those reference
points, and so I can't say, and so we've got an awful lot of work ahead of us to figure out how to proceed here.

MR. BOWEN: Yes, and, to your point, Dr. Crabtree, I was in no way, shape, or form advocating large time/area closures. I was just curious of how the stock status would change in moving forward.

DR. DUVAL: Like I said, we don't have answers and no crystal ball, and so Chris is actually online and would like to speak, and so we're going to go to him and then I will get to Charlie.

MR. CONKLIN: When I was at the SSC meeting, I had spoken to a couple of members of the SSC. They had mentioned one way to try and turn some discards into catch would be some surgical closures right in the heart of the range of the species, and I just wanted to make sure that was included, and hopefully, if we get a scoping, that that would be included, to see if that could actually allow us to just do something like that without having to make the species a choke stock for every other form of snapper grouper fishing, and I just wanted to make sure that that was brought up and included. Thank you.

DR. DUVAL: Thank you, Chris. That is so noted.
MR. PHILLIPS: Chester and I are on the same page. We really need to hear from the fishermen on really what their tradeoffs are going to be. Are they willing to have huge areas closed so they can't catch any bottom fish, just so they can catch some red snapper later, how many more red snapper, and how we're going to do an analysis on this is going to be very difficult.

We're going to have to try to work with our SSC and our partners and figure out, as best we can, but I don't think we're going to know the answer until we actually do it, but we need to get that input on what's important to them, and I don't want the cure to be worse than the sickness, and the sickness is pretty bad.

DR. DUVAL: Well said, and so I think that we can give direction to staff, and I don't know if we would need to do this in a motion, but to take this suite of options that Ben has put together here in this paper and structure it into a scoping document, where you would have actions dealing with size limits, bag limits, commercial and recreational -- I can see perhaps some on data collection, when you're looking at a stamp, a federal grouper stamp, descending devices. I think maybe you could have sort of gear-related things. It seems like descending devices and hooks would fall into maybe a gear-related action.

Just thinking off the top of my head here, we've heard some input from the committee that folks would like to see in there, just to get the public's input on seasonal area closures, similar to our spawning season closure that we have now, as well as potentially -- Chris referred to surgical area closures, or possibly hot spots. There are move-along-type programs up in the Northeast with regard to trying to minimize discards of river herring within the Atlantic herring fishery, and so it seems like the hot spot approach falls into something like that.

I think if we can give direction to staff to perhaps come back in September with a scoping document that is organized somewhat like that that we can react to, that would be good. Is everyone okay with that? I see Chip has direction to staff up here on the screen to take the suite
of options and structure them into a scoping document to include bag limits, size limits, trip limits, descending devices. I would include that in a gear-related action. Seasonal area closures and surgical area closures. I agree with what's been said around the table that we really need some public input on what's important to folks, as Charlie said. Is there any disagreement around the table with moving forward with that? Okay. Seeing none, I'm going to let you all go for about a ten-minute break and come back and we will move into the next agenda item. Thank you.

MS. BROUWER: -- the past, a change to fishing year start date for the commercial golden tilefish hook and line and perhaps for other species. Then we included in here the recommendations or the items that were discussed at the Snapper Grouper AP meeting. Kenny already touched on these the other day.

Then we just basically tabulated everything and kind of just put a little checkmark on whether each item addressed retention or seasonality and whether it was a commercial issue or a recreational issue, and this is the breakdown that resulted from that. You can see that there is a clear distinction between items that could be addressed in a recreational amendment and items that could be addressed in an amendment specifically for commercial management measures. I understand that there was some reluctance to move forward in that manner.

Then we just kind of put a bulleted list of items that you might want to consider, and so, based on priority actions and feedback from the AP and the table that I just showed you, you could consider separate amendments addressing commercial management measures and recreational management measures, respectively, and one of the good things about that is that would allow for a more meaningful analysis of actions that are related to each other and that may have synergistic effects.

You could also consider establishing a recreational deepwater species aggregate that includes golden tile, blueline tilefish, snowy grouper, and also wreckfish. Wreckfish is one that you have not thus far discussed for that purpose, but that's another one that already just has a small or a short recreational season, and so you could choose to line all of those up.

Consider establishing a recreational deepwater season for these species from May to August, to make them all line up, like I said, and then the other thing that we wanted to get some guidance on that we are going to need to decide is how do we differentiate between, quote, unquote, regular amendments and those that are addressing items that come out of the visioning project, because it's important to make sure that stakeholders realize that whatever actions you're taking are in response to some of the things that they brought up during the visioning project, and so we had some options for you to consider, including the words "vision blueprint" and how you address each of these amendments.

Basically, that's what I have for now. Remember that there are two amendments, two regulatory amendments, Amendment 23 and Amendment 24, that we talked about developing. There was a list of actions that were included under each of those, and those were basically just kind of put on hold, because we put them on hold and we didn't know how to develop them. We went through this whole exercise, and, for continuity's sake, we probably should resurrect one or both of those, to make sure that we continue with the appropriate numbering of amendments to your fishery management plan.

DR. DUVAL: Thanks, Myra. I wanted to make sure we had this discussion after talking about red snapper, because there is certainly overlap in some of the items, from a recreational perspective, and I think, after looking at the chart and considering some, I think, additional input that I've received from folks in North Carolina, there are fishermen who would also -- If we're considering commercial split seasons, they would like to see like blueline tilefish and snowy grouper, some of the deepwater species, thrown in the mix to evaluate for that as well. I mean I know I'm not really supposed to offer opinions, but I'm going to violate that rule here and just say that, to me, it seems like it might be more efficient to tackle this in terms of perhaps a recreational amendment and a commercial amendment, just given the way things are shaking out with red snapper, and I would love to get some feedback from the committee about that.

MR. BOWEN: Madam Chair, I agree with 100 percent with you. I mean it's two different fisheries, and I think we need to tackle it with two different amendments.

MR. COX: Just following up on what you were saying, I had written some things, and I think it would be really smart to maybe considering establishing a deepwater season for -- When I think of deep water, I'm thinking of the 400 feet for commercial, for the guys that are fishing for the golden tile, the gray tile, the snowy grouper, wreckfish, and rosefish.

The reason I put out there is because I'm listening to the guys coming in, and they're frustrated. You've got the blueline tiles closed or open, and a boat came in the last trip and he had eighty-five pounds of snowy, and he threw back twenty-five blueline tilefish that floated off behind the boat, and they're fed up with it. I think it's time that we look at something like that for the commercial as well. Thank you.

MR. HARTIG: To that point? Jack, do you want to add yellowedge to that?
MR. COX: Yes, and yellowedge.
MR. HARTIG: Then I agree completely.
DR. DUVAL: So I've heard from Zack for a commercial and recreational amendments. What about other folks?

MS. BECKWITH: My preference would be a commercial and a recreational. I think it would be more likely to get focused attention from the recreational community if they have all of their potential changes to their fishery in one amendment that they can track and follow. I also am guessing that some of these conversations that are coming from the red snapper discussions, such as a stamp of some sort that we've talked endlessly about and never been able to move forward on, that that would also be something that could potentially move in through a recreational amendment, but I think there's always going to more on this list than any one amendment can handle, and so, as we sort of move forward, we're still going to have to sort of pick and choose.

On the commercial amendment, I still think that the original discussion about a potential endorsement to the bandit boats of some sort, as we discussed during our visioning process, still makes a lot of sense and would solve some of these issues that we have with appropriate trip limits, sizes for day boats versus the multiday boats, and appropriate trip limits, step-downs, and other concerns, and so I don't necessarily want that to get lost. It's not specifically in there, and I know
that we can sort of address that as an option to manage some of these issues that are on that list, but I just want to reemphasize that that should not be forgotten.

DR. DUVAL: Duly noted.
MR. PHILLIPS: I guess some questions that come to mind. If we set up commercial amendments and recreational amendments, is it going to change the workload for staff? Then, also, we only put so many amendments per staff person per time period, and so is it going to change that out?

MS. BROUWER: Yes, it would, and that would be a conversation that you would likely have to have during Executive Finance, to figure out timing and workload issues, but, just for purposes of clearly expressing to the public and for us as staff to know in which way to move, we would like to know if commercial and recreational, and then give us some actions that you would like to see under each of those. That's what I'm hoping to get out of today's discussion.

DR. DUVAL: I think one of the reasons that we postponed development of Regulatory Amendments 23 and 24 -- I mean, a, it was workload issues. We had some triage issues come up, and then, $b$, there were some items in there that actually are some of these items here within this three-page document, such as I think a split season for red porgy and considering modifying the start date of the commercial hook and line season for golden tilefish.

I think, recreationally, looking at some of the items that on here, what we've heard from the public is that they would like to be able to have less complicated regulations, and so I think if we could take another look at our aggregate recreational bag limits, and I think it makes sense to consider an aggregate deepwater species bag limit, and then an aggregate shallow-water grouper bag limit.

