GULF OF MEXICO FISHERY MANAGEMENT COUNCIL

## REEF FISH MANAGEMENT COMMITTEE

Perdido Beach Resort Orange Beach, Alabama
October 26-27, 2021
VOTING MEMBERS
Martha Guyas (designee for Jessica McCawley) Florida
Kevin Anson (designee for Scott Bannon) .Alabama
Susan BoggsLeann BosargeMississippi
Billy Broussard. ..... Louisiana
Dale Diaz. ..... Mississippi
Jonathan Dugas ..... Louisiana
Phil Dyskow ..... Florida
Tom Frazer ..... Florida
Dakus Geeslin (designee for Robin Riechers) ..... Texas
Bob Gill ..... Florida
Chris Schieble (designee for Patrick Banks) ..... Louisiana
Bob Shipp ..... Alabama
Joe Spraggins ..... Mississippi
Andy Strelcheck. .....  NMFS
Greg Stunz ..... Texas
Troy Williamson ..... Texas
NON-VOTING MEMBERS
Dave Donaldson ..... GSMFC
LTJG Adam Peterson ..... USCG
STAFF
Assane Diagne Economist
Matt Freeman ..... Economist
John Froeschke Deputy Director
Lisa Hollensead. Fishery Biologist
Ava Lasseter. ...... Anthropologist
Mary Levy. NOAA General Counsel
Natasha Mendez-Ferrer Fishery Biologist
Emily Muehlstein. Public Information Officer
Ryan Rindone. Lead Fishery Biologist/SEDAR Liaison
Bernadine Roy Office Manager
Carrie Simmons Executive Director
Carly Somerset ..... Fisheries Outreach Specialist
OTHER PARTICIPANTS
Richard Cody. NOAA Fisheries
Jocelyn D'Ambrosio .....  NOAA GCTim Griner.SAFMC
Bonnie McCay ..... NAS
Jim Nance ..... GMFMC ..... SSC
Kelli O'Donnell .....  NOAA
Clay Porch ..... SEFSC
Martin Smith. ..... NAS
Table of Contents ..... 3
Table of Motions ..... 4
Adoption of Agenda and Approval of Minutes and Action Guide and
Next Steps. ..... 5
Review of Reef Fish Landings and IFQ Landings ..... 6
Gray Triggerfish Commercial Landings ..... 13
Imputed 2020 Landings for Gulf-Managed Species. ..... 17
Final Action: Draft Framework Action: Modification of Gulf of
Mexico Red Grouper Catch Limits. ..... 33
Presentation on SEDAR 70: Greater Amberjack Stock Assessment
Report ..... 41
Presentation on SEDAR 72: Gag Grouper Stock Assessment Report. ..... 50
Individual Fishing Quota Programs ..... 79
Presentation from the NAS ..... 79
Focus Group Formation ..... 94
Discussion: SSC Recommendation on Final GRSC Report and LDWF RedSnapper Abundance Studies....................................................... 111
Draft Framework Action: Modification of Vermilion Snapper Catch
Limits....................................................................... . . 114
Discussion: Draft Snapper Grouper Amendment 44 and Reef FishAmendment 55: Modifications to Southeastern U.S. YellowtailSnapper Jurisdictional Allocations, Catch Limits, and South
Atlantic Sector Annual Catch Limits........................................... 118
Adjournment ..... 137

PAGE 15: Motion to add an action to the Framework Action: Modifications to Vermilion Snapper Bag Limits and Gray Triggerfish Recreational Fixed Closed Season to adjust the commercial gray triggerfish trip limits. The motion carried on page 16 .

PAGE 39: Motion to recommend approval of Framework Action: Modification of Gulf of Mexico Red Grouper Catch Limits and that it be forwarded to the Secretary of Commerce for review and implementation and deem the codified text as necessary and appropriate, giving staff editorial license to make the necessary changes in the document. The Council Chair is given the authority to deem any changes to the codified text as necessary and appropriate. The motion carried on page 40.

PAGE 73: Motion to retain fishery dependent data. It is the council's desire to avoid a total shutdown of any species, if at all possible. The motion carried on page 79.

PAGE 96: Motion that the charge of the IFQ Focus Group be expanded to require a review of the current IFQ programs goals and objectives and recommend their replacement/retention. The revised goals and objectives shall serve as the bases for the Focus Group recommendations. The motion carried on page 100.

PAGE 103: Motion to add to the membership of the IFQ Focus Group a person who is well versed in the program but does not hold shares or allocation. The motion carried on page 107.

PAGE 107: Motion that the process document provided be utilized to advertise and solicit members of the IFQ Focus Group. The motion carried on page 108 .

PAGE 108: Motion to take Reef Fish Amendment 36B out for public hearings. The motion failed on page 110.

PAGE 116: Motion in Action 1 to make Alternative 2 the preferred alternative. The motion carried on page 116.

The Reef Fish Management Committee of the Gulf of Mexico Fishery Management Council convened on Tuesday morning, October 26, 2021, and was called to order by Chairman Martha Guyas.

## ADOPTION OF AGENDA <br> APPROVAL OF MINUTES ACTION GUIDE AND NEXT STEPS

CHAIRMAN MARTHA GUYAS: Okay, folks. We are going to start the Reef Fish Committee. Let's talk about who is on the Reef Fish Committee, since we have a new committee structure. If you're wondering if you're on it, the answer is yes. Everyone is on Reef Fish, and so come on over to the table. Okay.

Our first item of business is Adoption of the Agenda. Are there any additions or modifications to the agenda? I have one. I would like to add a brief discussion of goliath grouper to the end of our agenda, if we have time. Otherwise, we can take it up at Full Council.

MR. RYAN RINDONE: So noted, Madam Chair.
CHAIRMAN GUYAS: Okay. Thanks. Bob Gill.
MR. BOB GILL: A question, Madam Chair. I would like to have a discussion, probably in the gag segment, about fisheries closures. Would you like me to add that to the agenda or just bring it up?

CHAIRMAN GUYAS: I think you could just bring it up.
MR. GILL: Thank you, Madam Chair.
CHAIRMAN GUYAS: Okay. We need a motion to adopt the agenda as modified.

MR. GILL: So moved, Madam Chair.
CHAIRMAN GUYAS: All right. Motion by Mr. Gill. Is there a second? We have a second. Any opposition to that motion? The motion carries. Next, we have Approval of our August 2021 Minutes. Are there any changes to the minutes? Seeing none, any opposition to approving the minutes as written? Seeing none, the minutes are approved.

Okay, and so we will hit up the action guide as we move through our agenda, and so let's jump right into Item IV, which is the Review of Reef Fish and IFQ Landings. I think it looks like

Kelli O'Donnell is first on deck for that, after we go through the action guide for that.

## REVIEW OF REEF FISH AND IFQ LANDINGS

MS. KELLI O'DONNELL: Thank you, Madam Chair. I'll get going with the landings. They're a little bit longer this time, because we tried to add in some other items that may be of interest to the council, and so, as with the landings for CMP yesterday, for reef fish, the same thing. 2021 landings are preliminary, and commercial landings are through August 31, and recreational landings are through wave 3 and include MRIP, LA Creel, and headboat. No Texas landings were available yet.

Gag has been pretty much -- It's hard to see the blue line, but it is pretty much right behind the 2019 and the fishing year average yellow-dashed line, and so they are pretty much having landings go similarly to what they have in the past couple of years, outside of COVID.

Red grouper recreational landings, you can see there have been really high landings this year, which led to the closure, and we actually saw that the landings had exceeded their quota by the end of Wave 3, and, looking at this in more detail, we saw that, for Wave 2 and Wave 3, there were a lot higher West Florida charter landings this year than in previous years, and so we're pretty sure that's what we're attributing this high increase to.

Gray triggerfish commercial landings, they just got out of their seasonal closure, and they are still running a little bit lower than what they have in past years. They didn't have a closure in 2020, and, right now, we do not have any projected closure for 2021, but we'll see, since they're just coming out of their closure, their seasonal closure, and there's a couple more months to go in the fishing year, and we'll see what happens with them, but we're not anticipating, I guess, right now, that they're going to have a closure, due to the increased ACL and ACT that is in effect now, which are those higher dotted lines at the top, and so that should stay open for the rest of the year.

Recreational landings have been on par to exceed their quota, as they have routinely in past years. The blue line for 2021, we actually added the dashed-blue line, which is what the projections were based off of, and so, even though they currently aren't showing, through Wave 3, that they have reached their ACT, the projection using the 2020 landings that were from the reopening of the $1^{\text {st }}$ through the end of October, we're
projecting that a closure would need to happen by the $15^{\text {th }}$, since, again, we only have landings through the end of June, and, even with the closure, we would anticipate that they are going to meet even that increased ACT by the 15th, and so you can see, by that dashed line, where that was going to happen at.

It's kind of hard to tell by these charts, and so the September/October at the bottom is pretty much the end of October, and so you can see, at the beginning, the January/February, the landings don't start at the zero, and they start from the end of that wave, and so the middle of each dash mark at the end of the wave.

Commercial landings for 2021 for greater amberjack are still running low, and they have not even reached their step-down accountability measure yet, which, if you remember, once they reach 75 percent of their $A C T$, their trip limit would be stepped down to 250 pounds, and we still are not close to that trigger yet, and so we'll see what happens with them as they continue their fishing year as well.

Recreational landings have increased more in this past fishing year than what they were in the last year, but, again, since they have the August through July fishing year, we actually have their landings through the end of their 2020/2021 fishing year, and they still did not reach their ACT and trigger an in-season closure at all, and so they have now just started their 2021/2022 fishing year, in August, but we do not have those landings yet.

Gray snapper commercial landings, again, a little bit lower still in the 2021 fishing year, and they're still well below their stock ACL that would do a closure. Adding on the recreational landings, they're still well below what their stock ACT is for this current fishing year.

Lane snapper commercial landings are pretty on par to what they have been the past couple of years, and, when we add to those the recreational landings, because this is a stock as well, you can see that the commercial landings have been pretty much on par for the past couple of years, and, while this slide currently shows that they are under their ACL, again keep in mind that we only have landings for the recreational sector through the end of June, but, if we look at the next slide, breaking the recreational landings down by wave from 2018 to 2021, it shows that the landings that we currently have are on par with the previous three years, where they have ended up exceeding their ACL, and so that is why a closure had to occur,
and, as Andy has mentioned, and others, we're working as quickly as possible to get this lane snapper document implemented before the end of this calendar year, so that we can reopen lane snapper before the end of the year.

Vermilion snapper is another one of those ones where landings this past year have continued to decrease from what they were in previous years. Even adding on recreational landings, they are still well below their stock ACL, with recreational landings even being slightly lower as well this year compared to previous years.

Yellowtail snapper commercial also has had lower landings this year than what they've had in previous years, and, again, this is another species that is on an August to July fishing year, and so this is through the end of their 2020/2021 fishing year, and you can see that, even with those landings, they are still well below what they have been in recent years. Even adding on the recreational, because yellowtail is a stock, they're still below their stock ACL, with recreational landings also being a little lower than what they have been in previous years.

We added a couple of new species to this presentation this year, just to give some background of what's going on, and so midwater snapper has a post-season accountability measure that, if they exceed their ACL in one year, then, in the next year, a projection or closure has to be made when the ACL is met, or projected to be met.

Last year, they had just gone over their ACL, and so, this year, they had to close when their ACL was met, and you can see this is mostly a commercial-landed fishery, and they do have a fairly low ACL, and so, if it happens to be a good year for these species, it could be something that a closure happens again next year, but, since they have definitely exceeded their ACL this year, we will also have to do a projection next year, to see if they will need to close before the end of the fishing year.

Other stocks of note are the jacks complex. While they have not exceeded their ACL yet this year, they're at about 98.5 percent of landings, and we still have another couple of months to go, and so, while they wouldn't close this year, because they also only have a post-season closure accountability measure, if they do exceed their ACL this year, that would also be a stock complex that we will have to do a projection for next year, to see if they will need to close, and the same thing for cubera.

While they have already exceeded their ACL this year, they do
not have an in-season closure accountability measure, and only a post-season, and so they also will be getting a projection next year, to see if an in-season closure is needed. I think that is my last slide, and I will be here if there is any questions.

CHAIRMAN GUYAS: All right. Thanks, Kelli. Are there questions about this presentation? I've got a few, but go ahead, Susan.

MS. SUSAN BOGGS: Thank you, Madam Chair, and thank you, Kelli, for the presentation. I really do like these graphs. My question is, and $I$ think it's Slide 10 for lane snapper commercial landings, and it says their ACL is 301,000 pounds, but, when I look at the graph, unless $I$ am misreading it, it goes to 30,000, and are they far under, or is that hundreds of thousands of pounds that I should be looking at?

MS. O'DONNELL: Well, keep in mind that lane snapper is a stock, and so it does say on the note that the stock ACL is 301,000 pounds, and so that is the combined commercial and recreational landings, to have to meet that ACL, and we just show how much of that ACL, broken down, is being caught for a sector, by showing the commercial and then the recreational.

MS. BOGGS: Okay. I understand now. Thank you.
CHAIRMAN GUYAS: Leann.
MS. LEANN BOGGS: Thank you, Madam Chair. I mentioned this yesterday, and Dr. Simmons said we would be getting a little more information on that midwater snapper stock landing, and this was brought up at the SSC meeting, and, at that point in time, I think they were actually discussing a SEDAR schedule and a slot that was open to be looked at, and one of the members had mentioned that maybe we need to look at that midwater snapper and getting a new catch level recommendation on that, since we have exceeded it, and so a couple of questions.

Is this a data-poor type situation, where we essentially probably have a ten-year average in landings, and that's kind of where our quota is coming from, because $I$ do see a large, I guess relatively speaking, commercial increase there, and is it something that would be simple to go back and possibly get a new quota on, if it's just a ten-year average, or is even that pretty in-depth, if we're seeing some new commercial effort there and shifting possibly from other species that are down?

MS. O'DONNELL: I don't think that's a question for me, and maybe Clay or someone from the Science Center, or maybe Dr.

Larkin, and I think he might be listening in, and he may be able to provide some information as well.

CHAIRMAN GUYAS: I think Andy is going to take that one, Kelli.
MS. O'DONNELL: Okay.
MR. ANDY STRELCHECK: I don't recall exactly how we specified the ACL for midwater snapper, and I think you're right, Leann, that it's probably based on some historical average landings. This is a situation where we have seen commercial harvest increasing for this species in the last few years, and it's a joint ACL between commercial and rec, right, and it's unallocated, and we just, unfortunately, and $I$ will take ownership, but we missed the mark in terms of closing the fishery when we saw that the catch limit had been met. That, obviously, doesn't address your concern, which is, is the catch limit set too low, based on the information we have, but that's certainly something we could revisit as a council.

MS. BOSARGE: Well, maybe the best starting point is this gives us just about three or four years of data, and maybe, at our next meeting, if we could get maybe a longer time series of data and a little more information, and then $I$ think we might could make some educated recommendations at that point, but it's probably something we want to look into sooner rather than later, and I don't -- It's okay if you miss the mark, and I'm looking at this chart, and, I mean, it's only like 50,000 pounds, and so it's not like we went millions of pounds over the ACL .

CHAIRMAN GUYAS: Along those lines, if we look at this some more, $I$ would be curious as to the species breakdown of these four, and I could maybe guess what probably is driving these landings, but $I$ would like to see that, and then $I$ would be curious about, since a lot of this is commercial, what gear these are being caught on, and are these longline, or are these largely hook-and-line, and what's going on. Andy, go ahead.

MR. STRELCHECK: Kelli can correct me if I'm wrong, but I believe, when we looked at this, that it was actually trawl gear that was harvesting this, primarily.

MS. O'DONNELL: That is correct for the midwater.
CHAIRMAN GUYAS: Ryan.
MR. RINDONE: Thank you, Madam Chair. Just to Ms. Bosarge's
question about the data that were used, and so, during the General Annual Catch Limits and Accountability Measures Amendment, we used data from 2000 to 2008 , and we applied Tier 3a of the council's ABC Control Rule, which would set the ABC at the mean of the landings plus some standard deviation, based on an estimate of risk of overfishing the stock.

From that amendment, the OFL for midwater snappers is 209,000 pounds, and the $A B C$ is 166,000 pounds, and so the ACL was set equal to the $A B C$, and then those have an ACT of 136,000 pounds, and, just for those wondering what species midwater snapper includes, it's silk snapper, wenchman, blackfin snapper, and queen snapper.

CHAIRMAN GUYAS: Chris.
MR. CHRIS SCHIEBLE: This is just a technical question for Kelli, and I think I ask this almost every meeting, and I can't recall the answer, and so it said the recreational landings are current including MRIP, LA Creel, and the headboats through June 30. I know we send the LA Creel landings weekly, and so I'm curious, and is that just because the MRIP and the headboat landings are current through June 30?

MS. O'DONNELL: Yes, and we did a standard of just ending everything at June 30, but you are correct that we do have LA Creel through a more current time period, and I can't remember what we have it through, but we just kind of picked an end date of what we had the most data for, and we just picked the end of the wave for that.

MR. SCHIEBLE: Thank you.
CHAIRMAN GUYAS: Dr. Simmons.
EXECUTIVE DIRECTOR SIMMONS: Thank you, Madam Chair. Thank you, Kelli, for putting this together, and $I$ have a question again, and you said that the gear type that was driving the commercial landings for midwater snapper was trawl gear, and can you provide more information on that, because that doesn't make any sense to me. These fish are going to be on high relief.

MS. O'DONNELL: That's what it was coming in listed as, was otter trawl, and it was mostly wenchman landings that were driving that up.

CHAIRMAN GUYAS: That's a little interesting. I don't know what to say about that one. If I was going to pick a species that
would be probably caught, it wouldn't have been wenchman. Andy.
MR. STRELCHECK: Well, I think the council's reaction is similar to some of ours when we looked into this, and certainly we're happy to dig into it further. I guess a couple of thoughts here, and so, going back to Leann's comment, with the comp ACL amendment that we put in place many years ago, obviously, we set ACLs for the data-poor species, and it's certainly worth considering redoing that, especially with the new recreational data and looking at, obviously, updating ACLs that maybe have been static for quite some time.

The other two things $I$ wanted to mention are, with lane snapper and red grouper, they were kind of intertwined, and everyone was believing that, well, MRIP was driving the lane snapper closure, and this is not in fact the case.

We closed lane snapper because the catch limit had been met, and we are working to update and increase that catch limit, based on council action.

Right now, there's a proposed rule that we're soliciting public comment on, and that closes, I believe, November 2, and our goal is to turn around a final rule as quickly as possible after that and waive cooling-off, so that we can implement that new catch limit before the end of the year, hopefully in November, ideally, to reopen that fishery.

For red grouper, we're definitely seeing an increase in the landings, as Kelli shared, and we're not, obviously, certain exactly what's driving that, and she did mention, obviously, charter landings were higher, and we do know that, obviously, catch rates have been reported to be higher, and we've seen that in the commercial sector as well, and so I think that's a good thing, in terms of seeing observed higher abundance, but it led to an earlier closure this year because of that.

CHAIRMAN GUYAS: Kevin.
MR. KEVIN ANSON: I don't know if I'm going to provide much more information, but, in regard to the comments for the wenchman, we were contacted, and not me directly, but people on staff were contacted by an Alabama fisherman catching wenchman as a bycatch.

CHAIRMAN GUYAS: All right. Any other questions on this item? Okay. Then our next item under this tab is a presentation on gray triggerfish by Dr. Simmons.

## GRAY TRIGGERFISH COMMERCIAL LANDINGS AND MANAGEMENT REVIEW

EXECUTIVE DIRECTOR SIMMONS: Thank you, Madam Chair. Can we pull up Tab B, Number 4(c)? Just to remind everybody, the council requested that staff look into the commercial gray triggerfish landings history since the implementation of the framework action, which increased the catch levels for both the recreational and the commercial fisheries, and that was implemented in July of 2021.

The Reef Fish AP did have a chance to look at this earlier this year, and they did make the following motion. They requested the council consider to start a document that would consider adjusting the commercial triggerfish trip limits in response to the increased quota, and $I$ will just provide a little bit of background on the discussion that was held earlier this year in regard to this topic.

The Reef Fish AP commented that increasing the commercial trip limit would reduce dead discards, but there is not currently a directed commercial fishery for gray triggerfish, and they suggested that, if the council decided to raise the trip limit from sixteen to twenty, or even up to twenty-five, fish per trip, they didn't feel that this would harm the stock or create a directed fishery, but it would just reduce discards.

Just to remind everybody where the current regulations are for gray triggerfish, the commercial sector specifically, the trip limit is sixteen fish per vessel. It is closed during the peak spawning, in June and July, like the recreational sector, and the minimum size limit is fourteen inches fork length, and the commercial annual catch target is set 5 percent below the commercial annual catch limit. We do have some accountability measures on the books. There is an in-season accountability measure that, when the landings reach, or are projected to reach, that annual catch target, the sector is closed for harvest for the remainder of its fishing year.

If we don't do a good job of that, then, post-season, if the landings exceed that annual catch limit, then, the following year, an overage adjustment is applied, and you will see that in the next slide, for a couple of years, and reducing the commercial ACL, the annual catch limit, by the amount of the overage and adjust the commercial ACT accordingly, the annual catch target.

Hopefully everyone can see this on their computers, and
hopefully the public can see it back on the large screens, and you can see, in 2012, there was an overage, even with a mid-year closure. In the more recent time, in 2018, there was a minor overage, even with the closure in October. In 2019, the season closed for the last month, with no overage, and then, in 2020, the commercial landings did not reach the ACL or ACT.

For July, I think Kelly has taken us through, Ms. O'Donnell has taken us through, some more recent landings for 2021, and I just pulled these from the website, and so I think she has some more recent information regarding where we are with 2021 landings.

If the council did want to consider this increase in the commercial trip limit for gray triggerfish, we are suggesting that this could be added to the framework action that is looking at modifications for the vermilion snapper bag limits and the gray triggerfish recreational fixed closed season. I would note that, currently, this is a $C$ priority on our action schedule, and we have had a lot of other very high-priority species and stocks that we've been trying to tackle, between cobia and red grouper, and those are both slated for final action.

As we learn more, in the next month, about gag and greater amberjack, we'll have to balance where some of those priorities are going to land, but, in talking to Mr. Hood, we were hoping that maybe we could bring something to the council in June, perhaps, on this, and decide to add it to this particular action, and so, Madam Chair, that concludes my report.

CHAIRMAN GUYAS: Thanks, Dr. Simmons. Any questions or ideas about a path forward here? Leann.

MS. BOSARGE: I am not sure about ideas, but I do remember, at a couple of different meetings, we did have some public testimony from the commercial guys about, hey, if we're going to land that, we need to look at this and see about increasing that limit on our side. I don't -- I am not sure what the options should be, as far as what you should increase it to, and that's not my wheelhouse, but hopefully we could get some public testimony on it.

I just wondered, and so, the document that you're talking about adding it to, is that going to slow anything down considerably, and does it need to be in its own document? Will that be a burden, or do you need a motion to add it? All sorts of things.

CHAIRMAN GUYAS: Go ahead, Dr. Simmons.

EXECUTIVE DIRECTOR SIMMONS: Thank you, Madam Chair. I mean, it's up to the council if they want to separate it and try to request it to be a higher priority. It is, and I think I forgot to mention, about a 45 percent increase in the current ACL from where we are now for the commercial sector, and so it's really up to the council, and we'll have to balance these priorities with the Chair and Vice Chair and see what we can do.

CHAIRMAN GUYAS: Susan.
MS. BOGGS: Thank you, Madam Chair. I wouldn't be opposed to adding it to the other document, but -- We say this all the time, that it seems like it should be a pretty easy document, if we put it in one by itself, and it should move through fairly quickly, so the commercial fishermen can start retaining the fish instead of releasing them. I would certainly take guidance from the staff, but $I$ would think it could just be in a standalone document and we get it through fairly quickly. Thank you.