Right now, it's all over the place, and it's kind of complicated. You can keep one per vessel of this and one per person of that, and I don't think it's very user-friendly. I'm not sure that we wouldn't actually decrease discards by having just a deepwater aggregate and a deepwater recreational season, and so we're already halfway there, and so I think those are some items that I wouldn't mind seeing in a recreational amendment.

Anna brought up the snapper grouper stamp. That's also included as part of what Ben presented for red snapper, and so I think that can be considered in one and both places. I don't think we should lose that, and so, if folks are comfortable moving forward with an amendment focusing on recreational items and then an amendment focusing on commercial items, I think what I would like to do is get a little bit more input from the committee on what each of those amendments would include, and then we can talk about timing later on, at Executive Finance. Is that okay? All right. The items that have come up, Jack brought up a deepwater split seasons for snowy grouper, yellowedge, blueline tilefish, blackbelly rosefish -- What were the other ones?

MR. COX: Rosefish, and I was thinking of the blueline tile, and I don't know if you want to include the golden tile.

MR. HARTIG: Golden tile is a stretch for us. We don't catch anything else. Rarely, we catch a snowy. I mean it's clean. It's 99 percent, unless your line goes by a wreck.

MR. COX: That's your expertise. We don't, in my area, catch very many golden tilefish.

DR. DUVAL: Jack, I just want to make sure that Myra is capturing correctly what you were talking about. I mean, input that I have got, is that guys would like to see split seasons for some of those deepwater species. Is that what you were talking about as well, just so Myra captures this appropriately?

MR. COX: We want to establish a deepwater season, a deepwater split season, and deepwater, to me, and it could mean many things to different people. To me, it means 400 feet or deeper, but I just felt like we had to kind of define what deep water means, but the commercial fishery, where we interact with the gray and the blueline tilefish, the snowy grouper, the wreckfish, the blackbelly rosefish, and the yellowedge grouper. That way, we're getting our optimum yield, and we're not out there discarding so many dead fish in deep water.

DR. DUVAL: Wreckfish is an ITQ program, and so I don't think it would be appropriate to include that in there. Rosefish, we don't manage them.

MR. COX: You learn something every day. Thank you.
MR. BOWEN: I talked to a commercial fisherman out of Murrells Inlet several weeks ago, and he alluded to the fact that he does catch golden tile with the snowy. He's a hook and line fisherman, and not the longline fishery, but hook and line. He says, and this is anecdotal, and I understand that, but he says the bigger golden are on the rocks with the snowy, and so maybe consider that in that as well. Again, that's just what I heard from a constituent.

MR. BROWN: Off of Charleston, we don't catch golden tilefish with snowy grouper. You might catch wreckfish. That could be possible, but there's no interaction between the golden tilefish and the snowy off of Charleston, but, Jack, did you mean for that to be 440 or 400 feet?

MR. COX: I said 400 feet.

DR. DUVAL: I think the idea behind the split seasons is to allow for equitable -- It's to allow for access to the resource at different times of the year, and so we're just trying to get a rough list of deepwater species that we might want to apply this to. We know that the input from the advisory panel is commercial split seasons that also line up for the small-mouth species, and so we already have this for vermilion snapper and gray triggerfish. Red porgy has been brought up, and so I think we would want to include consideration of split seasons for red porgy. Perhaps there are some other species that might be included in there that the public might provide some input on.

MR. COX: To follow up on that, I had written that down as well, some kind of small-mouth fish season for the red porgies, the triggerfish, and the B-liners. We catch those fish all kind of together, and it would be nice not to have to do so much discarding.

DR. DUVAL: Some of the other advisory panel input was reexamining the trip limits for those split seasons. Right now, it's the same trip limit for each season, and so I think, if we were going to look at split seasons, we could -- Right now, we've got January through June and July through December. I think staff could provide us with different options for how we might want those splits, and then also looking at trip limits in that regard as well.

MS. BECKWITH: Again, I would like consideration of, if we're going to reevaluate trip limits and step-downs, I would like that done in the frame of the day boats versus the needs of the bandit boats, the historic bandit boats in the fishery. If we don't sort of move forward with that in this document, I think we never will, and we don't have to, but I certainly think that we have run into many conversations, over and over again, where we're trying to find an appropriate trip limit for a day boat, but we end up with a larger trip limit, because of Charlie's concerns of larger bandit boats are running longer distances. They're out there for multiple days on one trip, and there's all this other host of conversations that sort of always end up without giving us the flexibility to manage this fishery in a different way.

MR. COX: Anna, to follow up on that, that was our -- When we had our bandit boat visioning, we were talking about a traditional bandit boat, and so it seems like we had discussed that during that time. I think it would be something that is going to take some work to talk about how we would approach it.

DR. DUVAL: I mean I think if you -- We can just keep it on the list for now and try to get a list of items. We talked about trip limits by boat length as well, and so that's another possible way to look at things. The AP also talked about limiting commercial trips to a certain number of trips per month as a way to sort of spread out effort. That was talked about for vermilion snapper in particular, and the golden tilefish longline endorsement holders have also talked about trying to spread out their season with looking at things like two weeks on and two weeks off, and so that gets at a little bit of the seasonality issue.

A couple of endorsement holders have also approached me about having a certain number of trips either per week or per month, I think, and so perhaps we can include that in this examination of limiting commercial trips to a certain number per month or week or over a certain time period.

MS. BURGESS: As you talked about items for the golden tilefish fishery, I recalled conversations that happened in March of 2015 that related to Regulatory Amendments 23 and 24, and there were discussions, in addition to elongating the season with these different methods, several council members expressed an interest in other items for the golden tilefish longline fishery, such as, if someone were to purchase two separate separate snapper grouper permits for one vessel, put them both on one vessel, and one had an endorsement and one wouldn't, that they could fish both the longline quota and the hook and line quota. I think ideas about separate seasons for the longline fishery and the hook and line fishery would enable enforcement of something like that.

There is also the idea of -- We had talked about, and conversations kind of fell away at the council, but the council talked about it, but how to link landings with the golden tilefish endorsement, and staff was going to look into that, and I don't believe we've had time to review that, but the council talked about including that in Regulatory Amendment 23 and 24, and I just would advise the council to not miss this opportunity to follow through on what they discussed back in March of 2015.

DR. DUVAL: The last time we talked about that was actually the June council meeting last year in Key West. There were motions made with regard to that, because that was when we were taking final action on Amendment 35, which included the clarification on the golden tilefish longline endorsement, and so that's the last time that we had the conversation about -- I've got the minutes.

MS. BURGESS: I went back through the minutes of June and March. I went through Full Council and I went through Snapper Grouper, and there were definite discussions. The discussions pertaining to purchasing two licenses was --

DR. DUVAL: Right, and I'm not saying that those discussions didn't occur. I'm just clarifying that the last time we talked about them was June of last year, during the Snapper Grouper Committee meeting.

MS. BURGESS: Per my reading of the record, those discussions were not finalized. They were pushed off. Reading both the June meeting and the March meeting, the decision that if you have an endorsement on a vessel that you cannot fish the hook and line component, yes, that was decided. It was left open that if you were going to purchase a second permit, could that be entertained by the council? That was still left on the table, as well as how to track landings with endorsements.

DR. DUVAL: Yes, I'm not disagreeing with you on that. I'm just clarifying that it was June that was the last time that that was discussed, and the conversation was that, at a future time -- I mean there was discussion between Ben and Jessica that at a future time -- Ben said that he would be willing to entertain the idea of if someone had purchased a second snapper grouper permit to bring that up. I think that, if we want to tackle those two things, my recommendation would be to then use either Regulatory Amendment 23 or 24 to do those items, and we did have a document that staff and prepared, and we had zero time at the June meeting last year to talk about how landings were associated with endorsements versus with the permit.

MS. MCCAWLEY: That's fine to tackle it somewhere else. I just couldn't figure out where it fit in, and so I was looking at the list from visioning, and I thought that it might fit in with the visioning amendment, but if it fits in better somewhere else, that's fine, too.

DR. DUVAL: I'm just thinking if it's about -- If it's specific to endorsements, that wasn't something that came out of the priorities that we talked about, and it seems like it might make more sense to tackle those two items in either Regulatory Amendment 23 or 24, and so let's not lose that, and let's bring that back up at Executive Finance, when we go through those priorities. Would that be acceptable? Okay.

What about ideas for a recreational amendment coming out of visioning? The snapper grouper stamp is one of the biggest things that has been discussed. I think folks, if I'm reading people right around the table, would like to have that be out there. I know it might be repetitive with whatever might go with the scoping document that we would see in September with regard to Amendment 43 for red snapper, but it might be good to have it both places, because we may not be sure under which document we would pursue it, but I just throw that out there for folks to talk about.

MR. BOWEN: Agreed. I think it probably should be Bullet Number 1.

MR. BROWN: I agree, and I don't have any problem with it being repetitive.
DR. DUVAL: Yes, you've been repeating it for a while. I think the other thing was reconsideration of the aggregate bag limits.