## CHAIRMAN GUYAS: Carrie.

EXECUTIVE DIRECTOR SIMMONS: I understand where you're coming from, but I think we need the Regional Office staff to help us with the analysis, and so, I mean, I think the question is for those other two items for the vermilion bag limit, and fixed closed season, and we would also need their help with that, and so is it better to put it all in one or separate it, and, again, I think it depends on how quickly we want things to move, but, regardless, we're going to be relying on the Regional Office, and $I$ know they're down one staff member, regarding that type of analyst.

CHAIRMAN GUYAS: Go ahead, Susan.
MS. BOGGS: All right. I would like to make a motion then to add, and $I$ don't know how to exactly word it, but to add consideration of adjusting the commercial triggerfish trip limits to the Framework Action to modify Modifications to Vermilion Snapper Bag Limits and Gray Triggerfish Recreational Fixed Closed Season.

MR. GILL: Seconded.
CHAIRMAN GUYAS: All right. We've got a motion and a second, and we'll just get that on the board here. While staff is doing that, Mara, did you have something to add?

MS. MARA LEVY: Well, just, I mean, I assume what you want to do is add an action to adjust the gray triggerfish trip limits, right, and so I don't know if you want to change it to say that or we just know that.

MS. BOGGS: Well, I mean, I wasn't really, I guess, prepared to make a motion, and $I$ would certainly have help with it, but, yes, to add an action to the current framework action -- I mean, there's a lot of words there, and so, Bernie, you start it, and we'll finish it.

CHAIRMAN GUYAS: Bernie is on it, and so I think we've got to add an action to the current framework amendment to consider adjusting commercial triggerfish trip limits. I think we know, from the discussion, that the framework that we're talking about is this framework dealing with vermilion and the recreational triggerfish season. Okay.

MR. GILL: I think identification of what the current FA is needs to be in the motion, so that the motion can be standalone.

CHAIRMAN GUYAS: We're getting there, and so the framework is Modifications to Vermilion Snapper Bag Limits and Gray Triggerfish Recreational Fixed Closed Seasons. I picked the one with the longest title for you all. Okay.

Here is our motion to add an action to the current vermilion snapper bag limit and gray triggerfish recreational fixed closed season framework action to consider adjusting commercial gray triggerfish trip limits. I think this is clear what we're doing now, right? Is there any opposition to this motion? Seeing none, the motion carries.

Let's move on then to our next item, which is a presentation by Dr. Cody on the imputed 2020 landings for Gulf-managed species. I see Dr. Cody is at the table and ready to roll. Sorry. Hang on one sec. Leann.

MS. BOSARGE: So there was one other thing in our briefing book, the Gulf of Mexico Reef Fish Annual Catch Limit Landings, this one that goes through gag and red grouper commercially, and the other stuff did recreationally, and will we go through that when we get closer to red grouper and gag discussions, which is fine, and it's probably more valuable at that point anyway, but we haven't gone over the commercial landings for gag and red grouper in that first presentation on landings.

CHAIRMAN GUYAS: Let's take those up when we go to those
actions, and how about that, and so, I guess, Kelli or Andy or whoever from SERO is going to do that, and so just know that we're going to call on you for that. Okay. Go ahead, Dr. Cody.

## IMPUTED 2020 LANDINGS FOR GULF-MANAGED SPECIES

DR. RICHARD CODY: Thank you, Madam Chair. Basically, today, what $I$ will be presenting is a summary of the impacts of the imputation methods that we put in place for the 2020 MRIP estimates on a select few species, and these were requested by the council formally earlier on this year, and so we have gag, red grouper, red snapper, king mackerel, gray triggerfish, greater amberjack, and cobia included in these. What $I$ will try to do is present the information in terms of the impacts relative to the inclusion in the estimation process.

Just a couple of points that $I$ will try to make. In reference to the 2020 catch and effort estimates, there were relatively few impacts, if any, on the FES, the conduct of the FES, survey. That went on largely unimpeded by COVID, because of its nature, because of the fact that it's a mail survey and there is no need for contact. The APAIS, on the other hand, is where we see most of the impacts of COVID-19 on the conduct of the survey.

Really, the data gaps and imputation methods that we apply were variable across the states and fishing modes, but limited at the annual and regional levels, and so, by using the imputed data, we didn't see the extreme or unexpected results at the annual or regional level, and this is more variable, of course, at a higher level of resolution, like wave level and by mode, and for certain states, also.

What $I$ will do is $I$ will go over some of the data gaps, and you've seen some of these already, in an earlier presentation that I have given to the SSC and the council related to COVID19, and $I$ will go over the data imputation and estimation methods, briefly, and there is a reference for all of these materials, and we're updating our current manual to include more detailed documentation on the imputation methods for 2020 as well.

Then I will go over the catch and effort estimates for the recent time series, 2018 through 2020, and we will look at 2020 estimates, in particular with reference to with imputed records included and without imputed records.

As I mentioned, most of the data gaps for 2020 are -- They were in the APAIS survey itself, and so that's the source of our
catch and our catch rate information, but it also impacts the effort estimates as well, because there is supplemental information that's included in the APAIS that is used to make adjustments to the base effort estimates that we get from the FES, and those are in the adjustments for out-of-state angling effort, and, also, for the for-hire component, there is an adjustment that we use to look at on-frame and off-frame adjustments for new boats entering and leaving the fishery.

Most of the impacts, in general, were earlier in the year, in Wave 2 in particular, primarily April, and we did see some loss of sample in late March, as COVID began to ramp-up. Most states though I would say had resumed sampling towards the end of May, and we were in full, or close to full, production for the rest of the year.

There were some exceptions to that. Some states had different policies on social distancing, and the ability of samplers to do their job was impacted, and so Connecticut, New Jersey, and Virginia started up a little bit later, in July and August, and you will see this in a graph that we have later on, and then, as far as some other impacts, and these don't really impact the Southeast, but we had some impacts to our at-sea observer programs in the Northeast and the Mid-Atlantic, where samplers could not do at-sea observer trips throughout the end of the year, and so that did not resume in 2020.

Then, with the Southeast Science Center, there was a loss of sampling associated with the Southeast Regional Headboat Survey, but the validation component did continue, as well as QA visits, and, of course, the reporting by vessels continued as well.

This slide you've seen before in a previous presentation, and I will just draw your attention to the gray boxes, and you will see they are listed there between the numbers four and five on the vertical axis, which is April to May, and you will see that resumption of sampling, and this reflects where sampling was suspended, and so the gray areas reflect the data loss, or data gaps, in the APAIS survey.

You can see, for most states, there was a resumption of activity by the end of May, and certainly, from the start of June and onwards, the survey was back in production. You can see the three states that $I$ referred to earlier on of Connecticut, Virginia, and New Jersey, and those were later at resuming, and those are reflected there in the later resumption of their surveys.

That slide really reflected interviews, angler intercepts, but this next slide here that $I$ am showing shows the length information, and there was a concern, a valid concern, that this would be greatly impacted by COVID, and you can see, from this graph, that it's a bit more patchy than the last graph, and there are some gaps through the end of the year, and that's largely a result of, I think, hesitancy of some anglers to allow samplers to get close enough to them to measure their catch, and then, also, sampling protocols that were varied by state, in terms of what the sampler could do, per the guidance that was given by the states, and that's the length information that we get from the observed catch, once it's landed.

I won't spend too much time on this, but this is the weight information that we collect as well, and you can see a similar type of pattern there, but, largely, there is a fair amount of weight and length information that was collected through the end of the year, once sampling had resumed, and so that, I think, was the best-case scenario for us, and we really didn't expect that level of sampling throughout the end of the year.

CHAIRMAN GUYAS: Richard, we've got a question for you. Go ahead, Bob.

MR. GILL: Thank you, Madam Chair, and thank you, Dr. Cody. Would you explain the difference between the blank spots that are white and the gray spots that show no --

DR. CODY: White is -- There were no assignments scheduled during those periods, and so some states don't start the survey until later in the year, and they don't have a full year of survey, and so, in those states, you will see a white area. Then it depends, also, on the mode for the different states, and some states have different regions and modes that are represented here, and it's a little difficult, and they're not outlined, and they're not identified, on the graph, but $I$ can provide some additional information that will provide more resolution. What the black area really refers to is where we have loss of sampling, true loss of sampling.

CHAIRMAN GUYAS: One more question for you from Leann.
MS. BOSARGE: What months did you see the greatest impact in that 2020 MRIP year? What months did you see the greatest increase, or gap, for both the weight measurement and the length measurement?

DR. CODY: April was probably the greatest impact, I would say,
without exception, and there were a couple of states that continued into April a little bit, but, for the most part, most states had shut down sampling for April. Then there was a slow resumption in May, but most states were back online by the end of May.

MS. BOSARGE: Okay, and I say that just because those lengths and weights, as we saw with red grouper, that's what we use to convert numbers of fish to pounds of fish, right, for landings, for total landings, and so it's pretty important that that be pretty close to real life, and so I assume there's going to be a lot of imputation, or more imputation, than normal, right?

DR. CODY: Yes, more than normal, certainly.
MS. BOSARGE: So we probably need to take a look at that when we start to, I guess, use these numbers for whatever purpose it may be, assessment or otherwise, and maybe look at some other methodologies to kind of groundtruth what we're seeing.

CHAIRMAN GUYAS: Susan.
MS. BOGGS: Thank you, Madam Chair, and kind of a follow-up, Dr. Cody, to what Mr. Gill was just asking, and so $I$ was going to ask the same thing, and so the white spaces -- There was nothing scheduled, but, if you look at the -- Maybe I'm confused, but the first graph, the 2020 MRIP data gaps, that's where they actually intercepted and interviewed the people?

DR. CODY: That's correct.
MS. BOGGS: Then the other two graphs, and I am looking at Virginia, and so you have intercepts in Virginia, and are these people not doing the weight and the lengths as well, and the gaps don't match up, is what I'm asking.

DR. CODY: I think that's a difference in the safety protocols that were involved in some of the states. In Virginia, they resumed sampling, but they didn't -- As far as getting close enough to the angler to get at their catch, that was probably $i t$, and the safety protocols are different.

MS. BOGGS: Okay, and so that's my question. Are the same people doing the intercepts for the interview as well as the length and weight, and so my question being, if that's the case, then those should be gray, as opposed to blank, because they were there, but it's just the people didn't allow them to gather the lengths and weights.

DR. CODY: Well, keep in mind that this is based on an average. What you're seeing here is a heat map based on the average for the previous three years, and so, in some cases, there were samples in those cells, but, in some cases, there wasn't.

CHAIRMAN GUYAS: Richard, now I'm like really scratching my head, because, before COVID, we've got -- If we look at the graph on page 4, versus 5 and 6 , we've got a lot more white on lengths than weights, well before COVID shutdowns, and so what's going on? I mean, people have an assignment, and their assignment is to interview and --

DR. CODY: And get lengths and weights.
CHAIRMAN GUYAS: They're supposed to be, if they can, be getting lengths and weights, and so what's the story there?

DR. CODY: Yes, and I would agree. I would agree, but, in some cases, we don't get a lot of lengths and weights. It depends on the mode of fishing as well, and, in some cases, for instance, if the catch is largely released catch, then there's not going to be very much in the way of lengths and weights, and $I$ would say that, for the for-hire mode, we're far more successful in getting lengths and weights than we are at the private boat mode.

CHAIRMAN GUYAS: But why are they white squares instead of gray squares, because gray is a zero, right?

DR. CODY: That's based on the average for the previous three years, and so, if there was nothing in that cell for the previous three years, then that's what it is compared to.

CHAIRMAN GUYAS: Go ahead, Susan.
MS. BOGGS: Okay, and Martha is kind of on the same track that I am. It would seem to me, if I am assigned by DCNR to go out and do the interview and gather the weights and the lengths, it's the same people doing all of this, and so wouldn't it not be gray, because they were there, but it's just the person on the dock said, no, I don't want you to come weigh my fish, but yet they're still doing the interview, and it seems like it would track together.

DR. CODY: What we did was we took, independently of the intercept, and so you have weights, and you have lengths, and we just took that created the heat map from that, and so it doesn't
take into consideration that you have an assignment there.
If there is a color there, it means you did have an assignment, but, if there's no data to compare that happened in the previous three years, documenting lengths or weights, then it's not going to show up, and it's going to show up as white. If there were data in the previous three years, and none was collected this year, then it would show up as gray.

CHAIRMAN GUYAS: Ryan and then Leann.
MR. RINDONE: Thank you, Madam Chair. Dr. Cody, is there like a proportion of what has to be happening within that three-year period for a cell to be coded in a certain way, or is it, if sampling occurred in two out of the three years, is the cell coded differently than if it happened once or if it happened at all?

DR. CODY: It's an average, and so, if there's nothing in there, it would be an average of nothing, and so that's how it works.

MR. RINDONE: So if it's an average of nothing, and so, basically, the coding corresponds then to the average over the three years, and so I guess I'm just trying to understand the differentiation between what you described as being a true loss of sampling versus no sampling assignment for that state at that time, and I think that's where some of this confusion might be coming from.

DR. CODY: I mean, the only way $I$ can explain it is that, if there was something in the cell for the average, and we compare it, and it's either higher or lower or there's no sampling, and so, in that case, it would come up with a gray area. Really, all it is is this is just a heat map to show you where the sampling gaps were, and, when we scheduled assignments, and they weren't completed, that's where you would see the large gray areas, and so that's all this is really trying to do, and it's not a major analysis of it.

CHAIRMAN GUYAS: Leann.
MS. BOSARGE: I think my suggestion, to help us in the future, as we look at these, would be to have the raw data in a background document and not in a presentation. That's way too much data, but in the briefing book, because, the last time that we had a presentation, where we were trying to get into, well, what were these average weights and how many samples, and, when I went to the raw data, that's when I could understand it.

That's when $I$ could understand, all right, what did the raw data look like, and what did these averages or imputations, and where are those coming into play, and then $I$ think you really can see the picture a little better, and so $I$ would suggest that, as we have these presentations, we make that request as well and put it in the background information for the briefing book, that will actually break it down by state and by mode and by wave, and that's very helpful.

DR. CODY: We can certainly do that, but, I mean, this is really for illustration purposes, more than anything else, and the raw data itself is probably -- Without the programs to run it, it might not be too informative, but we can certainly do that.

The next slide is data imputation and estimation, and so we have -- As I mentioned, we had APAIS sampling suspension and gaps that varied by state, but these are known, and one of the things that we did was we worked with the commissions, both the Atlantic and the Gulf Commission, and the states, to try and track, as best we could, when the sampling was being conducted and when it wasn't.

We do know where the gaps are, and we used a simple imputation approach to fill those gaps, and so, basically, if there was a known data gap, such as April, we filled that with an average of 2018 to 2019 data, and so we used 2018 and 2019 data as a proxy for 2020 data, and we downweighted each of the years, since we're using two years, so that they are equally represented, and the method that we used as well was discussed with the consultants, with the MRIP consultants, and they were in agreement that it was an appropriate method, in that it was the least disruptive to the estimation methods, and it produced the most fidelity to the current methods, for comparison purposes.

Going to a more sophisticated approach would have meant more of a deviation from the current methodology and probably make the estimates a little less comparable than they currently would be.

We used standard two-month wave estimation, and we didn't produce two-month wave estimates during 2020, but we compiled these at the end of the year, and that's what was used to identify the data gaps and to pull the 2018 and 2019 data to fill those gaps.

As I mentioned, more complex methods were considered, such as modeling, and they were considered more resource intensive, and, as I said, there would be a larger deviation from the current
methodology, and, lastly, I will make a point that, for modeling methods as well, we would have had to use some auxiliary forms of data, and we did attempt to do this, early on in the year, and $I$ mentioned this in a previous presentation as well, where we tried to modify the APAIS questionnaire.

Going through the PRA approval process, we were not successful, and so the OMB Office of Information and Regulatory Affairs blocked those changes to the survey, and so we were unable to make changes to the survey that would have provided some auxiliary information.

The other thing that $I$ will point out as well, and $I$ pointed this out in an earlier presentation, is that we will revisit the 2020 estimates when the 2021 estimates become available. Note that, for this first round of imputation, we used the two most proximate years, of which one is 2018. With the revisit, we will use 2021 plus 2019, the two shoulder years, so they are more proximate to the 2020 year.

The presentation that $I$ have been showing you contains a number of different things, and I will have, on each slide, graphs that show annual landings for 2018 through 2020 for the seven species, and we'll start with one and progress through them. Then, underneath the landings, and underneath the releases portion, we'll have a comparison of estimates with and without imputation.

The first one is gag, and I apologize for the -- It's hard to see what's on these graphs, but the three states for the Gulf are represented, and the landings are represented for 2018, 2019, and 2020 in the top graph, and the graphs are represented with landings on top, and then, if you go below the hash line, you've got releases, and so it's the same type of information for both landings and released catch.

As you will see in the first one -- I mean, obviously, for gag, Florida is the major driver of the recreational component of the fishery, and you will see that there is an increase in landings that is estimated for 2020, but, if you look at the graph underneath that, you will see the landings estimated with and without imputed data included, and, with imputed data, there is very little change from if you don't include the imputed data.

We would contend that this makes it unlikely that the imputed data is the driver for the change in those estimates, and you will see a similar pattern for the released catch on the bottom, with the imputed estimates included and without being fairly
similar.

CHAIRMAN GUYAS: Hang on, Richard. Leann.
MS. BOSARGE: These graphs that you -- Are we still on the same slide, or did it move? I wanted to go back to whatever slide we were on, if we're not on that one now. These are in numbers of fish?

DR. CODY: Numbers of fish, yes.
MS. BOSARGE: Okay, and so you're giving us the differences here with the imputation, but, to me, it sounded like your biggest data gaps were not necessarily in numbers of fish, and your APAIS interviewers were able to get out there and do the interviews to count numbers of fish, but it seems like we had some pretty significant gaps in measuring the length of the fish and/or the weight of the fish, and that's what we're going to use to convert these numbers of fish to pounds landed, which is what we measure in, right, and that's our ACL, and that's our landings.

Do you have any information on how big those differences are, when you get into that sort of imputation, because I'm guessing the imputation on some of those waves is probably 100 percent on some species.

DR. CODY: Well, $I$ would say that the impact to a lot of the fisheries is fairly minimal, because it was earlier in the year for some of these reef fish species, and so that wave is only one wave of the year, and, obviously, you would like to get that data from that wave, if that's where the fish are measured, and you want to get that data as close to that wave as possible, but I think what the imputation comparison points out is that the data gaps in that wave had a relatively overall minimal impact on the amount of data that we collected for that fishery and the estimation process.

It doesn't tell us anything about length and weight differences at all, but we use our standard weight and length imputation process for that, and that didn't change, and that stayed exactly the same, and so there would be an influence of those 2018 and 2019 data if they were used in the weight imputations, and it's likely that there was some of that that happened.

MS. BOSARGE: So like on some waves, and I remember looking at red grouper, and I think I was looking at 2017 data, and we manage federal fisheries, right, and so, for that offshore
component, for for-hire and for private anglers, and so private anglers land a large portion of that, and so sometimes, for some waves, you would two intercepts that you got a weight sample from, right, and so, if COVID had an effect on how many weight samples you were able to get, and you're starting at a baseline of somewhere between two and fifteen, on average, sample weights that you're getting per wave, for something like red grouper for the offshore component of the private anglers, then that, to me, is going to have a significant impact when you start to convert these numbers of fish to pounds of fish by wave for that private angler component, that recreational component, and so that's what $I$ am trying to hammer down to.

Let's see what -- Really what our uncertainties are in this, and, for numbers of fish, I can see where you might not have had that big of an impact, but we have to convert that to pounds, to look at ACL monitoring and landings, and so I would like to know what kind of impacts we might be seeing there to understand how to interpret those landings if we use them for management.

DR. CODY: I mean, there is certainly a component of the 2018 and 2019 data that would be included in the imputation, and so that's a valid concern. I don't know how you get around it. I mean, obviously, the more information you have to help you with a decision would be beneficial, and so we'll try to get at that concern. This is red grouper, I think.

CHAIRMAN GUYAS: Hang on. We've got a list. Bob.
MR. GILL: Thank you, Madam Chair. Perhaps I should have known this already, Dr. Cody, but I noticed that the releases are almost an order of magnitude greater than the landings, and so that strikes to -- I grant you that selectivity is markedly different, but that strikes to discard mortality estimates being very high relative to landings, and so could you confirm that that scales are correct and that order of magnitude number is in fact correct as well?

DR. CODY: That's correct. The scales are correct on the graphs, but that's -- I don't think that's too unusual for many of the recreational species, that there is a very high component of released catch.

CHAIRMAN GUYAS: Dale.
MR. DALE DIAZ: Thank you, Dr. Cody, for your presentation. On the graphs that you have here, on the very top one, if you look all the way over to the right, it's got Mississippi, and then
it's got zero, and so these are in numbers of fish, and it's got zero, or no imputation, and then, with the red, there is nothing there, and then, if you go down to the third line, we've got the same situation, where there is zero with no imputation, and then there is a minus 97.4 fish, and so I'm just -- Is there an explanation for that? It's probably something simple, but I just don't work with this type of stuff.

DR. CODY: The zero just refers to the difference between the current year and the previous year, and so that just means that the catch is so small there that there's not really any real difference in it, percentage-wise. If you go down to -- Which graph are you referring to?

MR. DIAZ: On the third line down.
DR. CODY: The released catch?

MR. DIAZ: Yes, and so it's got --
DR. CODY: So there would have been a 97 percent difference, reduction, from the previous year. The zero just refers to there is no -- 2019 is not being compared to anything, and so there's a zero on that one, but, compared to 2020, there is a 97 percent reduction, and that generally reflects that the catch was small enough that it didn't take much for a big change to be reflected.

MR. DIAZ: Thank you, Dr. Cody.
CHAIRMAN GUYAS: Before you jump back in, let me just ask what sounds like a basic question, I know, but just to make sure that I understand this, but, when you're doing these imputations, what are you considering a data gap, given that there is blocks ahead of this where there were missing data or those red cells, and so like I guess what is your threshold for -- Like is it just a zero or a white cell, or how -- Can you give me a little bit more information here?

DR. CODY: If we didn't have any sampling that occurred, and say, for instance, in April, and we took the data from 2018 and 2019 and substituted it in there, into the different cells that are reflected in there, and so, in general, there would be almost 100 percent substitution for April for most states, and less so in some of the other states, or some of the other months.

CHAIRMAN GUYAS: Okay, and so I have another question then, and
so how -- The headboats didn't get started up again until when? Then how are you handling that, because $I$ know that was longer than just April and May, right, and so they were shut down for quite some time, and how is that being handled?

DR. CODY: Well, the headboats are handled in a separate survey, and it's not reflected here in our estimates. The charter boats, the charter fleet, is reflected, and so --

CHAIRMAN GUYAS: I guess then what is the plan for handing the headboat survey?

DR. CODY: What's that?
CHAIRMAN GUYAS: What is the plan, I guess, for handing the headboat survey?

DR. CODY: Well, that is handled separately, for stock assessment purposes, and so they provide their own estimates through the Southeast Science Center.

CHAIRMAN GUYAS: But there was a very large gap in which there was no data collected for the headboat survey, a larger gap of time, right?

DR. CODY: Yes, there is, but there is reporting that continued throughout it, and so the captains did continue to report. There is a loss of biological information, for sure.

CHAIRMAN GUYAS: So it would just be to use the logbooks to substitute for the headboat survey?

DR. CODY: Well, you would have to check with the Science Center on that they are doing.

CHAIRMAN GUYAS: Clay.
DR. CLAY PORCH: I mean, we do have the self-reported effort estimates, and, on top of that, we've been validating that and just checking, and that's where all that controversy came about of looking at cameras and seeing if people were actually going out in vessels and all that, but we are validating the effort. What we don't have is samples during that time period. We weren't able to do the dockside sampling.

CHAIRMAN GUYAS: Anybody else? Go ahead, Richard.
DR. CODY: Okay. I think we can probably move to the next
slide, and these slides are fairly similar, and this is red grouper, and so, if you look, again, Florida is the major driver of the red grouper fishery, and so it kind of dwarfs the other two states, and so it's pretty hard to see what's on those graphs, but we have landings on the top, and then we have the releases on the bottom, and, again, I will just point you to the estimates with and without imputed data included, and there is very little difference between the two, and this is largely because those fisheries started a little later than Wave 2, and the impact on the fishery was fairly minimal.

It's probably not necessary for me to go through all of these, but you can show the next set of graphs there, and this is red snapper, and so there is a sizeable component for each of the states reflected here, and what you will note is that, compared to 2018 and 2019, there is a reduction, with respect to 2019 for 2020, for Alabama and Florida, and I don't have the precision, or the variance estimates, included on this, and so it's showing up as a reduction, but there may be overlap there in the variance, but, if you note, underneath the landings for the with and without imputed data included, there is a slight drop with Florida, and, for Alabama, it's very similar whether you include imputed data or not. The same is basically reflected there in the released catch as well.

This is king mackerel, and king mackerel, again, there is a little bit more of a difference between the imputed, the with and without imputed estimates included, for florida at least, and there's a slight difference there. There is more of an impact in a couple of the waves for the imputed data being included for king mackerel, and so that might speak to Leann's concerns about perhaps the loss of some size data that may be overrepresented by one wave or another in the imputation process. If you look at the bottom there as well, it's a similar pattern for the released catch, but, for triggerfish --

CHAIRMAN GUYAS: We've got a hand, Richard. Andy.
MR. STRELCHECK: I guess just a question for the council, and I think he has explained, obviously, imputation, and, I mean, we can certainly go through all these in detail, if we would like, and I think the presentation is in the briefing book and fairly straightforward at this point, and so I'm wondering if we're good to kind of complete this presentation and move on, given we have so much other business today.

CHAIRMAN GUYAS: Leann.

MS. BOSARGE: Well, I am selfish, and I've got a question about red grouper, and maybe you can move on after that, but $I$ wanted to back up one slide, or a couple of slides, and just make sure I understand what that means, and so it would be Slide 13, if I could ask a question on that. Then, Andy, we can entertain your idea.

That top graph there, and I'm looking at the Florida piece of it, because it's a Florida-centric species, these red grouper, and so the blue bar is the MRIP final landings for 2018, and that had zero, and that's your baseline, right, $I$ guess, no imputation, and then 2019 MRIP final is the red bar, and it has some imputation.

DR. CODY: No. 2019 is just the decrease from 2018, and that's what that is showing, the first top graph.

MS. BOSARGE: Okay, and so these don't -- Is it the next graph that shows us the amount of the imputation?

DR. CODY: Yes, and the next graph shows you the differences with imputed versus not imputed data.

MS. BOSARGE: Okay, and so the last bar on the top graph is green, and it says 2020 MRIP with imputation, and we had to use -- In other words, we had to pull data from somewhere else to fill in the gaps, and so that was a COVID deal, and so I get that, and so that 49.7 percent there -- That means that landings were up by that much, and so then, when you go to that second graph, we only have a blue and a red bar, and so we don't have the -- How much imputation was in the green bar? That's what I am trying to get to.

DR. CODY: The green bar contains -- That's the imputed estimate for 2020. That's the actual estimate, and so, in the second set, what you're looking at, the red bar is really that green bar, and so you're looking at the impact, or the relative contribution, of imputed data to the estimate, the difference if you include it or if you don't include it, and so that's basically all it's doing, and what it shows you there is that there is -- If you didn't include imputed data, the estimate would probably be slightly higher. If you include imputed data, it's a little lower.

MS. BOSARGE: Okay, and so, eventually, you can get us this imputation and get us some charts like this that show us landings in pounds and the imputation that we're having to use there, since that's a lot of the samples that we're missing, are
the lengths and weights, which is what we use to convert from these numbers of fish on this graph to pounds, and eventually -We might be a little early for that, but we can get a presentation on that at some point?

DR. CODY: Yes, and, on the website too, we have a graphic that shows the relative contribution, whether it's weight or whether it's numbers of fish, and so you can get the information on how much the imputed data contributed to the estimate overall, and so that's available.

CHAIRMAN GUYAS: Okay, and so Andy suggested that maybe we fastforward this presentation a little bit, and so there's a bunch more catch estimates for individual species. Is there any heartburn, I guess, if we fast-forward through there, and, Richard, $I$ know you have effort information in this presentation.

DR. CODY: Yes, and $I$ have a little bit of effort information that $I$ can get to very quickly, but, if people have any additional questions on these graphs, I would be happy to handle those outside.

CHAIRMAN GUYAS: Okay. Thanks. So do we want to walk through the effort information? Yes. Okay, and so let's go ahead and -- I think that takes us to Slide 24 or 25 , and where do you want to start, Richard?

DR. CODY: The effort estimates are presented similarly to what I just showed you, and you have 2018 to 2020, and it's annual effort by region and state, and all modes are combined, and so you have both modes included together, and then $I$ have a presentation, or $I$ have a slide, showing the charter and headboat modes broken out.

It's showing the impacts of imputed data on the overall estimates of effort, and, as you recall, there is an impact to the effort estimates from the catch information supplied by the APAIS.

This shows the three states in the Gulf, again, and it shows 2018 through 2020, and you can see, for at least Florida at least, there is an increase in the effort estimates for 2020 relative to 2019, but 2018 is a similar level of effort.

If we look at this information by wave, what this is illustrating here, really, is that the effort level for the area waves was probably down compared to -- It was down compared to
earlier years, for Wave 2 anyway at least, and it seems like some of that effort was displaced to later in the year, to Wave 5, where you see a fairly large increase in overall effort for the Gulf.

This is the Gulf charter effort, and what it shows here is 2018 through 2020, again, and you can see there is a slight reduction in overall effort for the charter fleet in the Gulf for 2020 versus 2019, but they are fairly similar to what estimated for last year, in previous years.

Then this is just the similar graph that $I$ showed with imputed versus not imputed data included, and so you can see that there is a relative small impact of the imputed data on the overall estimate, and it led to an increase, in the case of Florida, a slight increase, but, for the others, it's fairly minimal. I think that's it for slides.

CHAIRMAN GUYAS: All right. Thanks, Richard. Are there any other questions about this presentation? Leann.

MS. BOSARGE: Just to make sure $I^{\prime} m$ on the same page, you said that the survey, the effort survey, during COVID, that was pretty much normal, because it's a paper mailout thing, and so it went out and came back in, but $I$ see some imputation here, and do we always have imputation, or was that imputation due to some little bit of COVID issues or what?

DR. CODY: Recall that $I$ mentioned the APAIS does contribute to the overall effort estimate, and so we get corrections for offframe effort from the APAIS survey, and so, in the case of the private boat and shore mode, those would be anglers from out of state, and so we get that information, the proportion of anglers that are interviewed, from the APAIS survey, and so that's how we correct for the fact that those are not included in the mailout survey. We only ask them about fishing in their state.

Then, for the charter mode, we have a correction that we do for off-frame effort, in terms of the vessels that are on our list, and so, as vessels are added, we need to correct the list for that.

MS. BOSARGE: Okay. Thank you, and I just also wanted to thank you for Slide 24. It's something that I often ask about, with the PSEs around the MRIP-FES, and you put that in the presentation, and I really appreciate that, so that we could see it. Thank you.

## CHAIRMAN GUYAS: Kevin.

MR. ANSON: I was at least one, if not the only one, who asked for this presentation at the last meeting, and so, Richard, I appreciate you and other NOAA staff that were included in gathering all the data, and so $I$ do appreciate it.

DR. CODY: Thank you, Kevin, and we're continuing to look at things as well, and so there may be more information that we're able to add to this, and I think, as we get closer to the end of the year, when we start looking at 2021 estimates, I think we'll continue to try and add indicators, to the queries at least, to help people with the interpretation.

CHAIRMAN GUYAS: All right. Thanks, Dr. Cody. Dale.
MR. DIAZ: Thank you, Madam Chair. Thank you, Dr. Cody. Bernie, can you go to Slide 4, please? I want to tell you what my take-away is on this presentation, and I don't want to take up a lot of time, but 2020 was a very abnormal year, and, if you call can remember, and go back to March of 2020, you couldn't get a haircut, and you couldn't go to the gym, and it was hard to go to the store.

A lot of businesses were closed down, and, I mean, there was a lot of fear out there, and a lot of people's livelihoods were disrupted, but our state people went back to work, and I hope that the state directors at this table goes back to your staffs that handle this MRIP data, and Louisiana and Texas, which their data programs do, and tell them this Gulf of Mexico Fishery Management Council recognizes and appreciates it.

I think they're essential workers, and especially the Southeast. I think all of the states should be commended, but, if you look at the graph on page 4, there is a lot of green in there, and there's a lot of the yellow color, and, I mean, that's where folks were out there actively trying to get these surveys, and so, anyway, I am proud of our state people. Thank you, Madam Chair.

## FINAL ACTION: DRAFT FRAMEWORK ACTION: MODIFICATION OF GULF OF MEXICO RED GROUPER CATCH LIMITS

CHAIRMAN GUYAS: Thanks, Dale. All right, and so let's move on then to Item $V$ on our agenda, which is the red grouper catch limits draft final action, or draft framework action. Excuse me. The first item we have on here is going through the public comments received, and also, Leann, I know you wanted to look at
the commercial landings table. Maybe we can do that once we get into the document. Bob. Sorry. I didn't see your hand.

MR. GILL: No problem. Thank you, Madam Chair. This document is predicated on approval of Amendment 53, and so $I$ would like to ask, I guess Andy, for an update on that timeline, and not that I expect a problem, but so that we're updated and that what we're considering is consistent with where we are at the moment relative to 53.

MR. STRELCHECK: Thanks, Bob. Right now, it's still under review with the Fisheries Service, and we haven't moved forward yet with a proposed rule, but we're working toward that, and so, at this point, it hasn't cleared my office or General Counsel.

MR. GILL: A follow-up, and so I'm not sure what to ask here. Does that suggest, from the agency's position, that they do not see any interference with 53 relative to the document that we're about to discuss?

MR. STRELCHECK: I am not sure what you mean by interference, but, no, we are proceeding with our normal rulemaking process and working to, obviously, publish the proposed rule as quickly as possible.

CHAIRMAN GUYAS: Let me see if I can help, Bob. I think, when we've talked about this in the past, the idea was that Andy's office, obviously, has to -- They will do what they're going to do with 53, and then this action would come behind it and modify the quotas accordingly, right, and so, like in a perfect world, I feel like they could do those things like one day after another, and, on Monday, we do 53, and then, on Tuesday, we implement the framework, but that's beyond our control, and so we're looking at Andy on that one.

MR. GILL: Thank you, Madam Chair, and so that's my understanding, and $I$ was just trying to see if there was any update and any hiccup on that, and I guess the answer is who knows?

MR. STRELCHECK: Well, if you're asking whether we're going to approve it or not, we're not at that point. The framework action, obviously, is predicated on Amendment 53 being implemented, right, and so that is moving ahead before the framework action at this point, ever so slightly.

CHAIRMAN GUYAS: Okay. That's probably as good as we're going to do on that one, it sounds like. All right, and so $I$ guess
our first item under here is the public comment, and it sounds like Emily is going to go through those, if you're on the line.

MS. EMILY MUEHLSTEIN: I sure am. Thank you for the opportunity. We only received three comments on this amendment, and we did have -- Since this was not a full-fledged amendment, we produced a public hearing video, and we got 160 views on that video, and so people were interested, but they didn't respond as such.

In the comments that we did receive, we heard support for Alternative 2. We heard that it's the only alternative that is consistent with Amendment 53, and we also heard mention that the 59.3 percent commercial and 40.7 percent recreational allocation is not equitable, because the recreational sector is huge and should not be closed while the commercial sector remains open, and that's it.

CHAIRMAN GUYAS: Any questions for Emily? All right. Thanks, Emily. I think next we'll go to Dr. Freeman, and I totally blew through the action guide, but I think our charge, or decision, in front of us is whether we want to recommend that the council goes final on this document, but, Dr. Freeman, if there's anything you want to add to that, please do. Otherwise, take it away.

DR. MATT FREEMAN: Thank you, Madam Chair. I think you summarized what was in the action guide pretty accurately, and so I will take you through the presentation at this point. As a reminder for the committee, the Science Center conducted an interim analysis for Gulf red grouper and presented this to the SSC at its August 2021 meeting.

The interim analysis was based on OFL that included an adjustment to the recreational landings in weight projected by the SEDAR 61 assessment model.

This is some of the discussion that took place just a few moments ago that this framework is contingent upon approval of Amendment 53. The council transmitted the document and the related materials in September. The analyses conducted by the Science Center are reliant upon the new sector allocations that would be in place in Amendment 53.

At its August 2021 meeting, the SSC accepted the new mean weight estimation methodology for recreationally-caught red grouper, and they also accepted the updated methodology and interim analysis results for red grouper. The SSC then recommended an

OFL of 5.99 million pounds gutted weight, as well as an $A B C$ of 4.96 million pounds gutted weight.

As a reminder the purpose of this framework action is to modify the OFL, ABC, ACLs, and ACTs for Gulf red grouper based on the results of the new stock analysis for Gulf red grouper. The need is to revise OFL, ABC, ACLs, and ACTs consistent with the best available science for Gulf red grouper and to continue to achieve optimum yield consistent with the requirements of the Magnuson-Stevens Act.

We have simply one action in front of the committee, and the committee did select a preferred in August. Alternative 1, which was no action, would retain the red grouper OFL, ABC, ACLs, and ACTs that are established in Amendment 53, and I will show that table in the next slide. The commercial and recreational sector allocations are, respectively, 59.3 percent and 40.7 percent. The commercial buffer between the ACL and ACT is 5 percent, while the recreational buffer is 9 percent.

The council's current preferred alternative is to modify the OFL, ABC, ACLs, and ACTs based on the recommendation of the SSC, as determined from the 2021 red grouper stock analyses, and so we can go ahead and look at the next slide with the table of those values, and, as discussed in August, the values under Preferred Alternative 2 for OFL, ABC, ACLs, and ACTs are all an increase from Alternative 1, and those values are in millions of pounds gutted weight.

As a reminder, the $A B C$ was based on the three-year moving average relative to the OFL, and the SSC chose to use the threeyear moving index average, because it was slightly more conservative in its value and thought to be representative of recent population trends than the five-year index average, and because of uncertainty regarding the impacts of the 2021 red tide event in Florida. Madam Chair, I will stop there, and that's the end of the presentation, and see if there are any questions or comments.

CHAIRMAN GUYAS: Thanks, Dr. Freeman. Are there any questions? We have a preferred here. Bob.

MR. GILL: I have a question on the document and not on the presentation. Is that appropriate at this time?

CHAIRMAN GUYAS: I think so, yes.
MR. GILL: Thank you, Madam Chair, and so I am looking at Figure
1.1.1 on page 3 of the document, and it shows, in the 1989 to 1990 timeframe, effectively a doubling of the landings, and that seems rather remarkable. As far as I know, there was no regulatory change, and so $I$ guess one question would be for Dr. Nance, and did the SSC discuss this doubling of recreational landings, as depicted in that figure, and have any comment, and I guess, if not, I would ask Dr. Porch if there's any thoughts that he might proffer on this as well. Nothing from Dr. Nance. Dr. Porch?

CHAIRMAN GUYAS: Clay, if you need a minute, John Froeschke has got his hand up. John.

DR. FROESCHKE: Bob, are you talking about Figure 1.1, the average size figure? Is that the one you're talking about?

MR. GILL: I am talking about 1.1.1 on page 3, where it compares the mean weight.

DR. FROESCHKE: I suspect those early years were probably not well estimated. That's probably the issue.

CHAIRMAN GUYAS: Andy.
MR. STRELCHECK: I would want to confirm this, but $I$ believe that's when the size limit was imposed for red grouper in 1990, the twenty-inch size limit, which is likely the jump in the average weight.

CHAIRMAN GUYAS: Thanks. That's helpful. Anything else, Bob? All good? Okay. Are there other questions for Dr. Freeman? We have codified text too, but we did want to go back to the IFQ landings, right, and so maybe this is the time to do that, before we go through codified text and make any motions, and so I don't know who from SERO wanted to briefly discuss that, and, Leann, I don't know if you have any specific questions that you wanted to get at with that, or if you just wanted to look at it.

MS. BOSARGE: No, and I just wanted to look at it. I mean, our landings have been down, both commercially and recreationally, in that species, in that fishery, and so, to me, as we're changing quotas and catch level recommendations, it would behoove us all to kind of see how we're doing on that, and I think it's going to line up with what we're seeing in this document, but, when we get those presentations, and I think it was Kelli that gives them to us, typically an IFQ species, she only shows us a graph of the recreational landings for that species, and so, if we actually want to see the full picture of
the fishery, we have to go to this other document that we have, and we just didn't go through that one.

MS. O'DONNELL: Madam Chair, I am available to go over those, if you would like me to.

CHAIRMAN GUYAS: Let's just go ahead and do that, real quickly, at least for red grouper and for gag, right, since we're going to do gag later. Go ahead, Kelli.

MS. O'DONNELL: I think we had discussed, at the June, or maybe the August, meeting that we were just providing these tables because it was asked to provide the actual poundage amount at a certain date, because it was here for the states to use this as a reference to look back on, but we had also mentioned that the IFQ landings -- You can go to the website at any time to see a real-time landings report, and so we were kind of getting away from actually presenting the IFQ landings, but, if you would like to have us put those into the actual figures, we could do that as well, and so, basically, we are looking to address a comparison from October 13 of where gag, red grouper, and red snapper commercial landings are to what the end of year for 2020 landings were in the table below that.

You can see that, for gag, we're still a little bit lower. For red grouper, we're just under where we were at the end of last year, and, for red snapper, we're still a little bit under as well, and sometimes the annual reports for the $I F Q$ species that are released every year could probably give a better historical look at the species, but, again, like I said, if you did want us to put these species into the actual figures, so you could see where they were, we could do that as well.

CHAIRMAN GUYAS: Thanks, Kelli. I was just thinking that might be helpful. One of the things that $I$ was thinking about, $I$ think maybe at the June meeting, when we took up the red grouper amendment, is we were hearing a lot that landings were coming in at a faster rate than they had in past years, and it would just be interesting to kind of see the rate throughout the year and kind of where we are. I mean, obviously, we're at 77.6 percent as of the 13th, but it just would be interesting, to me, and I would have to go back and look at our last meeting and what the percentage was, but my read is maybe the catch rate has slowed down a little bit as we've gotten later in the year, and I'm just curious. Leann.

MS. BOSARGE: Kelli, your suggestion about adding the commercial landings for red grouper, gag, and red snapper to your first
document that you give us, with the charts and graphs, I think that would be extremely helpful, because you actually give a longer time series for data there than what we get here, and it's just very helpful, for me, to see it on a graph, and so I still like this document we're looking at now, and don't get rid of it, but if you could just add those species, the commercial landings for those species, to your other document with the graph, that would be great. Thank you so much.

MS. O'DONNELL: Okay. Will do.
CHAIRMAN GUYAS: Any other questions for Kelli? All right. Thanks. Let's go back to $I$ guess the document itself, or maybe we should go to the codified text next, unless there is other questions about the document. Mara, do you want to walk us through that?

MS. LEVY: Sure. It's pretty straightforward, and it's a lot easier than yesterday's, and it's essentially just putting in the numbers from the preferred alternatives in the appropriate places in the quota section and the ACL/AM section. You can scroll down and look where those numbers are in there, but that's all it's changing, is the actual catch limits and catch targets.

CHAIRMAN GUYAS: Okay. Questions on the codified text? Seeing none, we have a preferred alternative already chosen in this document, based on the landings we just looked at, and this action would increase the commercial quota by a little bit, and so give them a little bit of breathing room, hopefully, if they keep catching at their current rate, and so I think we're at the point now if the committee would like to offer a motion to recommend that the council approves this at Full Council. I would be willing to accept that at this time and maybe suggest that we do that. Anyone? Everyone is on the committee, everyone at this table. Bob.

MR. GILL: Madam Chair, I will take a fling at it, unprepared as I am. I move that we recommend to send the Preferred Alternative 2 to Full Council and further transmittal to the Secretary for approval.

CHAIRMAN GUYAS: Staff is helping you out here, and they've got the language on the board. Susan, did you have a question? Go ahead.

MS. BOGGS: I do, and so I'm looking at the codified text, and I always thought, when we dealt with recreational fisheries, that
we dealt with whole weight, but, here, it's talking about the recreational $A C L$ for red grouper in gutted weight, and that seems inconsistent, if I'm not mistaken, to what we've done in the past.

CHAIRMAN GUYAS: Anyone from the NMFS side of the table want to talk about that? John.

DR. FROESCHKE: The ACL for red grouper is specified in gutted weight, and they take the recreational data that is collected in whole weight and apply a conversion factor.

CHAIRMAN GUYAS: Thanks, John. Let's go back to the motion. Bob, your motion is to recommend approval of Framework Action: Modification of Gulf of Mexico Red Grouper Catch Limits and that it be forwarded to the Secretary of Commerce for review and implementation and deem the codified text as necessary and appropriate, giving staff editorial license to make the necessary changes in the document. The Council Chair is given the authority to deem any changes to the codified text as necessary and appropriate. We need a second for this motion. It's seconded by Troy Williamson. Any discussion? Is there any opposition to this motion? Seeing none, the motion carries.

Okay. Cool. We are clawing our way, sort of, to being closer to back on schedule. We've got about twenty minutes until our scheduled lunch break. Do we think we can knock out maybe Dr. Nance's presentation on amberjack in twenty minutes? Okay. Andy.

MR. STRELCHECK: Just real quick, before we leave red grouper, I just wanted to remind the council that we have, obviously, Amendment 53 under review, and, if that proceeds forward, we would hold back red grouper quota for the commercial sector at the start of 2022, with, obviously, then this framework action that you just voted up, and assuming the council votes it up later in the week to follow that, that would then increase the quota to the commercial sector later in the year, and so $I$ just wanted to make sure that you understood kind of the process going forward with regard to the holdback in the quota increase.

CHAIRMAN GUYAS: Thanks, Andy. Leann.
MS. BOSARGE: Since he brought up 53, I just -- That Slide 24 in Dr. Cody's presentation that we skipped over, it finally gives us something that $I$ have been asking for, and $I$ know that 53 is behind us, but it's something that $I$ think we have to think about moving forward when we look at the changes to the
recreational data, and so the PSEs, which describes error, right, in a particular survey or dataset, and so, for red grouper in particular, it's 24.9 percent, and so call it 25 percent.

That is for whole fish, and that's not -- That doesn't include, I assume, any PSE calculations that may involve converting from whole fish to pounds of fish landed, right, and so that's just whole fish -- Numbers of fish, I mean, landed, and so I assume that would probably be higher when you looked at it from a pounds perspective, and so the old MRIP -- My understanding is, for MRIP-CHTS, that was a slightly lower number, that this number maybe actually went up some as we moved to FES, but, regardless of whether it went up or down, it is a much higher number, or it is a higher number, than what we associate with commercial landings.

They are known with somewhat more certainty, right, and we don't have that high of an error, and there is some error still, and don't get me wrong, but -- So that was a factor that $I$ had tried to illustrate, but, without the numbers in front of us, you really could not take that into account when you looked at historical landings, and you're using those as that is the gospel, even though there is a significant amount of error that is surrounding some of those figures, and that should affect how you interpret them and how you use them when you go to look at allocations and changing those allocations and the credence that you give to each dataset, and maybe the leniency that you give, in some circumstances, but we weren't presented with that.

We are now, and it's after the fact, but I'm glad that we at least have it, so that, going forward, when we're looking at some of these things, we can take that into account, because he did give it for all the species he presented today, and so thank you for that.

CHAIRMAN GUYAS: All right. Anything else before we move on to amberjack? Ryan, do you want to tee us up on amberjack and the action guide for this one, before Dr. Nance presents?