MS. MCCAWLEY: I was just going to bring up another one off of this list, to just make a little plug for the shallow-water grouper closure.

MR. BOWEN: I think it was talked about, but a start date and an end date to a snapper grouper fishery for the recreational sector, so we would eliminate discards while the season was closed.

DR. DUVAL: I am just looking through the list here.
MR. BOWEN: I am not -- I don't have a list. I'm not sure where we're at, but I remember that coming up.

DR. DUVAL: Okay. Myra has got up there the recreational season. I just want to put out there that, in terms of the aggregate bag limits, just to remind folks that we have a ten-snapper aggregate and we have a twenty-fish aggregate for everything that doesn't otherwise have a recreational bag limit, and then we have our individual bag limits for vermilion, for black sea bass, and then I've already described what I think is somewhat confusing for the public, to have all the exceptions that we have to the three-grouper aggregate, and I would like to see a deepwater aggregate versus like a shallow-water grouper aggregate.

MR. BROWN: How about a vertical line survey?
DR. DUVAL: I am not following.
MR. BROWN: Something that we could incorporate for something that's different than what is being used currently with MARMAP, just something separate.

DR. DUVAL: I'm not sure how that addresses seasonality or retention.
MR. BROWN: A vertical line survey, like with rod and reels or electric reels, hand reels, something other than a longline survey or the chevron traps or something like that.

DR. DUVAL: I understand what you're talking about, but that's a data collection need. This was we've had prioritized items dealing with seasonality and retention for these first couple of visioning amendments, and so it seems like a vertical line survey -- I dare say you're probably thinking about red snapper. That might be something that would fit better within the scoping document that we were talking about earlier.

MR. BROWN: Too repetitive, or does it matter or --
DR. DUVAL: I think what I'm trying to say is that, as we've had this discussion about moving forward with initial items from visioning, we prioritized items having to do with retention of fish and seasonality of fish, and I think a vertical line survey is a data collection type of item.

MS. MCCAWLEY: Hey, I just realized shallow-water grouper wasn't in the commercial list. Can we add that?

DR. DUVAL: Yes, ma'am.

MR. HAYMANS: If the recreational season there is a total closure to recreational fishing, I would like to also add a seasonal area/depth closure as an alternative to that.

DR. DUVAL: That seems like a decent list of items. I think we should probably leave that for now. I think the other question that staff had, because we'll be talking about this in Executive Finance, when we go to timing, was how to differentiate amendments coming out of the vision blueprint from other amendments. Does anyone have a preference of any of those three bulleted options that staff has put forward?

MR. BOWEN: I don't have a preference, but I do think that "vision" or "visioning" should be in front of something, so the public will know that that's some of the ideas that they brought forth. How you all want to go from there is totally up to the council, but I do feel like "vision" or "visioning" needs to be in there.

MR. HAYMANS: You are referring to the final page, the three-plus -- I think it should be Snapper Grouper Regulatory Amendment Blank, followed by Visioning Blueprint. I think that's the way they all run, isn't it? That's my suggestion.

MS. BECKWITH: I like Visioning Blueprint Regulatory Amendment Whatever, personally.
DR. DUVAL: Doug likes Number 1, Anna likes Number 3, and does anybody else have any preference around the table?

MR. BOWEN: Number 1.
DR. DUVAL: Zack says Number 1. All right. I think that's something we can probably decide on later. I think it's enough that the committee is in agreement that we should have some mention of Vision Blueprint in the title of these regulatory amendments, and I'm good with that. Anything else for now on this, because I think we will talk about timing and staff slots and everything in Executive Finance.

MS. BROUWER: Just for my own clarification, Regulatory Amendment 23 and 24 then will not be the vehicle to address Vision Blueprint issues, because most of these issues are such that cannot be addressed in a regulatory amendment. They would need an amendment to the FMP. Am I understanding that correctly?

DR. DUVAL: Why would most of those be plan amendments?
MS. BROUWER: When we're talking about implementation of a recreational stamp, that's not something that's included, for example, in the framework, that you can do a regulatory amendment to implement. It would necessitate a full plan amendment, and so I'm still wondering what's going to happen to Regulatory Amendments 23 and 24.

DR. DUVAL: Can you scroll down to the list of items? I think most of the items under the commercial amendment would be framework-able, and so those could be included in a regulatory amendment.

MS. BROUWER: What we can do is, if it's okay with the committee, to just direct staff to look at this list that you've given us, to determine which items are framework-able, if that's a word, and which items are not, and then go from there. Is that --

DR. DUVAL: Sounds great.

## MS. BROUWER: Okay.

DR. DUVAL: Okay. Moving on, the next item, before Other Business, on our agenda is Discussion of a Control Date Limited Entry for For-Hire Permits in the Snapper Grouper, Coastal Migratory Pelagics, and Dolphin Wahoo Fisheries. My guess is this will take us all the way through the end of our time today, and so Dr. Brian Cheuvront is going to come up here and walk us through this. You have two attachments in your briefing book, Attachment 12a and 12b.

DR. CHEUVRONT: This has been talked about at a couple of meetings here in the past, and so we were given the task of trying to come up with some information regarding what's going on with for-hire permits, because one of the things that we didn't really know at the time was how are the for-hire permits changing over time, and so one of the things that we did -- With help from SERO and Jeanette Dudley, who is one of the technicians who works in the Permits Office, we were able to decipher some of the things that are going on with some of the permit information.

These are all just for-hire permits, and what we're trying to look at is to see if there are any discernable trends over time in what's happening with the number of for-hire permits. What we did is -- I'm going to take each one of them one at a time. This is the South Atlantic dolphin wahoo for-hire permit. We looked at them by state as well as combined, and so if you look at Table 1, and I am in Attachment 12a, and you go over to the far-right column and you look at all the states, and you just look at the sum of the permits, you can see really there's not much trend variability. It looks like we're kind of at equilibrium here. That trend seems to hold true even when you look at all the different South Atlantic states as well as from other states.

At the risk of beating a dead horse, you're going to see the same thing here for South Atlantic snapper grouper permits, as well as the coastal migratory pelagic permits, and so those are Tables 2 and 3. There really isn't much variability, and so what it's kind of looking like, to us, is that perhaps -- We went back through 2007, and so we have nine years of data that are presented here. We didn't include that tenth year, because there was some -- There was a change in the counting system of permits in the middle of that year, and so, in talking with the permits folks, we decided that it was maybe a good idea just to leave that year out, because there was some concern over how accurate the data were for that year.

What we did is we looked at the number of permits on December 31 in each one of those years, and so you can see that there really isn't much change from year to year across all three of these permits, and so the issue here is that we don't see a growing trend, but there might be other reasons why the council might want to consider establishing control dates, and potentially even capping the number of permits in each category that are available.

That reason, largely, is compliance. As you will recall, we're doing electronic reporting now in the for-hire sector, but what happens is that, with these open-access permits, if somebody doesn't comply and report their data, and we had a report from the Science Center in March that showed
that compliance in the South Atlantic is lagging behind even what's going on in the Gulf, and those are just the reports that have been received, and we already know that there are some reports that have never been received.

By capping participation, limiting entry, what you can do is put some teeth into this. Right now, if somebody doesn't comply with reporting, their permit gets revoked. Then they just go get another one. It costs them twenty-five bucks, and so that's just a small cost of doing business. If you limit the number of permits, then it won't be so easy to go out and just get another permit, and, as we're doing this electronic reporting and accountability is becoming more and more important, that might be a reason why the council might want to consider, first, establishing a control date and then capping participation.

I took this table that you can see here now from that report that we got from the Science Center in March. That really shows that there are folks -- Only about two-thirds of the reports that we're receiving are getting turned in on time, as opposed to 85 percent in the Gulf. By making these limited entry, attaching a dollar value to them and making them important to business, you're probably going to increase the compliance rates, because it's really going to mean something to folks, and so I'm just putting that out there. Right now, there doesn't seem to be a need to cap participation, because it's growing, but there may be another need, or a reason for doing this.

What I would like to do is I've given you all, in just trying to help you out, based on some stuff that -- I worked with Zack prior to the March meeting, because he's been sort of the standard bearer for this, really pushing hard for it, and so we have a draft motion that is based on some of the information that we had talked about before.

The date that had been put out previously was to establish March 11, 2016 as a control date for the for-hire sector, headboats and charter vessels, in the following fishery management plans. That would be the Snapper Grouper FMP, the Coastal Migratory Pelagics, and Dolphin Wahoo FMPs. The permits must remain in the fishery and the category in which they were last renewed, meaning if you have a six-pack vessel and you've got a snapper grouper permit, that permit becomes a sixpack vessel snapper grouper permit, and you cannot increase the number of passengers that you can take aboard your vessel by getting the Coast Guard inspection and all to be able to do that. It's the idea of keeping people in the category of for-hire that they're in now, and then they have to keep that same permit. They can't switch between permits.