## PRESENTATION ON SEDAR 70: GREATER AMBERJACK STOCK ASSESSMENT REPORT

MR. RINDONE: Sure. Dr. Nance is going to summarize the SSC's discussions about the revised projections for SEDAR 70, which the SSC reviewed in January of 2021 , and there is a revision to the method by which the projections are done for the stock assessments, and that resulted in some changes in the way that
the results were interpreted for SEDAR 70.
In January of 2021, the SSC had certified that the greater amberjack stock was overfished and experiencing overfishing, as of the end of the 2018 fishing season, and SEDAR 70, like most of our recent assessments, used the updated recreational catch and effort information from MRIP-FES, and so the SSC got a first look at the new projections method in August of 2021, but, due to changes in how the projections are associated with the model and the resulting change in stock status that can come with how the projections are parameterized, the SSC wanted some more information, and so they had the Science Center bring it back to them at their September 2021 meeting, and they will go through a final review of that information, based on the council's preferred allocation scenarios, at their November meeting. Madam Chair.

CHAIRMAN GUYAS: All right. Thanks, Ryan. Dr. Nance.
DR. JIM NANCE: Thank you, Madam Chair. I appreciate being able to be here today. Let's bring up Slide Number 4, and then we can go ahead and go to the next slide, which is Number 5. In our meeting a few weeks ago, Dr. Katie Siegfried from the Southeast Fisheries Science Center presented a decision tree for determining projection settings.

Greater amberjack was used to demonstrate the new statistical code, and what this code does is it supplements the Stock Synthesis forecasting capabilities, and it also allows consideration for differing allocation scenarios.

As we know, projections require several decisions to be made, and these include the years used for averaging fishing mortality, selectivity, and recruitment, retention parameters, treatment of interim landings, and sector allocation ratios, if applicable.

Dr. Nathan Vaughan from Vaughan Analytics presented a new $R$ statistical code for determining yield projections for stocks with sector allocations. Several assumptions are critical to forecasting for greater amberjack, such as future recruitment defines productivity and variability, fleet selection and retention functions, fishing sector allocations, and benchmark targets.

Fishing to SSB 30 percent SPR under different recruitment scenarios for greater amberjack results in different estimates of forecasted recruitment, SPR, and allowable future fishing
mortality.
A time period for informed recruitment is necessary for projections. This can be problematic if recruitment varies from historical recruitment, if recent recruitment varies from historical recruitment. It could infer a variety of stock states, such as overfishing or a regime shift. As you see in the graph there, the long-term average from 1970 through 2018 is higher than the recent average of 2009 through 2018.

Recruitment, in millions of fish, varies based on the time series selected and used. A more recent ten-year average, which is 2009 through 2018, the stock is less productive than in the past, and recruitment is estimated at 1,650 million fish. If you use the long-term average of 1970 through 2018, recruitment is estimated at 2,805 million fish. If you use just the datarich time period, which is 1984 through 2018, the recruitment is estimated at 2,156 million fish.

You can use different -- Depending on what you use for selecting recruitment, you get some different recruitment scenarios. There is high uncertainty in annual recruitment estimates pre1984 and 2016 through 2018. It's inappropriate to assume a fixed level of recruitment from a longer-term average. It may be too optimistic or too pessimistic, depending on the data in the short term.

For greater amberjack, this may mean a lower equilibrium yield must be accepted in the short-term. It best reflects the current state of nature, low recruitment, and the SSC will continually reevaluate recruitment through time, as we look at the data. The SSC noted that using this approach with a stock that may be experiencing a regime shift presents a special case.

We had a long discussion on this, going back and forth, and we considered that you could use a long-term series to inform OFL and then use a short-term, or recent years, of forecasting ABC, if it was felt that the real recruitment was at the long-term average, or the real recruitment was the short-term average, but it gives different things. However, if you did that scenario, the OFL would be a lot higher than the ABC, and we had a long discussion on that topic.

The SSC provided input on how to set up projections for greater amberjack, specifically the treatment of recruitment in the future. The SSC was cautious about assuming optimistic recruitment, in other words using the long-term average. The SSC specified its preferred projection settings for SEDAR 70.

The SSC did not want to set overly optimistic catch advice based on possibly implausible high average recruitment, in other words using that long-term average.

We felt that the long-term recruitment may represent a rebuilding goal and setting $A B C$ at a more recent recruitment level better reflects contemporary stock and fishery dynamics. Ultimately, the SSC decided to use the recruitment period from 2009 to 2018 to inform the OFL projections. The SSC maintains that setting the $A B C$ equivalent to 75 percent of $\operatorname{SSB} \operatorname{SPR} 30$, as was done when the SSC last reviewed the greater amberjack catch limits, following its initial review of SEDAR 70 in January.

OFL and ABC projections, based on the sector allocation options required by the council, was compared. ABC projections performed to rebuild the stock under each scenario by 2027. Generally, if you look at each of those different scenarios, as additional fish are allocated to the recreational sector, the overall predicted yields are reduced. Combined with reduced recruitment and stock size, this is expected to result in lower long-term yields.

The SSB for greater amberjack has oscillated, but remains generally consistent since about the 1990s. Defining conditions of a regime shift is difficult. Changing assumptions about recruitment affects decisions regarding how to best define ABC.

The SSC thought it most appropriate to continue using the current MSY proxy, which is $F$ SPR 30, while also using the current SPR curve. The SSC recognizes the yield reductions necessary for greater amberjack and thought that careful consideration would be needed in determining future management of catch and effort.

The motions from our meeting, the first motion was to continue with the 30 percent $S P R$ reference point rebuilding projections using the spawner curve recruitments and ABC based on the lower recruitment scenario (2009 through 2018) for greater amberjack. The motion carried fourteen to eight with three abstentions.

Our next motion was the SSC determined that the SEDAR 70 operational assessment of Gulf of Mexico greater amberjack represents the best scientific information available and, based on assessment results, as of 2018 , the stock is undergoing overfishing and is overfished. The motion carried seventeen to five with three abstentions. That completes my report. Thank you.

CHAIRMAN GUYAS: Thanks, Dr. Nance. That was a good summary. Andy.

MR. STRELCHECK: Thanks, Dr. Nance, for the presentation. I am curious with the motions, and I didn't have a chance to listen in to the SSC meeting, and so the first motion was fairly divided in terms of votes, fourteen to eight, and is the eight dissenting votes that didn't support this largely based on the recruitment scenario considered?

DR. NANCE: It was mainly based on the differences in the things you could pick. Some felt that a longer-term average would be a better indication, and a lot of us felt like a shorter-term average would be our best indication, and so we had a long discussion on it, and even the topic where we had setting OFL using the longer-term recruitment and $A B C$ using the shorter-term recruitment, but we felt like OFL and $A B C$ needed to use the same recruitment scenario, and so that's where we went with that, but there was considerable discussion on which recruitment scenario to use. A lot of us felt like could we rebuild to that higher level, or should we rebuild to that lower, using that for the shorter-term and seeing where we go with that.

CHAIRMAN GUYAS: Bob Gill.
MR. GILL: Thank you, Madam Chair. I guess this question is for Ryan, and I would like to clarify where we are going forward, and so, if $I$ understand it correctly, the science Center is rerunning projections, and the SSC will get those at the November meeting and make determinations, as a result, for OFL and ABC, and we'll get those at the January meeting, for consideration of moving forward, and does that accurately describe what we're looking at?

MR. RINDONE: Generally, yes, Mr. Gill, and so, once we get the information from the Science Center, and the SSC makes that catch limit recommendation, we expect that to come back to you guys at your January meeting, and that will include all the data that are necessary for providing that management advice, including all the management benchmarks and everything as modified by the different allocation scenarios that are selected.

Similar to what was done with red grouper, an option that the SSC has is to say that, depending on the allocation scenario you decide to move forward with, these are the circumstances that relate that that allocation scenario, certifying that -Depending on that allocation scenario, that the math has been
done correctly, to briefly state it anyway.
CHAIRMAN GUYAS: Are there any questions of Dr. Nance or about where we are with amberjack? Tom.

DR. TOM FRAZER: When the SSC was talking about, or considering, the time periods, I guess do they take into account the current structure of the stock, and, I mean, with amberjack, typically, they're a fairly long-lived fish, but, right now, my look at the data suggests that most of those fish are younger than ten years old, but $I$ don't know that for sure, and I'm just wondering if they had this discussion.

DR. NANCE: I can't remember discussing age-specific for them. I know that we discussed that, for some of our indices, they may be more towards the eastern Gulf and not the western Gulf, and so we may not have a true picture of the entire stock that we're looking at. We did have some discussions on that.

DR. FRAZER: Okay. I appreciate that, and so I will follow-up with you, Jim, and get some specifics.

CHAIRMAN GUYAS: Leann.
MS. BOSARGE: I was looking at a slide that was from the presentation that was in the SSC meeting, and it's Slide 7 that Dr. Siegfried gave to the SSC, and it shows the two time periods of like historic recruits and then recent recruits, and the question at the bottom says should we use historic recruits, which is essentially going all the way back to, I guess, 1930ish, it looks like, present to 1930-ish, or should we use recent recruits with high uncertainty, and it looks like this uncertainty starts, and the recent recruits starts, in the early 1980s, and so, essentially, this -- I have no idea if these two things are related, but the FES, the back-calibrated FES numbers, and they go back to about the early 1980s. Are what we're seeing here --

DR. NANCE: Which graph are you -- Are you talking about the graph in my presentation, Leann?

MS. BOSARGE: No, and it's from Katie Siegfried's presentation that she gave to you all, the SSC Slide 7 from the SSC meeting. If $I$ go back, I can give you the name of it, but then $I$ will have to get back to the thing, and let's see. It would be Letter B, Presentation, Discussion of MSY Proxy and Projections.

CHAIRMAN GUYAS: You said that was from September, Leann, or

November?
MS. BOSARGE: The last SSC meeting. The question is this, and we had this kind of discussion, theoretically, when we were talking about some other species, probably one of the red ones, about, as we get these new FES numbers, and we plug them into these assessments, is it going to show us that, historically, the stock was larger than what we thought it was, and maybe there has been some fishing down of that stock, but is it also going to change our impression of the productivity of the stock, and therefore lead us to believe that the stock is slightly less productive than what we once thought it was as well, and that was a discussion on a different species, but is that essentially the debate that you all were having here for amberjack as well?

DR. NANCE: That was one of the debates we were having, yes. If we have that longer-term average, and I don't think we go back to 1930, and I can't remember seeing data, and $I$ know that it was back -- On my graph, it's 1970, and we certainly have a period of, if you look at that graph, pretty high variability in there, but you need to have -- From that standpoint, try to determine if that average is carrying through through a longer period of time. You have what was termed a -- This would be -I think 1970 through 2018 would be what we considered the datarich period. Maybe that's what you're talking about, Leann.

There is one -- What we looked at was the long-term average of 1970 through 2018, using that, and we could use that to estimate recruitment. If you use what was termed the data-rich period, and, in other words, what we felt very comfortable about having good data, and we didn't have to go back to 1970 and that type of thing, and that was 1984 to 2018, and we have low variability there in the dataset, or use the most recent years, where we've seen a decrease in recruitment, and that was 2009 through 2018.

We felt comfortable using that, and that's the most recent time period, and we felt comfortable, and we're there right now with recruitment, and so we're using that to set the OFL and ABC using the years 2009 to 2018, but the discussion was which one was the most appropriate to use for recruitment. That's why we had a little bit of -- For that first motion, fourteen to eight, and that was some wanted the longer-term and some wanted the shorter-term and that type of thing.

CHAIRMAN GUYAS: Clay, go ahead.
DR. PORCH: I just want to be clear here, and I believe what the SSC decided to do was to use the spawner-recruit relationship,
which, of course, is fitted effectively to the whole time series, to set the benchmarks, and so the stock status is going to be based on that, but, for the near-term assumption of what recruitment will be in the very near future, which is what the $A B C$ and the OFL is based on, they assumed that it would be equal to that lower period, the data-rich period.

DR. NANCE: Thank you, Dr. Porch, for that clarification.
CHAIRMAN GUYAS: Andy.
MR. STRELCHECK: Maybe, to put it a little bit different, we've been struggling with kind of similar issues in the South Atlantic, but, if you assume the longer-term average recruitment, and set your catch levels accordingly, and that's not realized, then, potentially, you're setting yourself up for failure, in terms of rebuilding and allowing for continued overfishing.

If you, obviously, set it based on a shorter-term, lower-average recruitment, and you end up getting higher recruitment, then, ultimately, that's a good thing for the stock, but you potentially have catch levels now set at a level that you're bumping up against more quickly, and so, to me, it does not make a lot of sense, obviously, to go way back in time, when there's really considerable uncertainty in terms of the long-term average. You want to at least use a time series in which we're able to estimate recruitment fairly well.

The more recent years are a little bit more problematic, because you're relying on the fish then recruiting into the fishery to actually groundtruth the estimates coming out of the stock assessment in those fill-in years, but, to me, it makes sense, obviously, to use that lower-term average recruitment in the short term and then reevaluate it in future stock assessments.

CHAIRMAN GUYAS: Thanks, Andy. Yes, I would agree with that. Any other questions on amberjack? Kevin, and then we're going to break for lunch.

MR. ANSON: I am just curious, and what is the uncertainty, or the higher uncertainty, in the recent time series more tied to? Is it tied to the lack of data or just the variability of data or a combination, as far as lack of data and not enough indices, a combination of all the above?

CHAIRMAN GUYAS: Ryan, do you want to jump in on that?

MR. RINDONE: Kevin, do you mean at the tail-end, like towards the terminal year, because there's nothing on the other side of it.

MR. ANSON: Well, $I$ guess $I$ mean the characterization of the 2009 to 2018 time period of having lower recruitment, but higher uncertainty, relative to the more long-term historical having higher recruitment, and $I$ took that to mean more certainty, I guess, in the earlier data, and maybe it was $I$ just didn't hear right, that there was that dichotomy of the two different time series.

MR. RINDONE: Well, when we use the longer time series, we're, obviously, including a lot more data, and so the model is better informed and has a better version of what's actually going on, or what's being estimated to go on, due to the recruitment is estimated through the stock-recruit relationship. When we're only using the last ten years, and especially like the last two to three years, because there are no data beyond 2018, and there's nothing to tell the model what actually happened in 2018, or 2017, to give it more confidence, if you will, to give the model confidence that those estimates for those years are in fact similarly precise as the years preceding them.

When we make assumptions though about the projections, about what we're willing to assume for future recruitment, then that helps provide some of that contrast to those terminal year estimates, and that's where the model is being informed by the projections, in terms of making those estimates for the management measures.

MR. ANSON: I guess I didn't think through it properly before I asked the question, but those are all fitted recruitment estimates and the uncertainty associated with that?

DR. NANCE: Yes, that's correct.
CHAIRMAN GUYAS: Okay. I think we're ready for lunch break, and I think we're more or less done with amberjack, and so we will come back with gag, and we're more or less on schedule after lunch. Dale.

MR. DIAZ: Thank you, Ms. Guyas. Let's go ahead and break for lunch, and we're going to come back at 1:40 and start it back up. Thank you, all.
(Whereupon, the meeting recessed for lunch on October 26, 2021.)

## October 26, 2021

## TUESDAY AFTERNOON SESSION

The Reef Fish Management Committee of the Gulf of Mexico Fishery Management Council reconvened on Tuesday afternoon, October 26, 2021, and was called to order by Chairman Martha Guyas.

CHAIRMAN GUYAS: Our next item is the presentation on the gag stock assessment report, and so, Dr. Nance, please come on up. Ryan, do you want to do the action guide for this, while he's coming up?

## PRESENTATION ON SEDAR 72: GAG GROUPER STOCK ASSESSMENT REPORT

MR. RINDONE: I can. All right. Dr. Nance will do an encore performance with summarizing the SSC's deliberations about the SEDAR 72 stock assessment for gag grouper. This was presented to the SSC at its September 2021 meeting and estimates that gag grouper is overfished and experiencing overfishing as of 2019.

The assessment used the updated FES recreational catch and effort estimates and an ecosystem-informed model for incorporating episodic mortality from red tide. The new projection code that was previously talked about for amberjack is also being used for gag, and, during its September meeting, the SSC had several discussion points that it was considering as it related to gag and the projections, and Dr. Nance had delved into those.

During the upcoming November 18, 2021 SSC meeting, the SSC is expected to decide on any changes, as it relates to the stock status estimated by the assessment and corresponding overfishing and acceptable biological catch projections for gag, and so you guys should consider the information presented and ask questions, and you should also consider if you want to request any alternative allocation scenarios to be considered, because projections will need to be run individually for each of those allocations scenarios, and staff will drum up a memo to send to the Science Center with any requests of that nature, and the SSC would likely be able to review those as soon as the January 2022 meeting, depending on what else is on their plate. Madam Chair.

CHAIRMAN GUYAS: Thanks, Ryan. All right. Dr. Nance.

DR. NANCE: Thank you so much. It looks like our November meeting is going to be filled with stuff too, and we had a -- I don't know if any of you listened to our SSC meeting a few weeks ago, but we had a four-day meeting packed with material, and we tried our best to go through all the material, but we were not successful.

Gulf gag grouper was last assessed in the SEDAR 33 update in 2016 using female-only spawning stock biomass, and, at that time, it was determined to be sustainably managed. Several data inputs used in the SEDAR 33 update were modified in SEDAR 72. One of the updates was conversion from MRIP-CHTS to MRIP-FES.

We know that gag is vulnerable to episodic red tide events, and the model accounts for that explicitly in SEDAR 72. Improvements were also made in retention and the recreational fleets' selectivities. Improved differentiation in commercial discards between black grouper and gag were also made. There was updated information on the maturity schedule, sexual transition timing, and the influence of the observed sex ratios.

Dr. Ailloud did an outstanding job in her presentation to us, and she took us through a step-wise progression from the SEDAR 33 update to SEDAR 72, including the updated data inclusions, adjustments made to selectivities, the red tide analysis, and model variability, which was critical for comparing the inference of model parameters on the resulting outputs.

Some SSC members contended that data estimated prior to the MRIP time period, which is pre-1981, should be excluded, due to the lack of precision and plausibility. We had a long discussion on that scenario. During the discussion, the Southeast Fisheries Science Center let us know that removing the pre-1981 recreational catch and effort didn't have a substantial effect on the stock status, but it did help in tuning the model to the initial estimates of exploitation rates, and they also let us know that the commercial data pre-1981 were thought to be very plausible.

A sensitivity run was conducted to examine the recreational catch and effort data generated by the Florida Gulf Reef Fish Survey, which is now termed the State Reef Fish Survey, or SRFS. Hindcasting for the data, calibrated to MRIP-FES values, are available back to 1981. Prior to 1981, mean catch per unit effort data for 1981 through 1985 were used to estimate historical catch per unit of effort.

Trends in model outputs are commensurate with SRFS. However, the lower level of landings reported through SRFS compared to FES does result in lower estimates of spawning stock biomass, exploitation rates, and age-zero recruits. The SSC discussed the merits and feasibility of using SRFS for monitoring recreational catch and effort for gag grouper in the future, and we spent some time deliberating that discussion.

SRFS has increased precision and reporting frequency compared to MRIP. SRFS may be more appropriate for monitoring gag private angler landings, since gag is a Florida-centric stock and almost all the harvest is recorded through that system.

The SSC discussed, and a motion was made, that the SRFS sensitivity runs receive a full suite of model performance and diagnostics, just like the FES model. We discussed that, and, during that discussion, the Southeast Fisheries Science Center recommended using a scalar to convert the recreational portion of the recommended catch levels, or limits, to SRFS currency, and the Southeast Fisheries Science Center preferred such model effort to occur during the SEDAR process. The motion from the SSC was taken off the table at that time. After that, the SSC requested that the scalar approach be described by the Southeast Fisheries Science Center for review by the SSC at a future meeting.

Standing stock biomass can be characterized by female-only mature biomass or combined male and female mature biomass. Female-only standing stock biomass provides the best estimates of biological reference points if the potential for decreased fertilization is weak. Combined standing stock biomass is best when the potential for decreased fertility is moderate or unknown.

Increasingly skewed sex ratios may result in reduced fertilization rates and, as a consequence, reduced population growth. Recent research that we looked at estimates the males account for less than 1 percent of the fish stock and less than 5 percent at the Madison-Swanson Marine Protected Area. The last strong year class was 2006/2007, and the relationship between sex ratio and fertilization success is poorly understood.

Under both the female-only and the sex-combined scenarios for standing stock biomass, gag grouper is overfished and has been overfished since 2006, with overfishing occurring since 2001. The SSC discussed using sex-combined estimates for standing stock biomass, considering the currently skewed sex ratio and
the recruitment since 2006/2007, but the SSC made a motion.
The SSC determined that the SEDAR 72 operational assessment for Gulf of Mexico gag, based on combined sexes for standing stock biomass, represents the best scientific information available. The motion carried with one opposed and one absent.

CHAIRMAN GUYAS: Dr. Nance, we have a question for you. Bob.
MR. GILL: Thank you, Madam Chair, and thank you, Dr. Nance. I am a little bit confused, because the discussion that you're relating to on the SSC consideration of SRFS inclusion seemed to indicate, to me, that the body of the SSC thought that that was BSIA, but it ultimately was not included, nor was it voted, and yet, without that, since it's now in the considered for the future as a scalar, you still voted the current information as BSIA, and $I$ see that as a bit of $a$ conflict, and could you explain some of that?

DR. NANCE: I disagree with that, in that we considered -- We looked at SRFS, and it was run as a -- I am trying to think of the term here.

CHAIRMAN GUYAS: A sensitivity run.
DR. NANCE: Thank you. A sensitivity run. We looked at it as a sensitivity run, and there was a lot of discussion with that, and it didn't receive the full-blown analysis through an assessment, and so there was a motion made to do that. With the Southeast Fisheries Science Center, we had discussions back and forth during that meeting, and they proposed using a scalar instead, instead of running that full-blown assessment, and running the assessment with that, to use the scalar instead, and the motion was then withdrawn and not considered, and then we continued our discussion.

Right now, the way we would like to do it is we have that scalar, or the way we're talking about doing it, is having that scalar approach, and the Southeast Fisheries Science Center would bring that scalar approach to the SSC, and we would review it at a future meeting, and certainly, when gag comes up for a research track assessment, using the Florida reef fish survey would be one of the things that would be used there.

CHAIRMAN GUYAS: Go ahead, Bob.
MR. GILL: So, currently, the Center is taking the bases that the SSC defined and providing projections, and SRFS is not part
of that, and so the projections will be as-is, and the scalar may get involved in a future assessment, and not this one, and presumably, whenever projections come back from the Center, that's when you will come up with your stock status determination, et cetera.

DR. NANCE: Maybe I am wrong here, but I think the scalar is used not in the assessment process, but the scalar is used to monitor the catch that is taken from --

CHAIRMAN GUYAS: Yes, you're right, Dr. Nance. What the SSC talked about, at the Science Center's suggestion, was, instead of using the State Reef Fish Survey data in the assessment, to inform the outcome and characterize the status of the stock, it would simply be used for management, where you would get projections in FES and then back-calculate them to the State Reef Fish Survey for setting quotas.

DR. NANCE: That's correct. You would be able to take the data that is produced and scaled to be able to monitor the fishery. Does that make sense?

MR. GILL: Thank you.
DR. NANCE: So yes, and so, based on that, as the motion indicated, the assessment that was presented we considered the best scientific information available. Dr. Ailloud reviewed the previously parameterized projections using the sex-combined -So she ran -- On Thursday, she provided us with new projections using the sex-combined estimates for standing stock biomass.

We incorporated three red tide scenarios into that, and there was a 10 percent, 10 percent of the intensity of 2005 , and there was a 30 percent, which we considered medium, and a 72 percent, which we assumed was high, and we don't know exactly how much effect the new red tide has on it, and so we're going to look at three different scenarios.

Those scenarios assumed that the 2021 red tide dissipates in mid-November, based on historical patterns and Ecospace modeling. All scenarios -- We had a brief look at the scenarios, and all the scenarios predict that gag grouper is still overfished and undergoing overfishing. However, at F SPR 30, the degree to which the stock is overfished is much greater than at Fmax.