DR. DUVAL: Are you ready for questions?
DR. CHEUVRONT: Sure.
MS. BECKWITH: Before we get into the larger discussion, I did have just one basic question. You said one of the reasons we might consider doing this is because it would help compliance, and that right now folks don't comply with reporting or whatnot, that their permit may be revoked and then they sort of go out and get a new one, but, if we go to limited entry, then it becomes almost a privatized portion of the public resource, as is the commercial permit, and I wonder -We haven't had very many permits, commercial permits, that are revoked due to lack of compliance with sort of data entry, or rather their trip ticket reporting. It's very difficult to revoke a commercial permit, and I'm sort of looking to Roy to maybe answer what history of that do we have?

DR. CRABTREE: It seldom happens, but I think the fact that it could happen is a significant incentive for folks to get their paperwork together.

DR. DUVAL: I just have a follow-up question to Anna's before I go to Doug. What is the penalty, the money penalty, for failure to report as required? Do we know that?

MS. LOWERY: I don't know that, but I can certainly try to look it up for you, if you would like that information.

MR. COX: I was just going to say that I know, in the snapper grouper fishery, one of the things that -- If we don't have our logbooks caught up to date, we're not allowed to renew it.

DR. CRABTREE: That's really it. I mean we have logbook requirements in the commercial fisheries. After their permit expires, if they come in to renew and they haven't submitted their logbooks, we won't renew the permit. If they don't renew it within one year, they lose it, and people do lose their permits because of that, but if they then submit their logbooks to us, we will renew their permit.

MR. HAYMANS: I had two questions, and that was the first one. The second, Brian, relates to the table of delinquent reporting, and I know this for 2015, but you can perhaps run an analysis of the permit contribution that each of those tardy categories has to the catch? In other words, 66 percent weren't late. What percentage of the total catch in the previous year did that make up? Because it could be that that other 34 percent is a very small portion of the catch.

DR. CHEUVRONT: That I can't do. That analysis was done by the Science Center, and so they deal with the reporting aspect of it, and so I think that's a Bonnie question.

DR. PONWITH: That's a really good question from the standpoint of what were the impacts of that, now that it's the history. The challenge is, if it happens in real time, it's not how much fish we're missing because someone is late. It's that there is unknown data, and if you get to the point where you're trying to generate estimates or projections, the lack of those data creates a requirement to estimate what's left, based on what you have in hand, and any time you do that, that adds a whole new layer of uncertainty to it. Even if the impact was small in the aftermath, that's the hindsight. It's when you're in real time that it creates the problems.

DR. CRABTREE: I will say this. If your vision is to get to weekly reporting in this fishery that's going to have a high enough compliance to use it to track ACLs, my personal opinion is you're going to have to go to limited entry, or you're going to have so many delinquent reports and so many compliance problems, and very little lever you can use over it, that I think you're going to have a very difficult time with it.

MR. BREWER: I hear this about compliance, and, quite frankly, I'm a little flabbergasted. I mean if I get caught out drunk driving and they take my license away, if I go to the DMV and try to get another license, they're going to laugh me out of there. Also, with regard to compliance, I'm taking a look at these tables, and the tables are based, and, Brian, you can correct me, but it appears that it's headboat data for the Gulf and headboat data for the South Atlantic. Is that correct?

DR. CHEUVRONT: Yes.

MR. BREWER: Okay. As I look at Week 4, compliance in the South Atlantic is 95 percent and the compliance in the Gulf of Mexico is 99 percent. Now, something happened this morning that I would like to suggest may have had far more impact on the reporting in the Gulf than, quote, whether it was limited entry or no. This morning, they published notice of the control date for the headboats in the Gulf of December 31, 2015. Anybody who did not have their data reported by that date couldn't stick it in, and they were going to be bound, in their upcoming catch share program, by their past catches.

If you didn't have catches or you didn't report catches after December 31, 2015, you're out, and so I think there might be other reasons involved with regard to the compliance here and the reporting of data other than, well, it's limited entry, and, therefore, these people are far more apt to be timely on their reporting.

I would also like to suggest to you that the -- This is the first step in a long road. It is going to be extremely divisive. It's going to be several years of this council's time, and I don't think it's needed. We do not see any increase or really major fluctuation with regard to the number of permits, and so it's not really -- In my mind, it's not really a compliance problem, and it's not a problem that we have overcapacity. It's not a problem that we need to limit the capacity. It is solely, solely, a step towards sector separation and the horribles that follow that, and I am vehemently against this motion.

DR. CHEUVRONT: I want to clarify one thing, Chester. This is only the reports that were received and the timeliness. There are probably still some reports out there that have not ever been received, and so they're not included in here, because there is no teeth in forcing them to turn in the report at this point. This is just of the reports received and not the reports that are still outstanding.

MR. HAYMANS: I don't know that limited entry necessarily is going to affect the delinquency rate. People are still going to be delinquent in their reporting, and not that I'm completely against limited entry. I have it in two of my fisheries in my state, and they are still tragically delinquent, but I would say the issue about the teeth, we could address that through regulation. We could have the system we've got now, but to the individual, if we revoke his license, we could change the regulations such that he could not renew, and that's not limited entry. That's just revoking an individual's right to renew. Could we not?

MS. LOWERY: I would say that's something that I would have to look into. I don't know if that's accurate, off the top of my head, but you're keeping me busy here. Getting back to the penalties, I am talking to Karen Raine as far as what the actual number is for the penalty, but there is -- The council, I guess, has received information before, and the penalty schedule is available on the GC Enforcement Section website, and so if anyone wants to look that up while we're waiting, just as an FYI.

MR. PHILLIPS: I have been struggling with trying to figure out how to get compliance up without using a hammer, and I think about our dealer reports that are electronic, and, if we don't get one in on time, we get an email, and we've had that happen, mostly because there was problems between our computer and the servers that we were sending stuff to. It just wouldn't accept it, and so we went for like six weeks that we got emails that weren't compliant, when we were turning
our paper stuff in to Brunswick, to Doug's office, and they were filing it. When you get that email every week, it reminds you to do stuff.

The other thing, and I just remembered if you don't send it in, and I forgot the length of time, then you're not supposed to be buying fish. If they've got delinquent reports, they may could go get another one, but are they really going to go get another one every time they've gone for whatever length of time, two weeks or month, and they didn't file and then they can't take people fishing? There may be other ways to do this, and I'm not going to say yes, no, or maybe, but I'm just thinking of all of the options on how to get where we want to get, which is compliance.

MR. BOWEN: As Brian alluded to, I have kind of been the vocal one about this moving forward, and, I tell you, my overall goal is for the for-hire sector to get out of MRIP. Without having limited entry and identifying our effort, it's going to be harder to do. If we go to mandatory reporting, which I am highly in favor of, and limited entry on the permits, we can separate from MRIP and actually know our estimates without the estimates being so heavily inflated, and so just that's a goal for me, and I would hope that anybody that sits at this table that runs a for-hire boat, that would be a goal for them as well.

MS. BECKWITH: I think Bonnie is going to allude to some of the stuff I'm about to say, is the for-hire industry getting out of MRIP has actually got more steps than us just making limited entry and making this logbook mandatory. It requires that every state forces their entire for-hire industry to report a logbook, which some states have. We have, thus far, failed miserably in North Carolina to achieve that goal, but, for the dolphin fishery, I would be interested to know how that would be achieved, because, of course, we have dolphin catches north of states that -- We would need the for-hire industry to actually report in all states, and so this is a very long process.

This would be a good first step to go in that direction, but to assume that the short term goal achieved would be to pull the for-hire industry out of MRIP and be able to manage our eventual quota only by our logbook information is a process that's about ten years down the road, I would guess, but I'm sure Bonnie can speak to that.

DR. PONWITH: Thanks for the segue. That's an excellent point. In my perfect rosy world, if we did go to electronic reporting for the full headboat fleet, we would do it shore to the edge of the EEZ, because, to me, what makes things challenging is when you have multiple programs that are chop, chop, chopped up, because, when you add them together, sometimes they're not easily additive, because the methodologies are different.

To me, having a system where we use MRIP in the coastal waters and this electronic reporting in the EEZ is inferior to having one program, where you're electronic reporting everywhere using the same system. It creates a lot easier data to manage.

The second thing is the compliance data that you see there, that is exclusively headboat, and the headboat is the easiest fleet for us to work with, because simply it's the smallest. When you do education and outreach on how you do this and why it's important to be accurate and timely, that work is easier, because it's a smaller population.

When you take a look at the numbers of the permits that are the combined headboat and charter boat, it gives you a feel for how much bigger that population is, and that adds a whole new layer
of complexity and implications, impact, if you have to chase after late reports, and so I am thrilled to hear you having serious discussions about finding a way to put some teeth into compliance, because that certainly makes our science work easier.