The SSC recognizes that closing the fishery would result in loss of critical fishery-dependent and biological information needed
to monitor rebuilding. In other words, if you close it down completely, age and length composition data would not be collected from the fleets. The current FMSY proxy is Fmax. Changing that proxy would require a plan amendment.

The SSC supports using the medium severity red tide scenario, which is 30 percent, based on the Ecospace model. We viewed it as a more precautionary than the low severity value of 10 percent. Due to time constraints, the SSC will revisit these gag projections at its November 2021 meeting. Madam Chair, that ends my presentation.

CHAIRMAN GUYAS: Thanks, Dr. Nance. Are there questions? I have some. I want to go back up to your slide that has the motion on it, where it talks about how the stock has been overfished since 2006, with overfishing occurring since 2001.

Maybe I missed this at the SSC meeting, but did you all discuss what is driving this change? I mean, I wouldn't argue that there is an issue with gag now, but, from what I recall, the last assessment of gag was quite a bit rosier, and it certainly didn't -- I mean, basically, what this is saying is, since the 2005 red tide, which was pretty severe, that we've been overfished since then, and we've had overfishing occurring this whole time. Ryan has got his hand up, and he wants to help you out here.

DR. NANCE: Go ahead, Ryan, and I will weigh-in, too.
MR. RINDONE: Sure, and just to speak to the last assessment, and, if we had used sexes combined for the last assessment, we would have had a different stock status, and $I$ can't recall explicitly if it was just undergoing overfishing or if it was overfished and undergoing overfishing, assuming sexes combined last time, but, at the time the SSC -- This was --

DR. NANCE: 2016.
MR. RINDONE: Yes, it was 2016, and so the SSC had considered the merits of looking at females only or sexes combined and had thought that females only still was the best representation, at that time, for the spawning stock biomass.

CHAIRMAN GUYAS: Yes, but this bullet is saying that, no matter which of those models you used, and, again, like thinking backwards, we still would have been in this situation back then, and so that's what $I$ am kind of wondering.

DR. NANCE: I think the key is -- What $I$ mentioned is that several data upgrades were made between the SEDAR 33 update and SEDAR 72. We went to FES, and we now have a better methodology to include episodic red tide events, and we have improved -- The Southeast Fisheries Science Center made improvements to retention and recreational fleet sensitivities and improved differentiation between commercial discards between black grouper and gag, and we have some really good information, updated information, on the maturity schedule, sex transition timing, and those influences on the observed sex ratio. All of those new data inputs have helped the model, SEDAR 72, be improved over the SEDAR 33 update, and I think that's why we see that difference between the two.

CHAIRMAN GUYAS: Okay. Thanks. That's helpful. Anybody else want to jump in? Leann.

MS. BOSARGE: A couple of questions. One is going to be on the red tide incorporation into this model, and then the other is going to be this female-only versus combined-sexes idea, to help me understand it, and so I think I'll start with red tide, and that, for me, is the easier question for me to ask.

When we did red grouper, when we completed that assessment, we did take into account some effects for red tide, but what I remember is that those were accounted for me in the projection side, right, looking at what had red tides historically been and what impacts for those versus this more recent red tide and what do we feel -- How significant do we feel that is, since it occurred after the terminal year of the assessment, and so we sort of buffered the projections down, the catch levels down, based on that.

With gag, it sounds like there's this new model, I guess, maybe for red tide, or some sort of model for red tide, and we actually incorporated that model into the stock assessment model, which we put some output from a red tide model, and I don't know if we created an index or what we did, and we incorporated that into the actual stock assessment model, and not the projections, but the meat of the model itself, and is that the difference in how we handled red tide between those two different assessments?

DR. NANCE: Clay may be able to answer better on that one.
DR. PORCH: With red grouper, we did both things, and we actually had an index of red tide from the past, and that would include like the 2005 and the 2014 events, and then we made
projections assuming certain levels of red tide that we weren't exactly sure about.

With gag, we had a different model for creating the index of red tide, and that was the Ecosim model that was presented to the SSC, but still it was basically an index of red tide that was incorporated, and now we're talking about also how do we account for the severity of the red tide in the projections.

MS. BOSARGE: So we now have an -- You said an Ecosim model, I think is what you called it.

DR. NANCE: I think it's called Ecospace.
MS. BOSARGE: Ecospace, and so this -- I guess this is the first time that I've heard of us truly incorporating an ecosystem model into the stock assessment to model, and we've had ecosystem data in there before, right, and red tide is kind of an ecosystem data component, and but so I wondering how deep did we get into the red tide model that went into the stock assessment model when we did this review? I'm sure you ran some sort of sensitivity analysis or something like that, to see what the effects of that particular modeled index was, and can you speak to that a little bit?

CHAIRMAN GUYAS: Go ahead, Clay.
DR. PORCH: This is the first time we've used Ecospace to create that index, and there was quite a lot of discussion about that and a pretty extensive review by the SSC, but, ultimately, it's still producing -- The way we used it was just as an index of red tide, and so we didn't use any other aspects in the gag assessment, and so it was just a somewhat different way to measure the severity of red tide.

MS. BOSARGE: Okay, and so then my other topic that I am trying to understand a little better, because I remember there was this debate about should we use female-only spawning stock biomass for our outputs or should we use this combined sexes, and so I'm trying to understand a little better what drives -- What factors drive your decision to go one way or the other, and you have a slide, Slide 20, but I need you to put that in layman's terms for me.

It says female-only spawning stock biomass provides the best estimates of a biological reference point if the potential for decreased fertilization is weak. I guess -- Let me put it in layman's terms, and you tell me if this is right.

You've got -- In the gag population, we've been seeing fewer and fewer males and more and more females, and we know that one male can impregnate many females right, and that's just the way it is, and so what you're saying is, as long as you have a species where, as you get more and more females, those few males do actually sow their wild oats and go and impregnate more females, and then you can use the female-only biomass, but, if that relationship doesn't hold true, and the males aren't quite, I guess, as promiscuous, and they don't seem to impregnate more and more females, as there are more and more females in the population, then you need to use combined, and is that what that is saying, and which one did we use?

DR. NANCE: Well, there are several things that are occurring here. If you have a situation where you have potential for decreased fertilization, and that relationship is weak, you would want to use the female-only as your standing stock biomass. You would use the combined standing stock biomass if the potential for increased fertility is moderate or unknown, and we looked at -- There is research to show which one.

We have increased skewed sex ratios that may be resulting in reduced fertilization rates, which we've seen that. We've seen that the males account for less than 1 percent of the fished stock, and, at the Madison-Swanson Marine Protected Area, they are less than 5 percent of the standing stock biomass, and the last strong year class was 2006/2007, and so those indicate that we wanted to go with -- We have a potential decrease of fertility that is moderate or unknown, and that's why we went to the combined standing stock biomass instead of female only, because that was more appropriate.

CHAIRMAN GUYAS: Clay.
DR. PORCH: I would just add that this debate has been going on for quite a few gag stock assessments, and it always hinges around is there evidence that males are limiting, and so, right now, if you just use female-only spawning biomass, you're saying males are never going to be limiting, and so you could have one male -- Until there is no males, but, basically, one male could carry the whole population, which, of course, isn't true, and so, in the extreme, that doesn't make sense, but we don't know exactly how many females a male can fertilize, and so there's not any real hard data there.

Conversely, if you use combined spawning biomass, you're effectively saying that, on a fish-per-fish basis, that males
are more important, by virtue of the fact that they weigh more, and, now, it's a fish-per-fish, and there are still going to be a lot more females in the population, because they transition to males at an older age, and so there's not going to be as many, but that's the kind of argument that is going on.

Unfortunately, we don't have really hard data on fertilization rates, and so there is nothing really concrete to grab. The concern was though that males, at some point, must be limiting, and so this particular group came up with a different decision than previous groups and thought the best thing for now, based on the literature that's been produced, is to go with the combined biomass model.

It could be that, down the road, we'll do something that maybe has two metrics, a minimum male threshold and combined with female spawning biomass, but, right now, they haven't come up with that alternative, and so this group felt that the weight of the evidence supported more combined biomass, male and female, versus female only.

CHAIRMAN GUYAS: Are there other questions? Susan.
MS. BOGGS: Thank you, Martha, and this may be a separate conversation, and I would like to go back to red tide. I've been sitting here looking at the Florida maps of red tide, and maybe I don't understand red tide enough, because the grouper are in deeper waters, from what $I$ understand, and the red tide, from what $I$ understand, typically is along the shore, and maybe I'm wrong, and maybe it extends way out, and so I'm just wondering, and, if you decrease the lower numbers in the gag, the catch levels, if you will, because of the red tide, and they're just not going fishing, and maybe the gag grouper themselves are not affected, because they're in the deeper water. I mean, I'm just trying to put all the pieces together, and this may be a conversation after today, but --

DR. NANCE: The one for the 2021 red tide, we would be using that red tide event in our projections. It wouldn't be included in the assessment itself, but, for our projections, is it affecting -- Do we feel like it's affecting the gag grouper tremendously, moderately, or not at all, and so those are the discussions we'll have when we look at our projections.

CHAIRMAN GUYAS: Susan, can $I$ jump in, too? Tom can talk to this, and so like, oftentimes, what we see with the red tides is they actually originate offshore. We see it when they come onshore, because that's where the people are, and so there is
that, and then, with gag, gag is a little bit different, and they have a pretty interesting life history, where they are using seagrasses at various points in their life, and they have these onshore and offshore movements, depending on their life cycle, and seasonal as well.

It's a little bit different situation than red grouper and some of the other deepwater groupers, but it probably would be good to -- Once we get to the point where we're talking about management, $I$ think it would be good to kind of break some of that down, so that we kind of understand what we're working with a little bit with gag.

Sue Barbieri has given some interesting presentations to the Reef Fish AP, and I think the SSC also, and that might be interesting for you to go and look at. They've been in the past year, and I don't know which meetings they were, but $I$ thought she did a good job of explaining kind of the big picture of what's going on in a gag's lifetime.

DR. NANCE: Yes, she did a very good job, and her report is available, and it would be good reading, for sure.

## CHAIRMAN GUYAS: Tom.

DR. FRAZER: Jim, I wasn't able to attend the SSC meeting, and so I'm just trying to capture some of the conversation, and so one of the comments that you made early on in the slides was we have better information, and one of them had to do with timing at maturity, right, and so I think that's what I heard.

DR. NANCE: I can't see, but maybe so. Anyway, go ahead and ask your --

DR. FRAZER: Anyway, if that's the case, essentially, female animals are maturing at two years old, or three years old, as opposed to some older time, and it gets to this issue of whether or not there is sperm limitation in the population, right, and so, if the population kind of makes that adjustment, they're making a decision, essentially, that it's worth it to put their energy into eggs rather than somatic growth, with the implication that they're going to be fertilized. Otherwise, it wouldn't be an evolutionarily-stable strategy, right, and so I'm just trying to figure out if that assumption of whether or not sperm is limiting in a population is a good one and whether or not we should revisit some of that.

The other question $I$ have is, because males are only 1 percent
or less of the population overall, is there any functional difference in running the models with a combined sex versus the females only?

DR. NANCE: I think both models were run.
DR. FRAZER: I don't have the answer, and I didn't know if you did.

DR. NANCE: We have models and had that to compare, and there was -- In one of the slides, we said that there was no difference using the female only or the combined sexes for overfished and overfishing, and both gave us the same input. We felt better about using the combined sexes given the fact that the amount of males, the number of males was so low in the population, and that's why we went with that scenario. I can't remember, and it probably was discussed, Tom, but I don't remember the timing discussion. Ryan, I don't know if that -- I can't remember whether we did or not, and I'm sorry.

DR. FRAZER: No problem. Thanks.
CHAIRMAN GUYAS: Go ahead, Ryan.
MR. RINDONE: I was taking notes, and so I missed part of that, but, Tom, you and I have talked about this question a couple of times. Both models were run, the sexes combined and the females only, and both resulted in similar estimates of stock status, in terms of the stock being overfished and experiencing overfishing.

The amount of samples to inform that age and size at transition is a very limited amount, and there was some uncertainty about how long it actually takes for that transition to occur, and when it where it occurs. Also, in terms of the movement of the species throughout where we find them on the West Florida Shelf, there is gag that have been tagged that stayed in the exact same place for well over a year and have been caught and released in the same reefs, the same fish released in the same reef, a few times throughout the course of the year.

Then there is some that do move considerable distances, but there's usually some sort of explanatory variable to that, like tropical storms and things like that that can shift many different species of fish.

There are still a lot of outstanding questions as it relates to what is happening with these fish between when they are these
young adult females and when they may be in a position to transition to male and the degree to which that is influenced by reaching a certain size or is socially mediated, et cetera.

Insofar as it relates to the fish that were caught in the reserves, like at Madison-Swanson and Steamboat Lumps, it's still the vast preponderance of fish that are caught out there right now are females, and there aren't usually as many males that are harvested, and the males are still rare, by comparison.

DR. FRAZER: I wasn't so interested, necessarily, in the time at transition from females to males. What $I$ was trying to figure out is the timing of maturity and if that's occurring earlier.

MR. RINDONE: I don't think we have much of a revision on that. That's still estimated to happen before the fish are -- It's starting to be happening before the fish are entering the fishery, and so twenty-three inches or twenty-four inches, the size at which 50 percent of the females are sexually mature. Our minimum size limit still corresponds well to that, and, if you guys remember, when you increased the commercial minimum size from twenty inches to -- I think it's twenty inches to twenty-four inches, those few years back, there were two reasons for doing that. One was the size at which 50 percent of individuals are thought to be sexually mature and to have commensurate regulations between the commercial and recreational sectors for gag.

CHAIRMAN GUYAS: Dr. Simmons.
EXECUTIVE DIRECTOR SIMMONS: Thank you, Madam Chair. I think I have a question just for the Science Center, and, Dr. Porch, I don't know if you know why we are using, for spawning stock biomass for red grouper, numbers of eggs per recruit, but, for gag, we're using metric tons, or estimate of metric tons, for spawning stock biomass. Could you explain that a little bit?

DR. PORCH: We have much better information on red grouper, in terms of the number of eggs females produce at age, than we do for gag, and so gag is done in biomass, and that's the main reason. However, there is a similar debate with regard to red grouper, to the extent to which males are limiting. They spawn a little differently, and red grouper form smaller harems than gag, spawning in much bigger aggregations, but that debate applies to red grouper as well, but it's just that, because we had actual egg production by females, that group elected to go ahead and use female fecundity.

CHAIRMAN GUYAS: Go ahead, Dr. Simmons.
EXECUTIVE DIRECTOR SIMMONS: Thank you, Madam Chair, and so would the Science Center see that as a high need, research need, to try to better inform the gag assessment, so we could get a better understanding of contribution of egg production for the females of a certain age class and size?

DR. PORCH: It certainly would be useful to know, along with getting a better idea of how limiting males might actually be, because we don't really have any information there, and that's a hard thing to get at, and it's easier to get at egg production, but I imagine, the next time we do a benchmark for -- Or a research track for red grouper, this same discussion will come up, or maybe even in the operational assessment, if we have a topical working group.

CHAIRMAN GUYAS: Leann.
MS. BOSARGE: I am not sure if this will be for Dr. Porch or for Dr. Nance, but, with a lot of the stock assessments that we receive, we'll have this slide somewhere in the assessment PowerPoint that the SSC receives where it shows us the changes from the previous model and kind of what the impact of each one of those was, and so like it will show us -- Most recently, we'll have the change from CHTS to FES, right, and what impact did that have on biomass, and that brought this down by this much, and what did it do to other things, and so did you get something like that in this?

I am just trying to visualize, and so we have sort of a change from the last model in how we handled red tide, and we obviously had the change from CHTS to FES, and I'm not sure what the other changes were, and I ask because -- Are you done with your slides on gag? Okay. I ask because I think the punchline, that we haven't really gotten to yet, is that it's in really bad shape, so bad shape that, although you all did not set catch level recommendations, there was this discussion of closing the fishery.

DR. NANCE: Well, we viewed some projections. We didn't have the time, on our late afternoon Thursday, to make any recommendations.

MS. BOSARGE: So I guess for me, as a manager, before we get to that point, I would like to see a little more in-depth information on what the big drivers were in this decrease in biomass, and I think that we have the capacity to -- The Science

Center has the capacity to show us that sort of analysis, given the different changes from the last assessment, what was really driving things in that downward trend.

DR. NANCE: From my perspective, or the SSC's perspective, Dr. Ailloud did a very good job in showing the different changes that occurred between the 33 update and 72 , what those changes were, and she showed how those different changes affected the model, and so they're in the report, and it's a long report, but it's well summarized in there, and, during our presentation, she went through each of those in slides and showed us the -- She took us through, step-by-step, the different things.

CHAIRMAN GUYAS: Dr. Simmons.
EXECUTIVE DIRECTOR SIMMONS: Thank you, Madam Chair. Once we get the projections from the Science Center, and the SSC looks at them, we could ask the analysts to provide a short summary, overview summary, of the stock assessment with those recommendations, and $I$ think we've done that in the past, but we weren't quite there yet with this one.

CHAIRMAN GUYAS: All right. Well, we're not going to be able to leave this topic without talking about the State Reef Fish Survey, and so we have a --

DR. NANCE: Madam Chair, did you want me to stay or -- I will do whatever you need.

CHAIRMAN GUYAS: You can stay. It's fine.
DR. NANCE: Okay. What $I$ mean is sit down or stand here.
CHAIRMAN GUYAS: Well, I know this was a discussion at the SSC.
DR. NANCE: Go ahead. I will stand then.
CHAIRMAN GUYAS: We have this data stream now that solves some of these issues that we've seen with MRIP-FES, or at least partially addresses them, uncertainty in estimates having more precision and more frequent waves, and we have not used that data for this assessment, even though, in my opinion, I think we're at a place where we could, and so I think it would be helpful for the council to hear why the Science Center rejected that approach for this assessment. They certainly fought against it at the SSC meeting, and why are we not using the State Reef Fish Survey for this assessment?

DR. PORCH: We didn't really reject the approach. We used it as a sensitivity analysis, but there is several issues that come to play. First of all, as we had discussed earlier in the week, the transition plan never followed through with determining what the best available science was in terms of a time series that is calibrated back in time.

That was originally part of the transition plan, but that's kind of gotten lost, and I don't know whether it was because of COVID or whatever happened, but the transition plan never really addressed coming up with a calibrated time series back in time.

There wasn't really anything to review, also because the statement of work that was put forward did not specify trying to review the calibrated time series back in time, and it just specified it as a sensitivity run, and so it didn't get the attention of a special topical working group to evaluate it, but, even so, the issue, more fundamentally, is what would they evaluate, and what was supposed to happen during the transition process, which I hope will reinvigorate, was to actually review calibrations of the state surveys, all the way back in time, so that they could be used in stock assessments. That's one thing.

The other thing is that, although FWC presented their calibrated estimates for the private recreational mode, you had to somehow stitch that in with all the other information, and so the shore mode is still FES, and then you have all the data from the other states, and, granted, that's a smaller fraction, and most of the catch is private recreational boats off of Florida, but there was still other information, and there wasn't any guidance how to stitch that in, and so, for the convenience of the sensitivity run, our analyst took some liberties, but none of that was reviewed.

Then there was also calibrating the time -- Well, extending the time series back to 1963, because the assessment goes back to 1963, and so the analyst wasn't given guidance on how to do that, and so she went ahead and came up with a reasonable way to do it, but none of that was reviewed.

You have, both in terms of the way we implemented wasn't fully reviewed, because it was just a sensitivity run, which, by the way, showed very similar trends, and the magnitude is a little bit lower, as we've seen, when you use something like GRFS or state surveys that estimates and catches are less than FES, and then the estimates of the magnitude of the stock abundance will be a little bit lower, and we saw that here, but the trends almost mirror each other, and the SSC did see that, which lends
some comfort, in terms of stock status.
The bottom line is we didn't have a peer-reviewed time series to put into the stock assessment, and it didn't get any additional review during the operational assessment, and so that's why it was not recommended, from our perspective, for a base analysis.

CHAIRMAN GUYAS: So the peer review that it's been through with the certification and the calibration level through the SSC and then in the assessment process itself is not sufficient?

DR. PORCH: There has not been a peer review of a time series calibrated back in time. In fact, there hasn't really been any review. There has been some level of review of the calibrations looking at the recent time period, but not how that gets extended back.

CHAIRMAN GUYAS: We can talk about this more later, but $I$ think this is a mistake to not include this data in this assessment, and I think it's a big one. Andy.

MR. STRELCHECK: Martha, can I dig into that further? Can you talk to us about why you think it's a mistake?

CHAIRMAN GUYAS: Well, I mean, this survey has been going on for quite some time now. I mean, think back to red grouper, when we just went through this, and there were a lot of questions of why we didn't have the State Reef Fish Survey data in that assessment, and ultimately use that to inform management, and $I$ agreed with that decision, and so that assessment only went through 2017, which really would have only left like a year or a year-and-a-half of State Reef Fish Survey data, which it wasn't appropriate to use those data for that assessment, and that's just the bottom line. The timing was not right.

Here, we do have a more substantial time series, and $I$ think to not use this information is -- I think it's going to violate some public trust a little bit. I mean, we have been -- We have seen this need in the MRIP program, and FES aside, and, even before that, I mean, we know that MRIP does not capture offshore fishing as well as it could, and this is the reason why we came up with this program.

We use MRIP, and we worked with the MRIP folks in NOAA, when we were developing it, to fill this need, and now we have an opportunity, and we are not doing it, and I think that's a huge problem, and I don't see a clear, concrete path forward, at this point, for us to be able to do that for Florida-centric species.

To me, this is an easy one, right, and we have a stock, and we have one survey for Florida, and essentially all the catches are for Florida on the recreational side, and this should not be this hard. I understand that it's more difficult for things like amberjack or red snapper, where we have different surveys happening in different places, and there's just a lot to figure out with other states, but this is a no-brainer, to me, and I think there's definitely reluctance, if not outright -- I mean, listening to the SSC meeting, I mean, the Science Center staff that were on there were not about this, and they did not want to include this data in this assessment, as the model run, to run diagnostics.

They did not, and, in listening to the SEDAR Steering Committee meeting, there was, again, resistance to this, and $I$ just find that very disappointing, and $I$ am not trying to pick on your people, Clay, or anything like that, but it's very frustrating that we have gone through this whole process, and this is not news that we have these surveys out there, and we haven't -- We don't have a plan -- We haven't come at this from, oh gosh, we have these new pieces of information that are solving a problem and how can we use this data to inform assessment and management, and we haven't come at this from that perspective.

We haven't even bothered to consider how this can be helpful to us is the problem that $I$ have with this, and it's just no, no, no, and this is why we can't, and I haven't heard any reasons or any willingness to figure out how we can in a timely fashion. Andy.

MR. STRELCHECK: I think it's a little disingenuous to say that no, no, no, we're not willing to do this. I think you heard me, earlier in the week, talk to you about the need to resolve process and procedure here, in terms of not only how we address this with gag, but all of our stock assessments, and this is a much bigger issue than just the State of Florida, right? All the states have their own surveys, and so all of us need to reach an agreement with regard to, scientifically, how is this data going to be funneled into the stock assessment process.

We have transition plans, and we maybe didn't convey those as well as we should have, and so $I^{\prime} m$ on that, and, at the end of the day, there has been discussion of the potential to adjust the gag assessment into GRFS units, or SRFS units, right, but that doesn't seem to be satisfactory, and that, to me, at least addresses part of the issue here.

I think my bigger concern is we want to have our cake and eat it
too, right, and we talk about calibration, and it's appropriate for gag, but we're going to wait on red snapper, and we talked about needing to get to this state and federal cooperative workshop and resolve these differences, yet we want to run with, you know, putting this into an assessment, right, and so we're essentially, $I$ think, talking in conflict with one another, but, in reality, we all have the same goal.