MR. BREWER: I agree. Compliance needs to have some teeth in it. Absolutely, but starting the war that this thing starts is not the way to get the compliance. The way to get the compliance is to put some teeth in the rules. Zack just said it. He just said it. Down the road, we're out from under MRIP. That means you've separated yourself from the recreational sector. That's the goal, and, as a recreational fisherman, I support the charter/for-hire headboat folks. I want them to do well. I want them to continue to provide a platform for recreational fishermen. I want them to continue to, like I said, to do well, but limiting the number is limiting, potentially, access, and I think it's just absolutely the wrong road to go down.

MR. BOWEN: Chester, to your point, yes, I said it, and I'm going to say it again. I want to be out of MRIP, and I am for sector separation. Thank you.

MR. COX: I remember, in the 1980s, when I was fishing pretty hard, I had six snapper grouper permits, and it was -- There was a time we didn't even have to have one, and I can tell you that it didn't take us very long, when we went to -- We had to meet criteria, and we went from over 2,000 permits in the commercial fishery, and I can't remember the number, but it dwindled on down, and compliance went -- I can tell you that my compliance went way up, and, with the six permits, I ended up with one of them, because I couldn't hardly keep up with everything that I had to report, but my compliance went way up, and it didn't take that long to do it.

DR. DUVAL: Thank you, Jack. I have a question, and I've been waiting patiently. The Gulf has limited entry for their reef fish permit, correct, for the Gulf for-hire reef fish permit, and also for the coastal migratory pelagics permit? Is that correct?

DR. CRABTREE: Both the charter reef fish and charter migratory pelagic are in limited entry, correct.

DR. DUVAL: So when the Gulf did this, when did they go to limited entry?
DR. CRABTREE: I think it was 2005 or so, something like that.
DR. DUVAL: When they did that -- I mean there's language in here, in this draft motion that's in this paper, that permits would have to remain in the fishery in the category in which they were last renewed. Did the Gulf do that? When they established limited entry, were you restricted from -If you had a charter boat when that limited entry program went into place, were you restricted to only keeping your permit on a charter boat? In other words, down the road, could you transfer it to COI boat if you wanted to?

DR. CRABTREE: The permits are fully transferable, but the passenger capacity is limited on the permits, because they didn't want the capacity of the fleet to be able to increase. If you have a charter permit with say a twelve-passenger capacity, when you transfer it, that's all the passenger capacity that it has, and so you can't go up in terms of the number of people you take under that permit.

MR. BOWEN: Just for clarification, the reason I put that in there or wanted it in there was solely the driving force of red snapper. I felt like we're trying to cap effort. We have a problem with exceeding our catches in red snapper, and I did not -- I didn't want to see a six-pack charter boat out of Daytona Beach go and trade his boat in because maybe we can go to one per person on snapper and go to a sixty-man headboat, and then, instead of reducing effort or capping effort, we have just multiplied it, and so that was the reason that I wanted it in there.

DR. CRABTREE: Michelle, the date is 2003.
DR. DUVAL: I just asked that because I know that -- I think several council members received phone calls from a gentleman who has been in the fishery for almost twenty years. He's had a permit, and then, two years ago, he bought a boat hull and has been in the process of revamping that to -- His plan was to transfer his permit to this hull, which is almost completed, and this would prevent him from doing so, and that's why I just wanted to get some clarification.

If the council decided to move forward with examination of establishing a control date in the forhire sector, as per the language that Brian had in the draft motion that's on the last page of this paper, and the permits much remain in the fishery and category in which they were last renewed, and that control date is March 11, then this gentleman would not be able to transfer that permit.

DR. CRABTREE: Remember this is just a control date. It doesn't limit anybody from doing anything. All it does is give notice to them that we're considering limited entry. You've got to go through the whole plan amendment process, in which you will decide who is in and who is out. You may not use the control date. You may move it forward. There will be a whole host of decisions, but just publishing a control date notice doesn't do anything but notify people of what we're considering.

MR. BOWEN: Just to make the council aware, the gentleman that called you that is operating one six-pack boat right now, as of yesterday, he has now three snapper grouper permits.

MS. BECKWITH: Since Zack sort of laid out his ideas on this, I will go ahead and lay out mine. It's not a secret that you guys know I'm not a fan of limiting commerce unless it's a resource issue, or privatizing a public resource. Currently, in order to be a guide, there is no permit hurdle in our area. State licenses, South Atlantic permits, HMS permits, bluefish permits, none of them are currently limited entry.

In order to become a guide, for better or for worse, your hurdles are creating your business plan, getting your boat, your tackle, your insurance, and building a reputation for yourself, and yet, even without any of these permit hurdles, there hasn't been a number -- The number of permits and effort has remained pretty stable, because the market generally takes care of itself. People get into guiding and they realize they can't make a proper living out of it and they flex out of the system.

Capping effort does not seem to be an issue, at least that we're facing at the moment. Now, while the resource is always a concern, I currently fail to see how possibly capping effort for the for-hire industry, while sharing one ACL with recreational fishermen, addresses any resource concerns, and, so on this point, I agree with Zack. If we were to go to limited entry, I would absolutely support sector separation.

In order to achieve better data, to me, that is the only valid reason to move to limited entry, in support of the logbook, and so, to me, it's the only argument right now that makes any sense, and so I understand that stabilizing the participation in the charter fleet would improve their accountability and the potential success of the logbook, even though having the for-hire industry pulled out of MRIP would be many, many years down the road.

I think one of Zack's concerns as well is we are seeing a recent flux of people getting permits. Well, that's not a surprise. Doug and I had a conversation at the last meeting where, if we were going to move in this direction, we were hoping that, once folks heard that we were moving in this direction and we were seriously considering this, that anybody that currently was not right with their permits would get right with their permits.

Again, if it was an argument for data, for better data, for hopefully getting the people that are actually participating in the fishery providing information on the future logbooks, then it's in our best interest to have everyone that's actually participating in the fishery to have a permit and to move towards the logbooks. I am sure that there is quite a bit of speculation occurring. Roy is right that we can handle that through eligibility requirements, if we decide to move in this direction through a plan amendment, but I just wanted to sort of lay out my thoughts on this.

DR. DUVAL: Can you clarify what you mean by "get right with your permit"? I mean are you referring to folks who operate a headboat and not having submits reports? I mean is that what you're talking about?

MS. BECKWITH: Or maybe folks that might have been fishing for certain species without the proper permits.

DR. DUVAL: Doug, and then we're going to start bringing this conversation to a close.
MR. HAYMANS: Just real quick, as of today, updating these charts, the dolphin wahoo is up ten, snapper grouper is up twenty-three, and migratory pelagics is up thirty-six. In the State of Georgia, in our little old permitting, it accounts for half of each of those categories. I have about fifteen guys who bought their permits since we started this in March, which was really the effect I was going for, because I know I've got 150 licensed guides, but I've only got thirty-two permits, and so they're saying only a fifth of them are fishing offshore, and so maybe I'm getting closer to reality. With that said, I would like to offer a motion, if that would be okay. I would like to move that we establish a new control date in the open-access charter/headboat permit of June 15, 2016.

DR. DUVAL: There is a motion by Doug. Is there a second to that motion? Second by Ben.
DR. CHEUVRONT: Doug, did your motion cover all three for-hire permits?
MR. HAYMANS: For the open-access charter/headboat permits. That covers all three.
DR. CHEUVRONT: I used "for-hire" as opposed to "charter/headboat", because I believe that's the term that they fall under.

MR. HAYMANS: I am looking at SERO's webpage, and it's open-access permits, but I don't care. That's fine. For-hire is fine.

DR. DUVAL: The motion is on the screen to establish a June 15, 2016 control date for the three open-access charter vessel/headboat permits.

MR. BOWEN: Was it seconded? Did somebody second it?
DR. DUVAL: Yes, Ben seconded the motion.
MR. BOWEN: Thank you, Madam Chair. I would like to offer a substitute motion.
DR. DUVAL: Go ahead.
MR. BOWEN: The same motion with the date of April 30, 2016, and I can give some rationale if I can get a second.

DR. DUVAL: There is a substitute motion by Zack to establish an April 30, 2016 control date. Is there a second to the substitute? It's seconded by Jack. Is there discussion?

MR. BOWEN: At our last meeting in March, when we brought this up, and to Doug's point back then, he wanted to make sure that the State of Georgia fishermen had -- If they were going to, quote, unquote, to use their term, get right with their permits, I feel like seven weeks and one day from the time this was brought up is enough time. I have never known the Permits Office to take that long to issue a permit.

The second point I would like to make is, with grouper season starting May 1, the shallow-water grouper season, anybody that's going to fish legal in the EEZ anyway is going to have their permit by April 30, so they can go shallow-water grouper fishing. I think the difference between April 30 and June 15, the number of permits has rose quite a bit. I think in our state, and Doug probably can correct me, but, when I brought this up in March, our number of snapper grouper permits were thirty-two. As of yesterday, I counted forty-seven in the State of Georgia.

I think people are -- I think the word got out. I think there's a lot of speculators out there, and, I agree with Roy and Anna that we can deal with that when we get there, but I think April 30, 2016 is plenty enough time that we gave -- We gave plenty enough time to the people that didn't have their permits in March -- March 11 I think is when we discussed this last, and I think seven weeks is plenty enough time to get your permit.

DR. DUVAL: Thanks for that, Zack. Is there other discussion around the table on this motion?
MR. COX: It may not exactly be on this motion, but I just think it would be interesting to see how many of these people had a captains' license before they went out and speculated on a permit, because that's what it takes to run a for-hire business.

MS. BECKWITH: I guess the only point I would make is a lot of our fishermen in North Carolina are inshore fishermen, near-shore fishermen, and they don't really start necessarily fishing until May or June, when cobia comes in, and so it may be that guys are not that organized and some of
those permits were new a little bit later on, but I don't think it's a lot of difference, and I think it's more appropriate to set it for the June 15 date, and so I won't support this motion. Thanks.

MS. MCCAWLEY: Call the question.
DR. DUVAL: You called the question? All right. All in favor, raise your hand.
DR. CHEUVRONT: Of making the substitute motion the main motion, right?
DR. DUVAL: The question has been called, and so we have to vote, and so we're voting on the substitute motion. The motion reads: Establish an April 30, 2016 control date for the three openaccess charter vessel/headboat permits. A show of hands of those in favor of the motion, one; those opposed, nine; abstentions, one. The motion fails.

We're back to the main motion, which is to establish a June 15, 2016 control date for the three open-access charter vessel/headboat permits. All those in favor of the motion, raise your hand, eight in favor; those opposed, three opposed. The motion carries.

It was certainly a fruitful discussion, and so I thank everybody for that. Zack, really quick, and then we're going to move on to Other Business.

MR. BOWEN: I was ready to make another motion, if that's okay, Madam Chair.
DR. DUVAL: Go right ahead.
MR. BOWEN: I would like to make a motion to direct staff to establish a limited-entry amendment.

DR. DUVAL: Motion by Zack to direct staff to begin development of a limited-entry amendment. Is there a second to that motion? It's seconded by Ben. Is the discussion? Obviously this would go through Executive Finance, if this motion passes, to be calendared.

MR. CONKLIN: In this amendment, what would you guys think about, since we don't have a lot of compliance in the dealer reporting -- We've got a lot of dealers that don't report, and it causes fisheries on the commercial side to close, and then we reopen them, like the triggerfish, and we've done with it with tilefish and vermilion snapper. We've been doing it long enough that compliance should be up to levels in the Gulf, and they certainly are not. Like somebody said, we wouldn't tolerate it in our banking system if that's how it operated, and I just didn't know what you all thought about trying to hold the dealers more accountable, and if one way to do it was to limit the entry on the dealer permits, if that were to be included in this amendment. Thank you.

DR. DUVAL: Thanks, Chris. Are there thoughts on that around the table, limited entry for dealer permits? I am assuming, Zack, that your motion would specifically be to direct staff to develop a limited-entry amendment for the for-hire sector?

MR. BOWEN: Yes, ma'am.
DR. DUVAL: Brian, can we add that to the motion, just to clarify it?

MR. BOWEN: That being said, I'm not saying I'm not in favor of Chris's suggestion, but I just think it should be two different amendments, if the council wants to go down that road.

MR. CONKLIN: It just was on my mind.
DR. DUVAL: Thanks, Chris. Anybody want to comment on a limited entry dealer permit? I see Roy shaking his head.

MR. COX: I haven't had a lot of thought about it, but, just off the top of my head, what it does is it keeps them -- If you have a dealer and he continues to be somebody that is not doing what he's supposed to do, it makes it a lot harder to run out and just get another permit. When you start limiting those things and they create value, people seem to -- Human nature is you take care of what you have.

DR. DUVAL: Ben and then Doug, and then we're wrapping this up.
MR. HARTIG: We're fighting for the infrastructure we have now. I mean I would welcome more dealers where I am, to be frank, I mean in the competitive aspect that we need in our area, and so I would not be in favor of that.

MR. HAYMANS: Is there one step short of developing an amendment? For instance, can we ask staff, over time, to develop a discussion paper for us to evaluate before we start the amendment, or is that just the first start of the amendment?

DR. DUVAL: I think, generally, the way this usually happens when an amendment is developed, we get an options paper, and then we look at that, and then we get a scoping document, et cetera, and move forward, and so I would assume that we would see an options paper as a first step for something like this.

Okay. If there is no other discussion, are people prepared to vote on this? Can I please see a show of hands of those in favor of the motion, which is to direct staff to develop a limitedentry amendment for the three for-hire permits? Four in favor; those opposed, six opposed; abstentions, one abstention. The motion fails.

MS. BECKWITH: It's not that we won't consider this at some point, but just, with the workload that the staff has now, it's just not -- We have other things that are a priority.

MR. BOWEN: To you.
MR. HAYMANS: I would agree with that. Again, I'm not opposed to it. I think we should look at it down the road, but not now.

DR. DUVAL: Duly noted. All right. I just had a couple of quick items under Other Business. First, I wanted to circle back, really quickly, to the golden tilefish discussion that we had yesterday, with regard to the update of SEDAR 25 and asking the SSC to go back and take a look at those ABC recommendations. I just wanted to let folks know that I've been talking to John and Marcel a little bit, and I think, especially with regards to the difference between those $\mathrm{P}^{*} 50$ and $\mathrm{P}^{*} 30$ projections, there's quite a significant difference, and so that alone, I think, merits going back to
the SSC to ask them to take a second look at that, but we'll come back to that at full council, and we just want to make sure that we're being very precise in what we're asking the SSC for on that issue.

Then the second thing I just wanted to do was give a shout-out to Jack Cox here, and so Jack -- As folks know, we gave final approval for our Spawning Special Management Zones Amendment in March, and one of those Spawning Special Management Zones is off of North Carolina, and Jack was instrumental in collecting a group of local scientists and fishermen together and Will Heyman came up and joined that effort. They were going out to do some research on the proposed SMZ off of North Carolina. I was only able to attend for an hour, but it was a very productive discussion, and so I wanted to thank Jack for that and give him a shout-out.

Then, also, I understand that I think Chip convened a meeting in regards to the proposed Warsaw Hole SMZ, to have similar conversations with FWRI staff and FWC staff about the research going on there, and so I just wanted to give a shout-out to folks for that, and I thank you.

MR. COX: I just wanted to say it was kind of fun getting scientists together and fishermen together. It was something that I always wanted to do. The fishermen don't quite understand what we do do here sometimes, and, when you get them together in a small group and you're able to get everybody in a room together -- Not a big group, but you have a little bit of everybody. You have science and you have Michelle was there. We had all kinds of folks there, and then we spent a week on the water monitoring our site.

The fishermen really want to get engaged, and they go out and talk to other fishermen about what we're doing, and I saw my fishermen that I brought to the meeting get pretty excited about it. They say, well, I wished that we had looked at some other areas. I think we could have done it a little bit better, but I encourage other states to try and do the same thing. It wasn't hard at all. I think we had our meeting was only about fifteen people there, and so I encourage you guys to try to do the same thing, and it went very well for us.

DR. DUVAL: Thank you, Jack. We're going to go ahead and take a quick break as staff gets ready for public comment, which will start at 5:30. Thank you all very much for your work today.
(Whereupon, the meeting adjourned on June 15, 2016.)

Certified By: $\qquad$ Date: $\qquad$

Transcribed By:
Amanda Thomas Transcriptions
July 11, 2016

SNAPPER GROUPER<br>Michelle Duval, Chair<br>$\checkmark$ Jessica McCawley, Vice Chair<br>$\checkmark$ Anna Beckwith<br>$\checkmark$ Metbett Robert Boyle<br>$\checkmark$ Back Bowen<br>$\checkmark$ Chester Brewer<br>$\checkmark$ Mark Brown<br>Chris Conklin via webinar<br>$\checkmark$ Jack Cox<br>$\checkmark$ Roy Crabtree<br>$\checkmark$ Ben Hartig<br>$\sqrt{ }$ Doug Haymans<br>Charlie Phillips<br>Mid-Atlantic Liaison, Tony DeLernia/Dewey<br>Hemilright<br>Staff contact: Myra Brouwer

## SUPs

Chris Conklin, Chair
Doug Haymans, Vice-Chair
Anna Beckwith
Roy Crabtree
Michelle Duval
Ben Hartig
LTJG Tara Pray
Staff contact: Gregg Waugh
SPINY LOBSTER
Jessica McCawley, Chair
Ben Hartig, Vice-Chair
Chester Brewer
Jack Cox
Roy Crabtree
Staff contact: Kari MacLauchlin