We want to get to that endpoint where we can use these surveys, where we want to include them in the stock assessment process, where we want to be able to understand the differences, and so it's a matter of then how do we get from where we're at today to where we need to be, and I can appreciate your frustration, but I think, procedurally, we're missing a few steps in the process.

CHAIRMAN GUYAS: Well, you know, for other assessments, we have found a way. For Atlantic red snapper, once again, FWC fills a need, and we do an assessment, or we do a survey, specifically for the Atlantic red snapper season, and we have for many years, and those data are used in those assessments without question. There was no certification, and there was no calibration, and those data are used to characterize the landings that are coming from Florida.

The approach that NMFS has taken across these assessments, and across regions, is very different, and it's just baffling to me that we're kind of picking and choosing when we do these things, even with calibration, and so we've moved forward calibration for red snapper, and now $I^{\prime m}$ hearing maybe, well, maybe that's not quite it for gag, and I just -- I don't know. I am frustrated. Leann, I saw your hand up.

MS. BOSARGE: I try and look at it holistically. We have a stock assessment that is saying we're in extremely bad shape with gag, and there are some new things that went into the stock assessment, and $I$ was trying to ask enough questions to figure out what was really driving this stock down so far, and I asked these questions because, as somebody that sits around this table, I think we have wonderful science, but $I$ do know that there are some assumptions that we have to make.

What I have to square is what the science shows me with the men and women that $I$ also consider scientists, and that's the ones that are on the water every day, and they see it. They know what that gag does, and they know where he is and where he goes, and so what I have heard from our fishermen is, yes, we have an issue with gag, and they're not in great shape, but $I$ have not heard them come to the podium and say I think we just caught the
last one, which is almost what this stock assessment is saying, and, obviously, it's not saying that, but, when you talk about closing the fishery completely, no commercial and no recreational and no for-hire fishing for a decade, in order to possibly rebuild it to an acceptable place, from a health standpoint, from a biomass standpoint, I mean, that's pretty far gone, if you have to close it for a decade.

So these two things don't match up, in my mind, and I do put a lot of stock in what our fishermen have to say, and so they're converging, or they're diverging, and they're not converging, and so, when I have that, and I ask these questions about, okay, and so what was new in this assessment and what was really driving this change, and $I$ don't really get concrete answers, and, I mean, that almost leads me to go down Martha's path and say, well, all right, and maybe we need to look at something different and see if there is another picture of reality out there that may jibe a little better with what we're seeing on the water.

I hate to -- I don't want to -- I am not questioning our science, but $I$ am just saying that $I$ have unanswered questions, and I am a little frustrated about that, and maybe we can get the lead stock assessment analyst to come in and present to us next time and answer some more of my questions, but I do have to say that the presentation we got, and $I$ guess it maybe was a couple of years ago, from is her name Beverly that's from Florida, and I called her Dr. Bev, for some reason, and that's what is stuck in my mind, but, anyway, she came in and she told us about the Florida GRFS system.

It essentially takes MRI\{ and beefs it up, and it builds upon the MRIP platform, and $I$ really thought they made some smart changes, and she called them buckets, and they divide their anglers into these buckets, so that, when they have to make assumptions and fill in holes for non-reporting or this or that, they actually have some buckets that they can really kind of drill down a little further and get a little more precise in their assumptions.

I mean, I do have some faith in that system, and $I$ think they made some smart changes, and so I am not willing to throw anything out at this point, and $I$ have big reservations that what $I$ am seeing here just is not really completely matching up with what $I$ am hearing from the fishermen, and $I$ certainly have reservations about closing any fishery completely. Very rarely do we ever open it again, from what $I$ have seen, and so, before we go down that path, $I$ think we should explore all of our
options.
CHAIRMAN GUYAS: Thanks, Leann. Bob.
MR. GILL: Thank you, Madam Chair. I might be piling on a little bit here, but this whole discussion smacks, to me, directly to the discussion we had at the SEDAR Committee, and hopefully we'll be discussing again, but we've got a stock that is in dire shape, and $I$ think the anticipation is that SRFS ought to provide better data than we currently have, and we're facing dire straits in terms of the results of the assessment.

I come away with what we need to think about and execute is a highly-accelerated program to look at SRFS to see if that is a mechanism that will help us better define where gag really is and what we ought to do, because the alternative is disastrous, and that goes to the heart of the motion that we discussed in the SEDAR Committee and hopefully we'll do here in a moment, but I think that, whatever the needs are, in order to do that, that the agency needs to hoist it aboard and make it happen.

Then we'll have to deal with the outcome, whatever that is, and maybe it will provide better data, and maybe it will provide a slightly better answer, or maybe worse, and $I$ don't know, but, when you're facing jumping off the cliff, then we need to figure out how to stop that wagon, however we need to do it, and that says a higher priority than treating it as business as usual, and so that goes to the heart of what that motion was all about, and I would hope you all would take that aboard and address it and, let's get the wagon stopped, before it falls off. Thank you.

CHAIRMAN GUYAS: Phil.
MR. PHIL DYSKOW: Thank you, Madam Chair. I agree with what Bob said, and I agree with what Leann said, and we're going to be asked to make a very important decision that's going to affect a lot of fishermen and their pocketbook, from all sectors, and, if there's additional information available to us, whether you like it or not, whether the science matches up perfectly or not, I would like to see it.

I think saying we're only going to look at this, and we're going to make our decision based on this, puts us in a difficult position, and, if we're going to make this tough call at some point, I want to see all the information available from all the resources that are out there, and so that's my two-cents on this. If there's information that we're not considering, I
think we should consider it, whether it's better or worse or compatible or not, and $I$ don't really care. At this moment in time, $I$ want to see all the information that's available.

CHAIRMAN GUYAS: Clay.
DR. PORCH: I just want to make it clear, and I think we're kind of missing each other. The information was examined, and it was as a sensitivity analysis, and it wasn't as a full-blown model with all the diagnostics and such, consistent with the terms of reference that the assessment was conducted under.

The SSC saw that, and stock status is about the same with GRFS, and so it's not that, when you use the SFRS information, that it gives you a different perception of what's going on with the stock. If we could pull up the graph, and I'm sure it's in the SSC files, and I have it right in front of me, but the trends track each other almost exactly, because it's just a constant calibration applied back in time, and so you would expect the trends from the assessments to be the same whether you're using SRFS or whether you're using the FES statistics.

I don't think that you're going to get a different perception on how the stock is doing. I do agree that we need an accelerated schedule for completing the elements of the transition process, and we all recall, if you look at the letters from Dr. Werner to the states, when the surveys were certified, it elucidated the next steps that we were supposed to take, which includes reviewing calibrations back in time, having an independent review of that, so we can use it for the assessment.

For some reason, that has not happened yet, and so I agree that that does need to be put on the front burner, and I think it's something that should be taken up by this January working group. It may take a little time to get the answer, because it's not a simple solution, but $I$ agree that we need to put it on an accelerated time schedule, and trust me that no one would like to see that happen more than my staff.

CHAIRMAN GUYAS: Leann.
MS. BOSARGE: Dr. Porch, you were talking about the sensitivity run you did with the state data, and you said it has the same trends, and I think you said it produces the same stock status, and so overfished and undergoing overfishing, but $I$ am guessing the magnitude is different though, and so does it also result in a decade-long possible closure of the fishery in order to get it back to an acceptable level, or is that not something that was
output, because it was just a sensitivity analysis?
DR. PORCH: It's similar. It's not exactly the same, but it's pretty close. I mean, with all these things, you change one little thing, and it might make a year difference, in terms of how fast the stock recovers, but it's in pretty much the same ballpark.

CHAIRMAN GUYAS: Dale.
MR. DIAZ: Dr. Porch had mentioned that January meeting of that transition team, and is that the right group of folks to examine that? It seems like there would be a lot of your stock assessment people that would be involved in what you're talking about, rather than that transition team.

CHAIRMAN GUYAS: Go ahead, Clay.
DR. PORCH: I don't even think it's a stock assessment issue so much, and it's looking at what drives the differences between the surveys and looking at how you would extend them back in time, and so the issue, for instance, is the relationship of the SFRS survey to FES -- Would that really be constant back in time, or are there other aspects that you might have expected to change in time.

Just to give you an illustration, when we calibrated the FES survey back in time, because that only started relatively recently, then we looked at things like the transition to cellphone usage, and so, the more people started using cellphones, they stopped answering their landlines, and so the phone survey wasn't doing as good of a job, and so they looked at things like that, to try and figure out how much to calibrate the FES survey back in time with each year, and it basically attenuates to the point where FES is almost the same. The calibrated FES is almost the same as the CHTS in the very early years, because nobody had cellphones.

There were other factors that they looked at that probably Dr . Cody could speak to better than I could, but we need to do a similar analysis to look at how you would calibrate the SRFS survey, or any state survey, back in time relative to the FES, so that you can use that in the stock assessment, and that's the missing piece.

CHAIRMAN GUYAS: In the case of SRFS, of course, that includes MRIP data, and so you should see that same attenuation. It should be there, inherently, and so it should be pretty simple.

Anything else on gag? This is going to come back in front of us in -- Bob.

MR. GILL: If you're thinking of leaving gag entirely -- Thank you, Madam Chair. I would like to bring up the subject of fisheries closures, and I just alluded to it a moment ago. We had a pretty good discussion in the SEDAR Committee over it, and the concept, to remind everybody, although I think most everybody was there, was that, although this is not an action motion, it is a motion that sets the stage and the psychology for how we handle imminent closures of fisheries, and I'm not talking in-season closures. I am talking where the SSC comes back with an $A B C$ of zero for some period of time.

It seems to me that the process starts early. By the time it gets to us, if we get an $A B C$ of zero, we don't have options, and there may not be any, but, on the other hand, as the assessment progresses and the SSC looks at it, I think they need to be cognizant of an approach that says we're going to do everything we possibly can to avoid prescribing an ABC of zero.

To a certain extent, we do that now, but what $I$ think we need to do is imprint that this thought process needs to start at the beginning and not at the end. Bernie, if you would bring up the motion from the SEDAR Committee, I would like to make the following motion. I would invite discussion around the table to clarify any concerns or any misunderstandings, or potential misunderstandings.

The motion is to retain fishery dependent data. It is the council's desire to avoid a total shutdown of any species, if at all possible. As I said, I would like to see discussion, so that there's full understanding of what both the intent and the value of this motion is and we can make a rational decision. Thank you, Madam Chair.

CHAIRMAN GUYAS: Thanks, Bob. Is there a second to this motion? It's seconded by Phil Dyskow. Any discussion on this? Dakus.

MR. GEESLIN: Thank you, Madam Chair. You will recall that, yesterday, I did not vote on this, and I felt like it somewhat came out of left field, but $I$ believe $I$ understand the purpose of the motion, but I've got a question, being the new kid on the block, and is it not understood that a fishery closure is absolutely the last resort?

CHAIRMAN GUYAS: Well, if you want to answer that, you can. Go ahead, Bob.

MR. GILL: Thank you, Madam Chair. I think it's understood, but it's how you approach it. You know, it's kind of like, well, I know I'm going to lose my house in a month, and you may or may not do anything until the next-to-last day, and what I'm trying to do is get the mindset that says, man, as soon as we know we've got an issue, we're going to have to figure out and bend over backwards to do what we can to avoid getting to that point, thinking way down the road and not waiting until the last minute.

I am not faulting anybody, and I think that's how we've done business, and we need a heightened sense of concern early on, by all of us. It's not unique to any one body, and so that, to me, is what I am trying to drive at, and perhaps thinking out of the box and taking extraordinary measures to avoid it might come up with something, and maybe not, and it may be an idealistic, misplaced thought, but, on the other hand, if we don't try, we won't know, and I want us to try just as hard as we can to avoid that situation, if there is any room at all. Thank you.

CHAIRMAN GUYAS: Susan.
MS. BOGGS: Thank you, Madam Chair, and I understand where Bob is coming with this, and $I$ am kind of like Dakus. I mean, I think it's understood that this council wants to avoid a shutdown if at all possible, and maybe it's getting to semantics, but $I$ thought a motion required some kind of action, and I don't know that we can have a formal action for this.

It's saying we'll do our best not to do it, but we can't guarantee that we won't. I mean, I understand the premise behind it, and I think, now that we're kind of all on record saying, yes, we agree, and we don't want to have a closure, if we can avoid it, but $I$ don't know that we can really do anything with this. I'm not opposed to the idea, and please understand that. Thank you.

CHAIRMAN GUYAS: Let me see if $I$ can help here, and $I$ see you, Chris, but it's more than just the council that ultimately has a hand in this, right, and so we can have this conversation here and say we don't want to close things down. However, if the SSC hands us an ABC of zero, this is our only option, and the SSC, in this case, they've been having this discussion with gag.

They recognize that this is an issue, and it is an issue, and so I'll give you an example. We're going to talk about goliath grouper later today, or maybe on Thursday, if we run out of
time, and that fishery has been closed for thirty years, and we -- I don't know if, Susan, you were on the council the last time we got a goliath assessment, but we've had multiple failed assessments, because we don't have any fishery-dependent data for that species, even though people have seen that, hey, there's goliath again, and, hey, they're big, and we have -It's obvious to fishermen and just people that are diving or whatever, but we can't quantify it, because we don't have that fishery-dependent data.

I mean, that's kind of a simple example, and, the last time we had an assessment that was rejected, the SSC, at the time, had the discussion of, well, how do we get out of this box, and we kind of can't unless we get fishery-dependent data, but they couldn't, at the same time, recommend anything.

They didn't also see how they could get off of that ABC of zero, and so it's a conundrum that can happen when these closures happen, and so I'm onboard with what Bob is offering here, and I kind of spoke for it in SEDAR, but, even when we do have cases where that is either an option or our only option, is to have a shutdown, to me, what $I$ would love to have, kind of going into the management and having to close things down, is what is the plan for reopening it, and what data can we scrap together, so that we can assess the fishery to be able to reopen, or we need to be thinking more forward and not just this is where we're at, and we have to shut it down, and then, five years later, when we try to do an assessment, realize that, oops, we actually don't have the information that we need to make a change. Go ahead, Susan.

MS. BOGGS: I appreciate the comments, and I understand, but it's just -- I don't know how you fix the motion to say, okay, if we're facing a closure, we're going to have -- I agree that, at any time, if there is any kind of a proposed -- If there is ever a proposed closure, we know we need to have sunset in it or -- I agree that, yes, you're not going to have data, but then you maybe have to -- I am just thinking out loud, and I apologize, but then you slowly reopen the fishery, to start gathering that data, but $I$ just -- I don't know how the council can pass this motion and assure the people sitting in the audience that we will do this, because I don't know that we can.

I mean, it says "desire to avoid", and it kind of gives us an out too, and it doesn't say we will not shut down the fishery, and I just don't see what this does and what confidence or comfort maybe that gives to the fishermen. Thank you.

CHAIRMAN GUYAS: I am going to go to Kevin and then Mara.
MR. ANSON: I am a little torn right now. I think $I$ will probably support it right now, just to kind of have further conversation at this point. To Susan's point just now, there is an out, and $I$ see it as an out, the "if at all possible", and I'm sure we might hear a comment about Magnuson and whether or not this violates Magnuson.

Martha, you mentioned that this is mostly coming from our SSC, and they have that responsibility of providing us the scientific advice, and so they have that first cut, if you will, and, if the science and the manipulation of the science and the data turns out that an $A B C$ of zero is warranted, then that's something we'll have to deal with.

Now, to further your point on what is a path forward, specifically as it relates potentially to gag, that is certainly an issue, or a conversation, we should be having right now, and that we ought to be posing those types of questions to the SSC, so that they have it on their radar for what it is that they would at least like to see, as far as making those decision or what trigger points would be needed in order for a fishery to reopen, because $I$ am concerned, and that's why I will be voting in support of this, but $I$ am concerned that red drum is also one of those fisheries that we've been trying to deal with as well, trying to reopen it, but we don't have any data, fisherydependent data.

I mean, these are issues that are arising now, and, as this council goes forward, and other councils go forward, with issues related to prosecution, issues related to climate change and those impacts on stocks, there could be situations where this creeps up, and so I think it's a good discussion to have, and it's a good motion to have, to help try to further that discussion, and those are my comments.

CHAIRMAN GUYAS: Mara.
MS. LeVY: Thanks. I mean, I wasn't going to say that it violates Magnuson, but what $I$ was going to say was $I$ think, and I hear you talking about, if you're going to shut down fishing for a species, to have a plan, and, I mean, $I$ see this coming into play if you have a stock assessment and it says that a stock is overfished and you've got that it can rebuild, in the absence of fishing mortality, in ten years or less, right, and then the Act is very constraining.

Your Tmax for rebuilding is ten years or less, and, in those cases, there is more of a likelihood, right, that there is going to be the potential for no fishing for a number of years, but my expectation is that you would have the projections about when it would rebuild, and so there would be a time set into that rebuilding plan that would allow for it to open to fish, right, and so, I mean, I think, at least under the way the Act is currently, you would have that when you would expect to reopen.

I guess you could potentially get an assessment down the road that says you're not there, and then you're potentially still closed, but $I$ see that as a completely different situation than something like red drum, which is not a prohibition on fishing, right, and, $I$ mean, the federal plan takes into account that fishing is occurring in state waters, and that's a little bit different than -- Yes, you have some of the same problems, because you don't have the fishery-dependent data from federal waters, but it's not the same situation as something like gag, where you have been saying, because it's overfished, we're going to shut down fishing.

CHAIRMAN GUYAS: Thanks, Mara. Susan.
MS. BOGGS: One last comment. Dr. Frazer made the comment yesterday about that he would like to SSC bring back a suite of options, and I was sitting here thinking about red snapper, and, my gosh, red snapper has been in trouble since I've been involved in the fishery now, for twenty-two years, and we've never had to shut it down, and we've had nine-day seasons and three-day seasons. I mean, we have danced around it, and worked around it, I guess you could say, but we never had a closure.

I think we have options available to us. With gag grouper, you only open it in January every year, instead of -- I mean, $I$ think we have options, and I do like Tom's idea for the SSC to bring back a suite of options of, you know, yes, you probably should have a closure, but these are a couple of options that we think will work to avoid that closure, but I -- Anyway, thank you for indulging me.

CHAIRMAN GUYAS: Andy, I think you're going to be the last word, because I think we've got to move on. Go ahead.

MR. STRELCHECK: Bob and I talked after this came up earlier in the week, and, to me, this is understood, and $I$ can't speak for the council members around the table, but certainly $I$ think we all want to avoid closures, and we all want to prevent that from happening, and that's the worst-case scenario. I guess where --

I feel like this just doesn't go far enough, to be honest with you, Tom, and I just got done with the September South Atlantic Council meeting, where we talked snapper grouper management, and you were there, and the council had an important conversation about kind of relooking at how we're managing the fishery as a whole.

I feel like this is a component to that overall picture, right, and this is one small aspect of that bigger picture, and so I certainly would hope that we as a council could start talking more from a broader vision and not just about a single species and whether it may or may not close, but how do we want to successfully manage the reef fish fishery as a whole.

I will speak from my opinion, and I think we're hanging our hat a lot on data collection right now, and data will solve some of our problems, but $I$ think the trends have certainly been heading in the wrong direction for some species, with or without those data improvements, and so $I$ just want to caution us, as we kind of go forward, in terms of kind of how we think about this, and I think it's probably time for a new day, in terms of how we manage these fisheries and really thinking outside the box.

State and regional management was a huge step forward, and I hope we can kind of provide that creative thinking going forward, and so I'm not opposed to the motion, but I just would like to see it more broadly discussed. Thanks.

CHAIRMAN GUYAS: Is it quick, Troy? I am not picking on you, but we've got to move on. Go ahead.

MR. TROY WIILIAMSON: Well, nobody else got a time limit, but I am very sympathetic with Bob's sentiments here, and I think it precipitated a lot of really great discussion around this table, and it also illuminated that it's a very complex issue, and I don't necessarily disagree or agree with the motion, but it just doesn't cover the subject, and $I$ think our discussion here covers the subject and not the motion, and so, for that reason, I will probably oppose it, or abstain, one of the two. My time is up, and I will yield.

CHAIRMAN GUYAS: Thanks, Troy. Okay, and so I'm sensing we might need to do a hand vote here, and so, all of those in favor of this motion, will you please raise your hand, and $I$ know, Dr. Shipp, you're on the webinar, and so you can raise your hand or shout it out, whatever you need to do.

DR. BOB SHIPP: Yes.

CHAIRMAN GUYAS: All opposed. I think we have eleven in favor and one opposed. Okay. The motion carries. We are going to take just a quick five-minute break, and then we're going to shuffle things around on the agenda a little bit. We're going to go, right after the break, to the $I F Q$ program agenda item, and our first speaker has some time constraints there, and so a very quick break, and then we'll jump to that, and then we'll come back to yellowtail later.
(Whereupon, a brief recess was taken.)
CHAIRMAN GUYAS: Ava, do you want to introduce this next topic, while we are pulling up our presentation from our speakers? Are you on the line, Ava, or Ryan, someone.

## INDIVIDUAL FISHING QUOTA (IFQ) PROGRAMS

DR. AVA LASSETER: Thank you, Madam Chairwoman. Just a brief introduction for this next agenda item, and this will cover us for the IFQ programs today, and so the following presentation on the use of LAPPs in mixed-use fisheries is the first of two reports that you will receive at this meeting, and this was mandated by the Modernizing Recreational Fisheries Act from the National Academy of Sciences, and your second one will be presented tomorrow during the Data Committee.

After we hear from Doctors McCay and Smith on this presentation, we're going to have time for questions and discussion, and they're going to move into discussion of that IFQ focus group, and so Andy -- We'll hear from the Regional Administrator on their proposal for establishing an $I F Q$ focus group, and then we'll have discussion on that, and then hopefully staff will have some guidance, so that we know how to pursue the IFQ program amendments before the next meeting, and, with that, I will turn it over to the National Academy of Sciences Committee.

CHAIRMAN GUYAS: Thanks, Dr. Lasseter, and thank you, Dr. McCay and Dr. Smith, for being here virtually to present to us. We've got your presentation up, and so go ahead and start whenever you're ready.

## PRESENTATION FROM THE NATIONAL ACADEMY OF SCIENCES ON THE USE OF LIMITED ACCESS PRIVILEGE PROGRAMS IN MIXED-USE FISHERIES

DR. BONNIE MCCAY: Thank you very much. This is Bonnie McCay, and I'm the Committee Chair for this committee for the National Academy for Sciences, Engineering, and Medicine. The title, as
you can see, is The Use of Limited Access Privilege Programs in Mixed-Use Fisheries, and we're pleased to talk to you today about what this committee was asked to do and some of the results of the committee's work, as well as recommendations that perhaps can lead to a good discussion with you, and so I'm going to talk about the first part of it, and really set the scene for it, and then Marty Smith, from Duke University, is going to follow-up with the results and the recommendations.

The committee members represent a wide range of people and of disciplines, mostly economics, anthropology, and biology, with a great deal of experience in fisheries on the east coast and in the Gulf area, and actually a little bit on the west coast, but the focus of the work is on the east coast and the Gulf.

The word "LAPP", limited access privilege program, is not often used in these discussions, but it is the technical congressional term for a variety of programs that fit within the criteria that include the IFQs with which you're familiar, and so, basically, it's a kind of catch share program, and it's distinct from a more open-access one, where people who are involved in the fishery will get some kind of share of an allowable catch, and there are different forms of that, but, basically, the most common one is assigning these shares to individuals, and those individuals may or may not be able to transfer them.

Sometimes the term "ITQ" is used as a variation of what you know as an IFQ, and it's the transferable version, and the two that are relevant to the Gulf Council are technically ITQs, even though they're called IFQs, and so they're permits that are issued to allow the holder to harvest a quantity of fish, as represented usually by a portion of a total allowable catch, and that person, or organization, will hold that for its exclusive use for some period of time, usually an entire fishing year.

These LAPPs, in particular the ITQs, or IFQs, have become quite popular in many fisheries, because they do seem to, in the assignment of these rights, but also responsibilities to individuals, and also the incentive structure, in helping attaining greater efficiency, as well as, to some extent, better conservation, depending, of course, on all else that is going on in the fishery, including effective monitoring and accountability measures.