## Capt. Mark gordon

John Sanchez
RICK DEVIAtor
Dr. Mike Larking
IrIs LOWERY
Joey Ballenger
Def Radonsky
Dr. SACK MCGOVERN
Dr. Marcel Reichert
Dr. Andy STRECHECK
Tracy Duna
Dr. Bonnite Ponwitth
Erika Burgess
NIK MOnth
Dr. Luz Barbiteri
Jocelin D'Ambrosio
Kenny FEX
Frank Helices
SIM ESTES

## SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL 2016 COUNCIL MEMBERSHIP (continued)

Doug Haymans
Coastal Resources Division
GA Dept. of Natural Resources
One Conservation Way, Suite 300
Brunswick, GA 31520-8687
912/264-7218 (ph); 912/262-2318 (f)
doughaymans@gmail.com
Dr. Wilson Laney
U.S. Fish and Wildlife Service

South Atlantic Fisheries Coordinator
P.O. Box 33683

Raleigh, NC 27695-7617
(110 Brooks Ave
237 David Clark Laboratories,
NCSU Campus
Raleigh, NC 27695-7617)
919/515-5019 (ph)
919/515-4415 (f)
Wilson Laney@fws.gov
Jessica McCawley
Florida Fish and Wildlife
Conservation Commission
2590 Executive Center Circle E., Suite 201
Tallahassee, FL 32301
850/487-0554 (ph); 850/487-4847(f)
jessica.mccawley@myfwc.com

LTJG Tara Pray
U.S. Coast Guard

909 SE $1^{\text {st }}$ Ave.
Miami, FL 33131
tara.c.pray@uscg.mil
Deirdre Warner-Kramer
Office of Marine Conservation
OES/OMC
2201 C Street, N.W.
Department of State, Room 5806
Washington, DC 20520
202/647-3228 (ph); 202/736-7350 (f)
Warner-KramerDM@state.gov

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

## 2016 COUNCIL MEMBERSHIP

## COUNCIL CHAIR

Dr. Michelle Duval
NC Division of Marine Fisheries
3441 Arendell Street
(PO Box 769)
Morehead City, NC 28557
252/808-8011 (ph);
252/726-0254 (f)
michelle.duval@ncdenr.gov

## VICE-CHAIR

Charlie Phillips
Phillips Seafood/Sapelo Sea Farms
1418 Sapelo Avenue, N.E.
Townsend, GA 31331
912/832-4423 (ph); 912/832-6228 (f)
Ga capt@yahoo.com

Robert E. Beal
Executive Director
Atlantic States Marine Fisheries
Commission
1050 N. Highland St., Suite 200 A-N
Arlington, VA 20001
703/842-0740 (ph); 703/842-0741 (f)
rbeal@asmfc.org
Anna Beckwith
1907 Paulette Road
Morehead City, NC 28557
252/671-3474 (ph)
AnnaBarriosBeckwith@gmail.com
Mel Bell
S.C. Dept. of Natural Resources

Marine Resources Division
P.O. Box 12559
(217 Ft. Johnson Road)
Charleston, SC 29422-2559
843/953-9007 (ph)
843/953-9159 (fax)
bellm@dnr.sc.gov

Zack Bowen
P.O. Box 30825

Savannah, GA 31410
912/398-3733 (ph)
fishzack@comcast.net
W. Chester Brewer

250 Australian Ave. South
Suite 1400
West Palm Beach, FL 33408
561/655-4777 (ph)
WCBLAW@aol.com
Mark Brown
3642 Pandora Drive
Mt. Pleasant, SC 29466
843/881-9735 (ph); 843/881-4446 (f)
capt.markbrown@comcast.net
Chris Conklin
P.O. Box 972

Murrells Inlet, SC 29576
843/543-3833
conklinsafmc@gmail.com
Jack Cox
2010 Bridges Street
Morehead City, NC 28557
252/728-9548
Dayboat1965@gmail.com
Dr. Roy Crabtree
Regional Administrator
NOAA Fisheries, Southeast Region
263 13th Avenue South
St. Petersburg, FL 33701
727/824-5301 (ph); 727/824-5320 (f)
roy.crabtree@noaa.gov
Ben Hartig
9277 Sharon Street
Hobe Sound, FL 33455
772/546-1541 (ph)
mackattackben@att.net

# SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL COUNCIL STAFF 

Executive Director

Gregg T. Waugh
gregg.waugh@safmc.net

Deputy Director - Science \& Statistics
John Carmichael
john.carmichael@safmc.net

Deputy Director - Management
Dr. Brian Cheuvront
brian.cheuvront@safmc.net

Fishery Scientist
Myra Brouwer
myra.brouwer@safmc.net
Financial Secretary
Debra Buscher
deb.buscher@safmc.net
Admin. Secretary /Travel Coordinator
Cindy Chaya
cindy.chaya@safmc.net
Fishery Scientist
Chip Collier
chip.collier@safmc.net
Administrative Officer
Mike Collins
mike.collins@safmc.net
Fishery Biologist
Dr. Mike Errigo
mike.errigo@safmc.net
Fishery Economist
John Hadley
Iohn.hadley@safmc.net

Public Information Officer
Kim Iverson
kim.iverson@safmc.net
Fisheries Social Scientist
Dr. Kari MacLauchlin
kari.maclauchlin@safmc.net
Purchasing \& Grants
Julie O'Dell
kari.maclauchlin@safmc.net
Senior Fishery Biologist
Roger Pugliese
roger.pugliese@safmc.net
Fishery Outreach Specialist
Amber Von Harten
amber.vonharten@safmc.net

## SEDAR Coordinators

Dr. Julie Neer - julie.neer@safmc.net Julia Byrd - julia.byrd@safmc.net

|  |  |  |  | How do you participate <br> in fisheries in the South <br> Atlantic? (Check all that <br> apply) |
| :--- | :--- | :--- | :--- | :--- |
| Timestamp | Full Name |  | Mailing Address (If your <br> address is already on <br> file, just type "on file") |  |
| 6/14/2016 9:54:28 | Joseph C. Ballenger | ballengerj@dnr.sc.gov | on file | Angler Recreational |
| 6/14/2016 9:56:32 | Alison Johnson | ajohnson@oceana.org | On file | Non-Governmental |
| Organization |  |  |  |  |


| Timestamp | Full Name | Email | Mailing Address (If your address is already on file, just type "on file") | How do you participate in fisheries in the South Atlantic? (Check all that apply) |
| :---: | :---: | :---: | :---: | :---: |
| 6/15/2016 8:13:36 | Kellie Ralston | kralston@asafishing.org | on file | Non-Governmental Organization |
| 6/15/2016 8:28:44 | Lora Clarke | Iclarke@pewtrusts.org | on file | Non-Governmental Organization |
| 6/15/2016 8:31:28 | Leda Dunmire | Idunmire@pewtrusts.org | on file | Non-Governmental Organization |
| 6/15/2016 8:32:21 | David Bush | davidbush@ncfish.org | on file | NCFA |
| 6/15/2016 8:34:24 | Sherri McCoy | sherrim@wildoceanmarket.com | on file | Seafood Dealer/Wholesaler/Retail er |
| 6/15/2016 8:45:23 | Frank Helies | fchelies@att.net | on file | Non-Governmental Organization |
| 6/15/2016 8:49:54 | Paul Nelson | captpaul1966@aol.com | on file | Charter/Headboat/Forhire, Commercial Fisherman |
| 6/15/2016 9:01:46 | Robert Johnson | jlfishing@bellsouth.net | on file | Charter/Headboat/Forhire, Commercial Fisherman |
| 6/15/2016 9:24:40 | jim freeman | cfreeman23@bellsouth.net | on file | Commercial Fisherman |
| 6/15/2016 9:25:55 | Dean Foster | dfoster@pewtrusts.org | on file | Non-Governmental Organization |
| 6/15/2016 10:10:27 | Rusty Hudson | DSF2009@aol.com | on file | Consulting |
| 6/15/2016 10:50:28 | Jimmy Hull | hullsseafood@aol.com | on file | Commercial Fisherman |
| 6/15/2016 10:56:37 | barrett colby | bcolby3@cfl.rr.com | on | Commercial Fisherman |
| 6/15/2016 11:21:39 | Terri Beideman | Terri.Beideman@vac-usa.com | on | Commercial Fisherman |
| 6/15/2016 12:20:36 | Captain Patrick Kelly | doublepats@aol.com | 2322 Deerbrook Drive, Lakeland, FL 33811 | Private Recreational Angler, Florida Guides Association |
| 6/15/2016 12:30:45 | Ira Laks | captainira@att.net | on file | Charter/Headboat/Forhire, Commercial Fisherman |
| 6/15/2016 12:56:47 | David Bush | davidbush@ncfish.org | on file | NCFA |


| Timestamp | Full Name | Email | Mailing Address (If your address is already on file, just type "on file") | How do you participate in fisheries in the South Atlantic? (Check all that apply) |
| :---: | :---: | :---: | :---: | :---: |
| 6/15/2016 15:19:16 | Ray Rosher | Ray@missbritt.com | 9490 sw 109 terr Miami, FI 33176 | Private Recreational <br> Angler, <br> Charter/Headboat/For- <br> hire, Commercial <br> Fisherman, Seafood <br> Dealer/Wholesaler/Retai er |
| 6/15/2016 15:38:59 | Dick Brame | dbrame55@gmail.com | on file | Private Recreational Angler, NonGovernmental Organization |
| 6/15/2016 15:41:06 | William F. Coley | wmcoley1@gmail.com | 408 Cardinal Drive Satellite Beach, Florida 32937 | Private Recreational Angler |

Tuesoay - June 14, 2016 Webinan Attendance

| Last Name | First Name | Email Address |
| :--- | :--- | :--- |
| Abeels | Holly | habeels@ufl.edu |
| Alvarado | Nicolas | Nicolas.Alvarado@noaa.gov |
| Amick | Steve | steveamicks@sol.com |
| Aukeman | Trip | taukeman@ccaflorida.org |
| Bailey | Adam | adam.bailey@noaa.gov |
| Bell | Mel | bellm@dnr.sc.gov |
| Bianchi | Alan | Alan.Bianchi@ncdenr.gov |
| Binns | Holly | hbinns@pewtrusts.org |
| Blow | Kes | wesamy2000@cox.net |
| Brennan | Men | kenneth.brennan@noaa.gov |
| Brouwer | Julia | myra.brouwer@safmc.net |
| Byrd | CHRIS | juliabyrd@hotmail.com |
| CONKLIN | Rob | CONKLINSAFMC@GMAIL.COM |
| Cheshire | Lora | Iclarke@pewtrusts.org |
| Clarke | Robert | rcrimian@tnc.org |
| Crimian | Tim | tbcullen@yahoo.com |
| Cullen | Jocelyn | jocelyn.dambrosio@noaa.gov |
| D'Ambrosio | Christopher | Christopher.Davis@mrc.virginia.gov |
| Davis | Robil | RichardD@electricsalesinc.com |
| DeLizza | Rich | Rony |
| DeVictor | Rick | rick.devictor@noaa.gov |
| Dunmire | Leda | Idunmire@pewtrusts.org |
| Erwin | Gwen | gwen.erwin@myfwc.com |
| Fast | Richard | richardfast0@gmail.com |
| Foster |  |  |

$6|14| 16$ WEBINAN ATTGNDANCE

| Markwith | Anne | anne.markwith@ncdenr.gov |
| :--- | :--- | :--- |
| McHan | Chris | cmchan@gmri.org |
| Mehta | Nikhil | nikhil.mehta@noaa.gov |
| Merrifield | Mike | mikem@wildoceanmarket.com |
| Miller | Janet | janet.l.miller@noaa.gov |
| Neer | Julie | julie.neer@safmc.net |
| Package-Ward | Christina | christina.package-ward@noaa.gov |
| Raine | Karen | karen.raine@noaa.gov |
| Records | David | david.records@noaa.gov |
| Renchen | Gabrielle | gabby.renchen@myfwc.com |
| Schalit | David | dschalit@gmail.com |
| Shipman | Susan | susanshipman@att.net |
| Smit-Brunello | Monica | monica.smit-brunello@noaa.gov |
| Stephen | Jessica | jessica.stephen@noaa.gov |
| Takade-Heumacher | Helen | htakade@edf.org |
| Travis | Michael | mike.travis@noaa.gov |
| Williams | Erik | erik.williams@noaa.gov |
| bubley | walter | bubleyw@dnr.sc.gov |
| holiman | stephen | stephen.holiman@noaa.gov |
| sandorf | scott | scott.sandorf@noaa.gov |
| smart | tracey | smart@dnr.sc.gov |
| vara | mary | mary.vara@noaa.gov |

WEDNESDAY - JUNE 15,2016 WEBINM ATTENDANCE

| Last Name | First Name | Email Address |
| :---: | :---: | :---: |
| Abeels | Holly | habeels@ufl.edu |
| Alvarado | Nicolas | Nicolas.Alvarado@noaa.gov |
| Amick | Steve | steveamicks@sol.com |
| Austin | Anthony | redress@ec.rr.com |
| Bailey | Adam | adam.bailey@noaa.gov |
| Bell | Mel | bellm@dnr.sc.gov |
| Bianchi | Alan | Alan.Bianchi@ncdenr.gov |
| Bickford | Joel | joel.bickford@myfwc.com |
| Binns | Holly | hbinns@pewtrusts.org |
| Bonura | Vincent | SailRaiser25C@aol.com |
| Brennan | Ken | kenneth.brennan@noaa.gov |
| Bush | David | davidbush@ncfish.org |
| Byrd | Julia | juliabyrd@hotmail.com |
| CONKLIN | CHRIS | CONKLINSAFMC@GMAIL.COM |
| Cheshire | Rob | rob.cheshire@noaa.gov |
| Clarke | Lora | Iclarke@pewtrusts.org |
| Crimian | Robert | rcrimian@tnc.org |
| D'Ambrosio | Jocelyn | jocelyn.dambrosio@noaa.gov |
| Davis | Sarah | sayraj75@gmail.com |
| DeVictor | Rick | rick.devictor@noaa.gov |
| Desfosse | Joseph | joseph.desfosse@noaa.gov |
| Dunmire | Leda | Idunmire@pewtrusts.org |
| Erwin | Gwen | gwen.erwin@myfwc.com |
| Fast | Richard | richardfast0@gmail.com |
| Fitzpatrick | Eric | Eric.Fitzpatrick@noaa.gov |
| Foster | Dean | dfoster@pewtrusts.org |
| Franco | Dawn | dawn.franco@dnr.ga.gov |
| French | Jonathan | french60wasp@gmail.com |
| Froeschke | John | john.froeschke@gulfcouncil.org |
| Gerhart | Susan | susan.gerhart@noaa.gov |
| Guyas | Martha | martha.guyas@myfwc.com |
| Hadley | John | john.hadley@safmc.net |
| Hartig | Ben | mackattackben@att.net |
| Horton | Chris | chris@sportsmenslink.org |
| Hudson | Rusty | DSF2009@aol.com |
| Iverson | Kim | kim.iverson@safmc.net |
| Jiorle | Ryan | ryan.jiorle@mrc.virginia.gov |
| Kemp | Brian | Kempbrian6971@gmail.com |
| Knowlton | Kathy | kathy.knowlton@dnr.ga.gov |
| L | I | captaindrifter@bellsouth.net |
| Lamberte | Tony | tony.lamberte@noaa.gov |

Glis/ig wgoinan ATtewdancle

| Lindeman | Ken | lindeman@fit.edu |
| :---: | :---: | :---: |
| Lloyd | Vic | vic_lloyd@bellsouth.net |
| MacLauchlin | Kari | kari.maclauchlin@safmc.net |
| MacLauchlin | Bill | billmac@charter.net |
| Mahood | Bob | rmahood@mindspring.com |
| Martin | Gretchen | gbmartin71@gmail.com |
| McHan | Chris | cmchan@gmri.org |
| McRae | Gil | gil.mcrae@myfwc.com |
| Mehta | Nikhil | nikhil.mehta@noaa.gov |
| Merrifield | Jeanna | jeannam@wildoceanmarket.com |
| Neer | Julie | julie.neer@safmc.net |
| Raine | Karen | karen.raine@noaa.gov |
| Records | David | david.records@noaa.gov |
| Renchen | Gabrielle | gabby.renchen@myfwc.com |
| Sands | Kathleen | kathleen.sands@noaa.gov |
| Shipley | Krista | krista.shipley@myfwc.com |
| Shipman | Susan | susanshipman@att.net |
| Smit-Brunello | Monica | monica.smit-brunello@noaa.gov |
| Stafford | Pete | spstafford@gmail.com |
| Stephen | Jessica | jessica.stephen@noaa.gov |
| Stillman | Karolyn | karolyn.stillman@Noaa.gov |
| Takade-Heumacher | Helen | htakade@edf.org |
| Travis | Michael | mike.travis@noaa.gov |
| Von Harten | Amber | amber.vonharten@safmc.net |
| Von Harten | Herman | capt_bo@hotmail.com |
| Williams | Erik | erik.williams@noaa.gov |
| Wyanski | David | wyanskid@dnr.sc.gov |
| blough | heather | heather.blough@noaa.gov |
| bubley | walter | bubleyw@dnr.sc.gov |
| chappell | stephen | stephen.chappell@noaa.gov |
| holiman | stephen | stephen.holiman@noaa.gov |
| malinowski | rich | rich.malinowski@noaa.gov |
| moss | david | david@smoss.com |
| pugliese | roger | roger.pugliese@safmc.net |
| smart | tracey | smart!@dnr.sc.gov |
| vara | mary | mary.vara@noaa.gov |


[^0]:    MS. MCCAWLEY: I move that we move the size limit action earlier in the document to before the spawning season action, which is Action 5.