This has been well studied in many other contexts, and the question here is how does this impact the overall fishery, including those fishing sectors that are not part of the LAPP program, not part of the $I F Q$ program itself, but target the same
species, and so this is the question that was posed, actually, in the Modernizing Fisheries Act of a few years back. What it's asking the study to do is to look at the impacts of LAPPs in these mixed-use fisheries, where there are recreational, forhire, and commercial groups that are targeting the same species or groups of species.

The committee's charge is outlined here, and, basically, first of all, it's to look at how each relevant LAPP in the study has met its goals and the goals of the Magnuson-Stevens Act, and then also to look at, for each relevant LAPP, how each sector of the fishery is affected by it, in terms of social effects, economic effects, and ecological effect, and then, to think about, how are the stakeholders in this mixed-use fishery affected by the existence of a LAPP program in one of the sectors.

Then, finally, these last two are to identify and recommend information and factors to be considered when either designing a new one, establishing a new one, or maintaining and adapting an existing one in a mixed-use fishery, with the goal of mitigating impacts that may exist on stakeholders.

In doing this, we need to review best practices and challenges, and, there, we're asked to look at all council regions and not just the areas that are included in this particular study, and, finally, to recommend policies.

We were asked to look at these particular fisheries, which have been identified by the National Marine Fisheries Service as exemplars of mixed-use fishing systems, and so they are quite diverse, and they varied greatly in catch volume and degree of quota allocations by sector and geographic range and the nature of mixed use. The two Atlantic coast fisheries, golden tilefish and wreckfish, have very low recreational participation, if any, and the commercial participants are very small in numbers. For example, there are only thirteen shareholders, initially, in the golden tilefish and only six, initially, in the wreckfish fishery.

In sharp contrast, the Gulf of Mexico reef fish fisheries, including the LAPPs for red snapper and the grouper-tilefish complex, are extremely large, as you know, and $I$ think the initial shares were about 554 for red snapper, and then, when the grouper-tilefish was traded, it became 766 for them, and then they have major recreational sectors, with high percentages of the allocation of TAC, especially for red snapper and the shallow-water groupers, and so it's quite a contrast there.

Then the bluefin tuna fishery, which is managed by the Highly Migratory Species Division of the National Marine Fisheries Service, is the most complex, in terms of the variety and number of sectors, and it's not only the recreational sector, but there is purse seine, trap, harpoon, general category, hook-and-line, and then pelagic longline, and so it's a very complicated one, but the pelagic longline sector is the only one with a LAPP, and it's managed through an individual quota for bycatch, which is small relative to the others in the bluefin tuna fishery.

For example, its actual allocation is a little more than 8 percent, whereas the recreational allocation is 19.7 percent. The recreational is very important there, but it's quite a different and very complex fishery.

I should mention, and $I$ forgot, and $I$ wasn't looking at the slide as much as I should have, how we approached it, but we did it in an ordinary committee way, and we examined all the data that was available to us, which included testimony from the participants and the councils involved and the original experts, through a series of meetings, all of which were virtual, and we did literature reviews of peer-reviewed studies that had looked, in particular, at LAPPs and their impacts in general and in mixed-use fisheries.

This was quite a methodological challenge, and it's not easy to be straightforward about what a change in a fishery management system does and how to explain the observed changes, in terms of the object of the study, in this case LAPPs, and, okay, ideally, you have two comparable fisheries, one with a LAPP and one without, to be able to look at the effects of LAPPs, but, more common, what we really have is a system where you know about a fishery before the LAPP was implemented and then you look at it afterwards, and you kind of think, well, the LAPP might have caused these consequences.

That is problematic, and there are real limitations to doing that, and one obvious limitation is that there are lots of other things that are going on, and so you might have -- If you're doing a before and after study, or even LAPP and non-LAPP, you have variations in the conditions of natural conditions, economic and political conditions and so forth, as well as what is actually happening in the fishery management system, whether or not a LAPP was accompanied by, as often happens, very often happens, much stricter control on overfishing, whether or not it's accompanied by a rebuilding program, whether or not there is greater accountability and better catch monitoring and
differences in enforcement, and so it's very, very challenging and difficult to tease out the effects of this system of sharing catches in relationship to everything else going on.

That was the committee's task, in part, and part of it was to embrace the interdisciplinarity of the effort and of the questions that are being asked, and so we're concerned about managing for economic efficiency, but also social justice and ecological resilience, and so we have an appropriately multidisciplinary team that works on this committee to come up with some understanding and ideas about what is happening, and it requires, in that case, a lot of interaction among the committee members to respect the divergent ways of knowing and standards of evidence for coming up with conclusions.

This is just the background to what we did, and we'll move on now to what we found out, and so $I^{\prime} m$ going to turn this over to Dr. Smith from Duke University, who is one of the committee members, and talk about the overall findings of this study. Thank you.

DR. MARTIN SMITH: Thanks, Bonnie. The starting place of our overall findings is to say something about the main charge of the committee, and that overall finding was that the use of LAPPs in the mixed-used fisheries that we reviewed show little discernable impact on recreational and for-hire stakeholders.

The outcomes of the LAPPs in these mixed-use fisheries, by and large, are similar to experience in LAPPs that lack mixed-use components, and so, in other words, the impacts of the LAPPs that we found, whether they be economic, ecological, or social, were impacts that are consistent with findings from other LAPP fisheries that don't have mixed-use components.

The economic impacts, we'll start there. The first thing is we find very strong evidence showing that LAPPs mediate the race to fish, and strong evidence, and not quite as strong evidence, for increased profitability in the LAPP fisheries.

Now, when $I$ say very strong evidence, I mean that that causal linkage that Bonnie referred to was really tight for showing that LAPPs slow down the race to fish, and that means that we had a study that was published in Nature that actually showed that using a really strong matching of control fisheries to treated fisheries before and after and comparing, but many of the -- Much of other evidence we used was evidence more like showing what happened before and after in the LAPP, and so evidence of increased profitability mostly fits in that.

There was some evidence that the LAPPs modestly reduced economically-wasteful overcapacity, and, for most LAPPs, there was no evidence that the associated consolidation with the quota holders had in some way contributed to market power in the quota market, and so that's something that is often raised as a concern, but we found no evidence of that, and, in fact, for most of the LAPPs, those markets have enough participants that that is not a concern, currently.

Ecological impact, the one LAPP in our study that was explicitly designed to produce ecological impacts actually showed very strong evidence of positive ecological impacts, and that is the individual bycatch quota LAPP designed for bluefin tuna, and that was manifested as reducing regulatory discards and creating overall incentives for avoiding bluefin tuna in the longline fishery.

There was weak evidence of what we considered modest ecological benefits in the other LAPPs that we studied, and so weak evidence showing that there might have been some improved stock status for some of the species, but what's really an important context here is we found no evidence whatsoever of ecological harm, and so the modesty of that, and the weakness of the evidence for those benefits on the ecological side, are not being counterbalanced by evidence going in the other direction, and some of that is suggesting the possibility that some of the increased accountability measures that went along with LAPPs, for instance, could have contributed to slight improvements in the stock status.

Again, thinking about that causation that Bonnie raised, one of the difficulties in teasing out the ecological benefits, of course, is that many of the LAPPs that we studied, including some of the ones in the Gulf of Mexico, coincided with new accountability measures in those fisheries anyway, and so attempts to rebuild fisheries that were driven by the 2007 reauthorization of Magnuson coincided with, shortly thereafter, creating some of these LAPPs, for instance in grouper-tilefish, and so teasing out the effect of the LAPP versus the effect of the broader fishery management context becomes very challenging.

On the social side, there is strong evidence that LAPPs led to improvements in safety-at-sea, and this was an impact that really links directly to the mediation of the race to fish, and so undoing the race to fish, derby fishing conditions, actually creates a safer environment for fishing activities in the commercial sector, and some of the evidence in support of this
also has to do with looking at the weather conditions when fishing is taking place before and after the formation of the LAPP and some very low numbers in anecdotal information, before and after, looking at accidents at-sea.

There is mixed, and $I$ would say largely inconclusive, effects of LAPPs on labor, with some indications that some of the participants end up being better off and others end up being worse off, and so some of what we found in this area was that the nature of labor relations changes in some of the LAPP fisheries and some of the move away from, for instance, the share system, but that, in some cases, could benefit certain stakeholders and harm other ones, but, overall, the evidence, in terms of the bottom line for labor conditions, was largely inconclusive.

Importantly, in this last point, there is no direct evidence of either positive or negative effects of the LAPPs in the study fisheries on communities, but we really want to emphasize here that there is a significant lack of access, lack of data, to assess the social and community impacts, and so, because we found no evidence, it doesn't mean that there are no positive or negative effects on communities, but it's simply a matter that there isn't enough evidence to say one way or the other.

For the mixed-use impacts, again, just to reiterate, there is no evidence for direct effects of LAPPs on the private recreational anglers or the recreational for-hire providers. In the commercial sector, the greater accountability in the commercial sector, due to the LAPPs, may be leading to pressures to attain greater accountability on the part of the recreational sector.

In other words, the positive experiences of the LAPP fisheries in the commercial sector could be creating some pressure to try to replicate that in the recreational sector, but, again, that linkage is a bit -- It's a bit tentative, and so that's a bit of a tentative assessment.

Moving on to conclusions and recommendations, LAPPs are designed to address the economic, social, and ecological impacts, or they're designed for those impacts, for LAPPs, and we reviewed future use of LAPPs in mixed-use fisheries, and so that's what our conclusions and recommendations focus on.

Many of our results are applicable to LAPPs in single-sector fisheries, and so a lot of the recommendations that we make aren't limited to what you ought to do or what you ought to consider for a LAPP in a mixed-use fishery, and that really
stems directly from the fact that the economic and social and ecological impacts are largely not discernable from non-mixeduse fisheries, and so the recommendations pertain to best practices and recommendations for how additional data, research, or syntheses of existing research could enhance decision-making capacity when designing, establishing, or maintaining a LAPP in a mixed-use fishery.

We sort of divided that out in these bins here, the existing and future LAPPs, data collections and future research, and then really thinking much more intensively about how to do all of this in a more deliberate interdisciplinary way, and $I$ will talk about that more in a second.

Let's talk first about impacts on recreational stakeholders, and so one of the things that is a possible impact, and this is something that, again, we didn't find direct evidence of this, but it's a potential impact, is that creation of a LAPP could lead to more fishing effort in other sectors, and so we have one example of this in the literature, where forming the New England sector program actually still caused effort to spill over into the Mid-Atlantic fisheries, because some of the fishery participants were permitted to fish in both of those.

The mechanism here that's at play, or what one might be worried about, is, if you actually create a LAPP that reduces capacity in the LAPP fishery, that capacity may want to go somewhere else, and so you can think of it as some sort of elaborate whack-a-mole game.

LAPPs may be viewed as barriers to expanding recreational access to the fishery, because they can shift decision-making structure by creating a new class of a quota shareholder, and so, in other words, there are now new stakeholders that never used to be in the fishery, the people that own quota, and, as you know, some of those quota shareholders don't necessarily fish, and so that creation of that new class can change the political economy on some level.

Increases in the accountability of the commercial sector, due to the incentives for higher compliance associated with LAPPs, may highlight accountability problems in the recreational sector and increase pressure for management, and so we already talked about that, and $I$ just want to emphasize it again. Success in one might say, look, maybe this is something to replicate in the other, and then additional tools really are needed to improve the accountability across sectors.

Impacts on commercial participants, the LAPP design features have enduring effects, and so, when you put a LAPP into place, how that's configured isn't something that just plays out in the first year or two and then goes away. It really, really lasts for a long time, and many of the objections that are expressed in the literature about the way that LAPPs might transform fishing communities and issues like that, that emerge in the academic literature, much of those objections really stem from those initial design features and their associated long-term effects.

Our report advises councils to put more effort, via data collection, research, and deliberation, into development and design of new LAPPs, and reform of existing ones, building on known issues, such as such programs have in achieving both efficiency and equity, and so a lot of the tension here is between the economic benefits that the LAPP might create and the stakeholders who might feel that they have been squeezed out, in some sense, and so that really leads us to zero-in particular attention on the initial allocation.

I know that that's a subject that all of you are quite familiar with, and one of the issues that comes up again and again in the literature is this idea that LAPPs make it harder for new entrants to participate in the fishery, especially new entrants who, pre-LAPPs, might have followed a career trajectory of being say a deckhand, moving on to a first mate, becoming a captain, and eventually purchasing their own boat and their own permit, and then fishing that permit.

With LAPPs, as the economic success of a LAPP occurs, the quota prices go up, which is a good reflection of the economic benefits, but that makes it harder and harder for those people to buy into the fishery, even though they have invested a lot of their careers in building up to that point.

That led to some recommendations about ways that councils might consider thinking about that a little differently, including the possibility of vesting fishing crew and fishing captains into their time in the fishery as a potential alternative to grandfathering initial allocations purely on the basis of catch histories attached to the permits. That's not a recommendation to adopt that as a solution, but rather a recommendation to consider that as a possibility.

Impacts on fishing communities, LAPPs can affect communities through changes such as increases in social conflict, diminished employment or loss of product for processing plants, and these
are some of the things that occur in the literature on LAPPs, and mostly not literature associated with the LAPPs that we studied.

The lack of community dimension data in the fisheries that we studied really presents a major challenge to evaluating the effects of LAPPs on the broader mixed-use fishing community, and so we were very limited in assessing to what extent do these impacts that come up in the broad literature, the global literature, on the use of LAPPs -- To what extent do we see these impacts happening in the ones that we studied.

Our recommendations really underscore the importance of the human dimensions overall and explicitly argue that NOAA needs to build more data and social indicator data into the study of coastal and fishing communities.

Our recommendations on data collection and future research are we -- I keep saying it, but $I$ will just say, again, that there are major information gaps here. There is a really great deal of importance of economics and social data for the design and assessment of programs like LAPPs with explicit economic and social goals, but we really need more data on the human dimensions in mixed-use fisheries, and, as you all are aware, you spend a great deal of your time in council meetings talking about the stocks themselves, and the stock assessments, and there is not a companion amount of information on the human dimensions.

Interdisciplinary impact assessment, this is one where we're really broadening out to say fisheries policy we know has major economic, social, and ecological dimensions that require more interdisciplinary conceptualization, but finding ways to integrate divergent disciplinary perspectives is really a challenge.

What we have right now, to a large extent, when you look at the literature on fisheries, is you have a lot of studies based on qualitative data, and those are often done by anthropologists and sociologists and human geographers, and you have a lot of data done -- A lot of data on the quantitative dimensions, more commonly done by economists, and so finding ways to get these kinds of data to talk to each other and integrate more effectively could lead to new insights and new hypotheses and much more informed decision-making. That is sort of the long run that we're recommending.

Our overall conclusions is the use of LAPPs in the mixed-use
fishery cases that we reviewed had little discernable impact on the recreational and for-hire sectors, but the LAPP participants are held to higher monitoring, data collection, and enforcement standards relative to non-LAPP fishery counterparts and to business as usual scenarios, and that's, of course, quite important to remember.

To the extent that this eliminates overfishing, and stocks are no longer overfished, it's possible that there will be more resiliency in the overall ecological system that benefits all fisheries sectors. In other words, if something that is happening in one sector improves the stock status overall, that's a benefit to all the sectors.

The improved monitoring of the commercial sector with LAPPs may lead to pressure on these other sectors to do a better job, with the goal of staying within fishing mortality rates and reducing bycatch and discards, and so, thus, the LAPPs may improve accountability, and hence conservation, maybe in a serial manner, in mixed-used fisheries in ways that really deserve more scrutiny.

The last slide here is the committee's appraisal of the influence of LAPPs is constrained, really, by the scarcity of data and studies that would enable a better picture of how the commercial, for-hire, and recreational fisheries for particular species and complexes interact, and $I$ want to end on this point.

A lot of what we do in the report is really to say here are ways that we can do better, and here are things that we don't really know, and we need more data and more methodology to explore, and it doesn't mean that the LAPPs aren't doing a good job, and, in fact, in many respects, the LAPPs are doing what they were designed to do quite effectively.

When we talk about all of the sort of ways of improving, they really should be seen in that context, ways of improving existing LAPPs, ways of improving future LAPPs, relative to what we've done in the past, and $I$ will stop there, and Bonnie and I will take questions. Thank you.

CHAIRMAN GUYAS: Thank you very much for your presentation. Does anybody have questions for our presenters about this report? Tom.

DR. FRAZER: Thank you for the presentation. I had a quick question on when you were going over the impacts, the economic and the ecological and social impacts, and, on the social
impacts slide, you had that there was no direct evidence, whether positive or negative, effects of LAPPs on communities, but $I$ guess what $I$ was trying to figure out is what types of measures would you be looking to assess in that regard, and what type of data would you need to generate to assess those effects?

DR. SMITH: That's a very good question, and so one of the particular outcomes that we looked at was to use NOAA's social indicators data and to design our own quasi-experiment basically looking at communities on the Gulf coast that were potentially treated with LAPPs and then compare them to -- The Gulf coast of Florida, sorry, and then compare them to communities on the Atlantic coast of Florida that were not treated with LAPPs and look at the effects on employment.

What we found was there was no discernable impact on employment. We did this in a number of different ways, including looking at, specifically, communities that had a higher dependence on commercial fishing and kind of focus in on just those communities, both the Gulf coast of Florida and the Atlantic coast of Florida, and so that's just one example.

Some of the things, of course, that people talk about are not as readily measured as something like employment, and so we might think about the characteristics of a traditional fishing community, and that's not something that lends itself rather obviously to a quantitative measurement, but one of the reasons that it's very difficult to discern whether LAPPs are having some kind of impact on fishing communities, as an example, is that a lot of things are having impacts on fishing communities kind of all at once.

Globalization of seafood markets is one that we talk about specifically in the report, and that pertains to communities that have LAPPs and communities that don't LAPPs. Climate change is another one, and storm events, like hurricanes, the same thing.

DR. FRAZER: That's helpful. Thank you very much.
DR. MCCAY: If you don't mind, $I$ just want to also mention that there is also -- We need to have a better, perhaps a broader, understanding of communities as such, to the extent that communities are deemed important, and they certainly have been, but, as you know, in the Gulf region, and actually throughout the Atlantic too, there are not many places that are just fishing communities, in terms of the municipality dependency and so forth. They are quite scattered, and so that's one of the
problems too, is identifying and getting a better handle on the nature of community in the areas.

Secondly is to know just how basic information about, for example, which places really are involved in the two IFQ fisheries in the Gulf and who are the people involved in these fisheries, and where do they live, where do they land their fish, and so forth, and so those patterns are really, really difficult to get a handle on when you're doing an assessment. You know, has there been a major shift from one area to another that is related to a LAPP program? What about how the -- In terms of the mixed-use question, how do the commercial fisheries with LAPPs interrelate with the recreational fisheries in the same port? We just found no information on those questions.

CHAIRMAN GUYAS: Thanks. Dr. Shipp, I see your hand is up. Go ahead.

DR. SHIPP: I appreciate the presentation. One of the problems we're presented here in the Gulf is the expansion or the ability to get new applicants into the fishery, and you mentioned the progression from a deckhand to a boat owner, and are there any other areas, or any other ideas, that are in the report that may offer additional ways to get people into the LAPP program?

DR. SMITH: Well, the idea of vesting initial allocations, based on participation in the fishery as labor and not exclusively as a permit holder, is the thing that we -- It's one of the ideas that we focused on in the report, but you can also imagine allocations where there is a set-aside that could be auctioned as well, or you could also imagine auctioning all of the quota, if you were starting a new LAPP.

I think that's not something we considered explicitly as a way to get more participants into the fishery, because, if the fishery is doing extremely well, and you auction the quota, you would expect those quota prices to be high as well, and so the thing that you certainly wouldn't want to do is to start subsidizing participation in fisheries and really start going back and doing things that we know have contributed to overfishing in the past.

DR. SHIPP: One of the things that we have discussed is a possible tax, especially if the quota is increased year by year, and possibly using some of that as a set-aside, as you mentioned, to encourage others to participate in the fishery, but we see this as a really big problem. The IFQ system in the Gulf is working well, but there are aspects of it that make it
very difficult for additional participants to join in. Thanks a lot.

DR. SMITH: Thank you for bringing that up, and I think it's a really interesting idea that is, in many respects, consistent with this idea of getting people to vest in. Ultimately, you're going to have to figure out who qualifies. If you do a setaside, who qualifies, and that means collecting data on people who are working in the fishery, but not necessarily registered as permit holders, or quota owners.

DR. MCCAY: There is one other thing that our report does discuss, and that is the importance of reforming the markets that exist for quota, to make them much more understandable and much more transparent, so that people who do want to get involved can have a better sense of the possibilities of obtaining quota.

The markets are often quite -- Not disorganized, but not very centralized and so forth, and it's quite difficult, oftentimes, for people to even know, unless they're already in the system and in the know, to understand where there might be quota available to them at a reasonable price, and even just to know what prices should be like, that sort of thing, and so we did underline that.

DR. SMITH: Thanks, Bonnie, for adding that, and this image here of the wreckfish ITQ ticket is a reminder that sometimes we've designed these things in ways that really are not very efficient, and so making transactions, when you have these individual tickets like this, become much more difficult.

## CHAIRMAN GUYAS: Troy.

MR. WILLIAMSON: Thank you for the presentation. You mentioned an auction, and how would you design it, and where would you get the shares, or the quota, to populate the auction?

DR. SMITH: We're getting a little off-topic for the report, because we didn't get into auction design in the report explicitly, and so I am happy to comment on that, but $I$ want to be clear that it's not a reflection of the consensus study, but rather just my own opinion as an economist.

I think the easiest way to set up an auction, obviously, is to set it up at the stage of the initial allocation, and then you don't have to sort of carve out from somebody else's allocation in order to set aside a chunk for the auction, but, as one of
the previous questions really referred to, if you're increasing quota over time, it might be easier to carve some of that out, and so taking some of that and setting it aside for an auction, but, yes, that is the basic idea.

I think having more of a detailed conversation, just on the webinar, is probably not the best way to go about it, because the devil is really in the details, and you want to make sure that you set up an auction that allows for the possibility that the quota goes to the highest bidder, and that's what you're doing with an auction.

CHAIRMAN GUYAS: All right. Are there any other questions on this presentation? If not, I want to thank you, Dr. McCay and Dr. Smith, for joining us this afternoon, and we will roll into our next agenda item under this topic, which I think is going to the Tab B, Number 9(d), and we're going to talk about the focus group formation, and, Andy, you're going to lead us on that one, right? Ava, I'm sorry. Go ahead.

DR. LASSETER: I had a question that $I$ am just hoping will be elaborated on a little bit, and this really comes from reading the report, and $I$ feel like it may have been answered on the slide where you had the three bubbles of recommendations, with the left bubble including recommendations for both existing and future LAPPs, but I thought I would go ahead and ask it, to get a little further clarification, and this is kind of thinking forward for the council's work.

The specific wording of the recommendations in the report is largely directed toward the development of new LAPPs, rather than existing LAPPs, and $I$ think there was one place where the text acknowledged the difficulties of incorporating and adding these provisions in existing LAPPs, and $I$ think that's kind of noted in here as well, but $I$ am wondering if the recommendations should be read narrowly, where it specifically applies to new LAPPs only, or, in the instances where recommendations talk about applicability to new LAPPs, we could interpret those to also be recommendations for our existing LAPPs, and could you maybe comment on recommendations in terms of existing versus future LAPPs?

DR. MCCAY: I think that it should be read broadly, because focusing on the difficulty of doing this in existing LAPPs is just a warning that it is hard, but it doesn't mean that those issues are not either important nor are not even addressable. I mean, yes, the initial allocation is a done deal, by the time you have a LAPP program, but then rethinking the results of that
initial allocation and then deliberating on what went wrong, if people are unhappy with it, and that certainly is -- I assume that's where you are, but you can then think about, well, what other kind of allocation is there.

By our focus on initial allocation, we're really suggesting that you look at the whole general system of allocation and reforming some of the effects of the initial allocation, if people agree that there are serious problems.

DR. SMITH: I agree with what Bonnie just said, and, just to remind everyone, $I$ think it's just easier, in principle, to design equity into the initial allocation from the get-go than to try to backfit an equitable solution for things that have become objectionable over time, and that is a reflection of the broader point that we made that LAPPs have enduring effects, including that initial allocation.

DR. LASSETER: Thank you so much.
CHAIRMAN GUYAS: All right. I think that was really our last question this time, and so thanks again, presenters, and then we will move on to Tab B, Number $9(d)$ on the focus group. Andy.

## DISCUSSION: FOCUS GROUP FORMATION

MR. STRELCHECK: Thanks, Martha. I volunteered to report out on the focus group, and we had a meeting between Martha, Dale, myself, and council staff to discuss the focus group composition, as well as our thoughts and ideas, in terms of how the focus group would operate, and we took a little bit different approach than the shrimp focus group, in that we did not identify participants at this point, but rather set up the framework for a conversation at today's meeting.

If you recall, Bob Gill, $I$ believe, made the motion at the last council meeting to come up with a focus group that would really spend time focusing on three things, and one would be addressing minimization of discards in the IFQ program, and the second item would be fairness and equity, and the third would be new entrant issues, and that any findings from this focus group would be reported back to the SSC and appropriate advisory panels, as well as advice back to the council.

We spent quite a bit of time kind of thinking about the composition of this group with regard to that charge and identified nine members that would voluntarily serve on the focus group, and these would be individuals that would apply,
and there would be a solicitation of applicants from the council before the next council meeting, and participants could then apply to the various positions within the focus group that we're trying to populate.

The idea is that we want to cover a broad range of knowledge and expertise and participation in the fishery, and so we looked at fishermen that are permitted, operating in the program with shares, and we also wanted to look at dealers that were participating in the program, but then also there were public participants and crew members and permit holders that didn't have shares that we wanted to include as part of the process as well, and so you can see kind of the list of the variety of different participants that we suggested, including an eastern Gulf longliner, given that that's been a concern, about red snapper discards in the eastern Gulf.

We put some kind of definition around each of those participants on the focus group, and the idea being that we weren't going to be overly prescriptive and that, for many of these, the Regional Office IFQ team can help to determine where a shareholder falls, in terms of their IFQ shareholdings and what category they would qualify in for participation on this focus group, as well as validate landings and other information that may be required as part of meeting the criteria for the focus group.

Probably the most important thing to talk about beyond, obviously, composition is then how we envision the focus group working, and so we really view this as a consensus-driven group, and we don't view it as kind of a typical advisory panel that is reacting to actions and alternatives and kind of the details and specifics that the council often presents to our advisory panels to respond to.

Rather, they focus more on the holistic kind of problems and big-picture ideas and overarching kind of recommendations, with pros and cons as to ways we can potentially look at those particular issues and how they might be beneficial to the fishery as a whole, and so those are largely our recommendations, and $I$ will stop and look to Dale and Martha and see if they want to add anything else.

CHAIRMAN GUYAS: Andy, I thought you did a good job summing up kind of our discussion and our ideas here. Bob.

MR. GILL: Thank you, Madam Chair. Thank you, Andy, for reporting out. That's a job that I always avoid, and I thought you did an excellent job, and thank you for the three members
putting this together, and $I$ think you came up with a good strawman and a good working, as Andy mentioned, discussion document, and it's a little bit different than $I$ had envisioned, which is fine, and I think there are some things, at least from my point of view, that $I$ would like to recommend that we consider for improving the document.

I have got several of them, and I don't want to monopolize the conversation, but let me start with perhaps the first one, which is the most important one, and, Bernie, if you will put up the motion, please, that $I$ sent you in the email.

One of the things that is missing, and I take ownership, and I did not put it in the motion, and we did have it in discussion at the last meeting, but $I$ think that the focus group needs to be guided by reconsidering and redefining what the goals and objectives of the programs are.

They may or may not be -- The result may or may not be what currently exists, but certainly they ought to consider that, and recommend changes accordingly, and then, whatever their recommendation for the ultimate goals and objectives of the program would be, the basis for all of the recommendations, and so I offer this motion as an improvement to the current document, and I would like to hear some discussion on it, if $I$ get a second.

CHAIRMAN GUYAS: Let's get it on the board, and $I$ will read it. Are you going to second it, Kevin?

MR. ANSON: I will second it if Bob would agree to changing "bases" to "basis".

MR. GILL: It's the plural, Kevin, and that's why it's "bases".
CHAIRMAN GUYAS: Let me read this out loud. That the charge of the IFQ Focus Group be expanded to require a review of the current IFQ programs goals and objectives and recommend their replacement/retention. The revised goals and objectives shall serve as the bases for the Focus Group recommendations. Kevin will second the motion. Any discussion? I think you've already explained where you're coming from, Bob, but if you have anything else.

MR. GILL: Well, $I$ think this is a sine qua non. We really need it to have a focus point for the focus group, because just taking the current system and saying, okay, I think we ought to change this is a little bit unfocused, and this provides the
look forward from where we are and where they think we ought to go, and we can utilize that as the basis for the recommendations.

CHAIRMAN GUYAS: Tom.
DR. FRAZER: Thanks, Bob, for those changes, or offered changes, but I guess I wanted to go back to the document itself, and I look at kind of the charge, right, and Item Number 1 says to define the changes needed for an improved IFQ program for red snapper and grouper-tilefish, to specifically address minimizing the discards, fairness and equity, and new entrant issues.

I guess what I'm trying to figure out is if there's already a preidentified -- We have some specificity already in the document, and I don't know what you would be looking for above and beyond that for this motion.

CHAIRMAN GUYAS: Go ahead, Bob, and then I see you, Kevin.
MR. GILL: I see those as issues for the focus group to address, but it doesn't necessarily apply in terms of their considerations of what the overall IFQ programs goals are objectives are stated within the program itself, and so that's a subset, if you will, and, if they don't think that the current goals and objectives of the IFQ system are right, that they ought to be changed, then that changes their discussion, and perhaps their ultimate recommendations, for the issues that they will specifically be addressing.

CHAIRMAN GUYAS: Kevin.
MR. ANSON: I would agree with that, and $I$ think the way you described it earlier, Bob, about this kind of would give them some good background, if you will, and it is, $I$ think, more inclusive of potentially what things they could discuss, and these are very prescriptive, the ones that are in the program, and I guess my question would be then do we need to be more prescriptive in Number 1 then, if this doesn't capture the intent of what Bob is trying to do, and that would be my question.

I agree with what Bob is saying, is that review could potentially prompt some further discussion about other things that may not be as defined in Number 1 here, and, if we need to give them the latitude to do that, then I think that would be a second motion that would probably need to come forward or tailoring this one, if people don't feel this would allow for
additional discussion besides the three items that are presented in Number 1.

CHAIRMAN GUYAS: Mara.
MS. LEVY: Thanks. Just a process question, I guess, if this passes, and so the council has decided the current goals and objectives for the program, and I think we've talked about them, at multiple council meetings, and whether they've been achieved and whether the council would want to modify any of those goals and objectives.

I guess I'm wondering -- So this group would look at them and recommend potential replacement or retention, and, to me, that would have to come back to the council, and the council would actually have to consider that and decide to change the goals and objectives before the focus group could use them as the basis for the further recommendations.

I guess I'm just pointing that out, because it seems like it's potentially going to prolong the process, and you're going to get away, potentially, from focusing on the things that you've already identified in the document as the issues that you want to address.

CHAIRMAN GUYAS: Thoughts on that, Bob?
MR. GILL: Thank you, Madam Chair, and so, as $I$ see it, if we step back a little bit, the whole point of this group is to help give us a sense of direction to 36 B and provide a talking discussion and foot place, or baseline, and call it what you like, for the council to move forward, because it's been sitting there for ten or eleven years, whatever it is, and we've, effectively, not made good progress on where we're going and how we're going to get there.

I don't see the process, Mara, the way that you do, and I see that this group looks at the problems holistically, and comes back with recommendations, and, if they think that the current set of goals and objectives is not appropriate, then they ought to say so and shape the recommendations accordingly, and then the council, ultimately, when it gets through the SSC and the AP, the council will deal with that at the end of the road, and so I don't quite see it the same way that you do.

CHAIRMAN GUYAS: Dale.
MR. DIAZ: What I am worried about with this motion, and maybe I
am overly concerned, is, in some of the discussions we had when we were talking, I mean, just like Bob just said, we've been wrestling with this for a long time, and it's incredibly complicated, and this group is going to be together for some short period of time.

I am just worried that we -- That this is going to make it so difficult for them to get through and come up with some suggestions, and, I mean, just think, and we've been working on this forever, and we go round and round about these issues, and we're trying to get them to operate by consensus also, and so, I mean, their lift is already pretty heavy, and so, I mean, I'm just concerned that we're setting them up for something that we haven't even been able to get even close to, and so thank you.

CHAIRMAN GUYAS: Thanks, Dale. Susan.
MS. BOGGS: Thank you, Madam Chair. To Dale's point, that's what I have been sitting over here struggling with. I mean, we were pretty specific in identifying some issues that seemed to be holding us up, and to give this focus group the opportunity to address these issues, and to move 36 B and 36 C along, or come back in January and say, okay, we're going to scrap this and start over again and then go to this step, because I am kind of like Dale.

This is just, to me, prolonging it, after we've already spent the time discussing and identifying, and, like $I$ said, if something happens that we can't move with this, then $I$ think it was suggested at the last meeting that we scrap this, and we not scrap the IFQ, but scrap $36 B$ and $36 C$ and go back to the drawing board and figure out what does this fishery need to move it forward, but I'm kind of like Dale, and I don't want to stall in -- I am kind of caught off-guard with this, and $I$ need to think about it, but my initial reaction is let's see where we get with this, and, if that doesn't work, in August, when we have new council members at the table, we kind of start all over again, and I am mixed on this.

CHAIRMAN GUYAS: Thanks, Susan. Bob.
MR. GILL: Thank you, Madam Chair. To Dale's point, recollect that this group is facilitated, and $I$ view the facilitator as the driver to get to the endpoint, and we haven't had that, and that's something new, and, in my mind, that drives it to a more efficient process that has a likelihood of getting to the answer, whereas, clearly, the process we've been involved with has not, and so I don't see it as delaying, and I, frankly, see
it as expediting, because they are focused and driven in trying to get to that answer. Is it complex? Sure. Is it going to be hard? Sure, and I don't disagree with it, but we need a place to land that gives the hope of the council ultimately coming up with a document that's going to work.

CHAIRMAN GUYAS: All right. Are we ready to vote on this? It looks like yes. Okay. Let's raise hands for this one, and, Dr. Shipp, you can either raise your hand or shout it out, whatever is more convenient to do for you. All in favor of this motion, please raise your hand.

DR. SHIPP: Yes.
CHAIRMAN GUYAS: Thanks, Bob. Nine in favor. All opposed, please raise your hand. Okay. The motion passes nine to five.

MR. DIAZ: I just wanted to make a comment, while we're talking about stuff for them to review, and we just went through the presentation from the folk from the National Academy of Science on the use of limited access privilege programs in mixed-use fisheries, and I think that presentation, or having that report accessible to them, and having that presentation during that timeframe, would be something that would be good for the group to have access to. Thank you.

CHAIRMAN GUYAS: Thanks, Dale. Leann.
MS. BOSARGE: When we -- I think we made this motion at our last meeting, to form this focus group, right, or so August, and we have preferreds. In 36B, we have preferreds on everything, and I asked when we were going to go out to public hearings on that, and we said, well, I guess we better wait until we do the focus group and hear back from them, and I wasn't real excited about that, because we've been working on that document for a long time.

That document is purely about a permit requirement tied to ownership of shares, right, and the options for how long we get somebody to do that and then will anybody be grandfathered, but it's just about that one topic.

Now I see where we're going to advertise this before January, and now we'll meet in January, in closed session, to review the applicants and populate it, and so that means we won't get any kind of report back on them meeting until April, at the earliest, if you convene them between the January and the March/April meeting, and so we won't see 36 B again until June,
probably, and, I mean, that's my last meeting, and I sure had hoped to maybe finish that, since I've been working on it for like six years or something at this point, before I roll off the council.

I mean, do we have to hold 36B up, at least from public hearings, to wait for nine people to give us their opinion? I do have some fears about a nine-person group recommending those sorts of changes for an entire industry. I mean, I know we had a focus group in shrimp, but that focus group was really for one tiny change to -- A change to one tiny piece of one type of data collection, and it wasn't to change the whole scope of shrimp management in my fishery.

I don't know, and, I mean, I don't think it's a bad idea, and I think it's a worthy endeavor, but $I$ do think we're pretty far along in 36B, and, if you want some feedback on whether it's good or bad from the industry, I think it's time to take that to public hearing across the Gulf of Mexico and get feedback from all of them and not just from nine of them, and I think that's fleshed out enough, and so that's my question. Can we see 36B again before this group meets and we get a report and all that? Can we send it to public hearings and get a broader perspective on it from the fishery?

CHAIRMAN GUYAS: While people are thinking about that, I'm going to go to Ava, because her hand is up.

DR. LASSETER: Thank you, Madam Chairwoman, and so I had my hand up before you passed the motion, and so I'm good with that motion carrying, because what I wanted to comment on was the idea that, at the council, we have really struggled with addressing these goals and objectives, and so I did like the idea of this focus group diving into those, but I do think it's very important that they tie any problems that they want to recommend be addressed and how to address those to the goals and objectives.

When Mara made the comment about procedural terms, in that having them address the goals and objectives, while you guys may not be willing to accept those, I think we definitely need to accept that, and this group, within the same meeting, could address potential recommendations for goals and objectives as well as some of these changes to make, but $I$ just really think kind of keeping those things together $I$ think is important for the progress of whatever document might come out of this as well. I think that's kind of moot, because the motion did carry, and so I will turn it back over.

CHAIRMAN GUYAS: Dr. Simmons.
EXECUTIVE DIRECTOR SIMMONS: Thank you, Madam Chair. Dr. Lasseter, $I$ don't know if you heard some of the questions and a request that Ms. Bosarge was asking about regarding 36 B , but, from what I recall, where we left 36B, and I'm hoping you can help out with, is there is quite a few things that still needed to be addressed, including updating the information, in order for the council to sign-off on that revised public hearing draft, and then we had planned to do a direct mailout to receive comments, and we had not planned to do in-person public hearings, and is that correct, and could you give us an update on that, please?

DR. LASSETER: Yes, absolutely, and so the plan for public hearings was to do one, or possibly, two virtual webinar public hearings and to do a mailout to all shareholders and permit holders. Where we last left the document, yes, I believe there were preferreds on everything, but we had not actually fleshed out --

We haven't written the effects sections for some of those subactions, and then we did have to pull an additional data request that pertained to updating the numbers of accounts, and I'm not sure how long SERO staff would need for that. I will remind the committee that the preferred alternatives for 36 B were not to have that permit requirement go into effect until it was implemented, and so, if you did take final action, if you do go to public hearings now, before January, and you took final action in January, that document would be going through rulemaking next year while this focus group is meeting and discussing, and so you just may want to keep that in mind as well, that you may have moving parts going at the same time.

I'm sorry, and probably one more point is that, on your focus group, you have a potential participation role for a public participant, and your preferred alternative in 36B is to no longer allow that in the future, and so you may want to think about how that potential role would be in that program, because it would basically be a participation role that is not going to continue in the future, except for those that already have their shares.

CHAIRMAN GUYAS: Thanks, Dr. Lasseter, for that reminder. Leann.

MS. BOSARGE: Right, and so there is one public participant on
the focus group, whereas, when we take it out to public hearing, every public participant that happens to be part of that program will have the opportunity to give feedback, and so $I$ just don't see holding up that document for the nine-person focus group when we can send it out across the Gulf to all stakeholders and get feedback and begin to continue our work on that document.

CHAIRMAN GUYAS: Okay. Whatever we do or don't do with 36B and C right now, we still need to deal with this, and $I$ kind of looked at your cards, and $I$ know you have some more motions here, and so I don't know if other people have things to say about this group. We do need to provide some direction, ultimately, about what we're going to do with this group. Go ahead, Bob.

MR. GILL: Well, I don't want to monopolize the discussion, and so, if other folks have thoughts about this document that they want to share, I am happy to do it. I do have a couple more motions on changes that $I$ think would improve it, and, if nobody has any discussion, $I$ will discuss them.

CHAIRMAN GUYAS: I would say, if people have motions that they would like to put on the table, it is $4: 41$, and it is the time.

MR. GILL: Thank you, Madam Chair. One of the -- We just talked about the public participant, and one of the things that $I$ would like to suggest, or flashed in front of my face, was $I$ think it would be helpful for this group that not everybody has a vested interest in the outcome, and so my thinking about the public participant is that he's not a shareholder or holds allocation, and so, on the other hand, you want somebody that knows and understands the program well enough that he can be a contributor and have something to say about it, and so $I$ have a motion to that effect, Bernie, the participant motion, the first one, that little two-liner.

Part of my thoughts are that, if he's not in the program, one, he's not vested, but, two, he has a different perspective, and he is one of nine, and so he's not a driver, but he can help provide a different viewpoint that may not be seen by everybody that's vested in the program.

My motion is that the public participant in the IFQ focus group be well versed in the program, but not hold shares or allocation. I am thinking it might be an academic, or it might be somebody who studies IFQ programs, et cetera, and it might be Doctors McCay and Smith or whomever, as opposed to a participant in the program.

CHAIRMAN GUYAS: Just to clarify, we are speaking more to a true member of the public and not necessarily -- Not a public participant in the way that we have described it and discussed it in the context of the IFQ program, where we've talked about a public participant being someone that doesn't have the permit.

MR. GILL: Correct.
CHAIRMAN GUYAS: Okay. Are you saying, Bob, that we should replace the public participant on this list with a member of the public that has knowledge?

MR. GILL: That was my intent, and $I$ wasn't hung up on the terminology, but you're right, and you're describing it as $I$ was thinking.

CHAIRMAN GUYAS: Okay. Is there a second for the motion? I will read it. That the public participant in the IFQ focus group be well versed in the program, but not hold shares or allocation. Are you seconding, or are you raising your hand? Are you seconding, Troy? Okay, and so it's a second contingent on a terminology change. How about this -- Andy, go ahead.

MR. STRELCHECK: You, I think, stated it, and so a "public participant" is defined with regard to what the council did in terms of allowing public participation in the program without a permit, right, and so it's anyone that is actively involved in the program that doesn't hold a reef fish permit, and so that was our intention here.

It sounds like what you're suggesting could be a tenth role, or participant, in this group, unless you're really wanting to exclude the true public participation role that operates within the IFQ program.

CHAIRMAN GUYAS: Let me see if $I$ can try to reword your motion here, Bob, to I think what you mean, and you don't have to accept this, but I think your motion is to replace the suggested public participant on the focus group with a person who is well versed in the program, but does not hold shares or allocation.

MR. GILL: That works for me. Thank you, Madam Chair.
CHAIRMAN GUYAS: Okay. Replace "public participant in the IFQ program" with "a person who is well versed in the program, but does not hold shares or allocation". Okay. I think we're there. Okay. Here is what $I$ think the motion is, and you all
take it or leave it. Replace the public participant in the IFQ Focus Group with a person who is well versed in the program, but does not hold shares or allocation. Bob, yes. Troy, since you're the seconder.

MR. WILLIAMSON: I don't think you want to replace the public participant on the focus group. Those folks have a dog in the hunt. What you want is a neutral party in addition to the people that are now populating, and you want ten people on the focus group, and one of those ten is going to be a neutral party, just somebody that is well versed in the IFQ program, but doesn't hold shares or allocation. That's what we're looking for.

CHAIRMAN GUYAS: I hear what you're saying, but $I$ don't think that's Bob's motion, and so you can withdraw your second, if you want.

MR. GILL: I think that's a different concept, and I am not opposed to it, but I think that ought to be a substitute, because it projects a totally different idea on how to do it, and I would support it, but I think it ought to be another motion.

CHAIRMAN GUYAS: So do you want to keep -- Are you still seconding this motion, Troy?

MR. WILLIAMSON: Well, $I$ would make a substitute motion.
CHAIRMAN GUYAS: Well, if we don't have a second for this motion, then this motion is gone, and this is why, and so is there anyone who would like to second this motion? Going once, going twice. I am not seeing a second.

DR. SHIPP: I will second it.
CHAIRMAN GUYAS: Bob Shipp saves the day. Thanks, Bob. Okay. We've got a motion on the table.

DR. FRAZER: I would like to make a substitute motion.
CHAIRMAN GUYAS: Go right ahead.
DR. FRAZER: The substitute motion would be add to the membership a public participant who is well versed in the program, but does not hold shares or allocation, and so it is a tenth member.

CHAIRMAN GUYAS: I think you mean a person who is well versed in the program, but does not hold shares or allocation.

DR. FRAZER: Okay. Add to the membership a participant.
CHAIRMAN GUYAS: I think the problem is that "participant" is used specifically as someone who is participating in the IFQ program, and so this is not a participant. Right?

DR. FRAZER: All you have to do is add to the membership --
CHAIRMAN GUYAS: I would suggest that your motion be to add to the membership of the focus group a person who is well versed in the program, but does not hold shares or allocation.

DR. FRAZER: Yes, that's my intent.
CHAIRMAN GUYAS: Yes. Okay, and so here is our substitute. Add to the membership of the IFQ Focus Group a person who is well versed in the program, but does hold shares or allocation. Is there a second for the substitute? All right. The motion is seconded. Is there discussion on the substitute? Andy.

MR. STRELCHECK: Just to, I guess, understand better what we're looking for here -- I mean, a person who is not holding shares and allocation is very broad, and so we could get all sorts of applicants, and are we thinking academic or a federal Fisheries Service employee or an NGO representative, or what is the thought process around this, so that we can have a better understanding and maybe lay this out better for applicants?

DR. FRAZER: Well, in my view -- I mean, we just listened to a presentation where there were kind of economic considerations and ecological considerations and social justice considerations, right, and the participant list, as $I$ see them now, don't necessarily capture all of that, in my view, and so it's just adding one.

CHAIRMAN GUYAS: Bob.
MR. GILL: Thank you, Madam Chair. At the end of the day, the council is going to make the selection of who is in and who is out, and we'll have the discussion of the concerns that you raised, Andy, at that time, and I don't quite see that we need to go into that detail in the motion.

CHAIRMAN GUYAS: Any other discussion on this? All right. Let's vote on the substitute motion here. Is there any

## opposition to this motion? I see one opposed. The motion passes. Ava.

DR. LASSETER: Thank you very much. Just building a little bit on what Andy was just saying, we may get a lot of people just clicking this box and saying, hey, $I$ can do this, and $I$ don't have shares or allocation. Is there maybe something that could help us as staff, when we do try to start organizing all of this, to put forward to you, in terms of should they maybe have -- How would they demonstrate their well-versedness in the program? I heard academic and NGO and all of this thrown out. With this just the one position, $I$ would be a little worried about getting just blanket people from the public applying, and I won't know how to organize that for you.

## CHAIRMAN GUYAS: Susan.

MS. BOGGS: I mean, I just have to say that this is how we take something that seems so simplistic and complicate it to the point that we are so back far in the weeds that it may this time next year before we get past this discussion.

CHAIRMAN GUYAS: All right. Any guidance for Ava right now? I guess we can think on this a little bit and come back to this at Full Council, if we have to, at least in regard to what kind of direction we would want to provide staff as they solicit members of this group and applications, I guess. Okay.

What else have you all got? We're done with this motion, yes, and we voted on this. We are not done with the focus group though, because we need to -- If we are happy with this group, or $I$ guess the proposal for this group, as we have modified it through motions, then we probably need to tell staff that we want to move forward with getting applications. I would suggest, if everybody is satisfied, that we get some kind of motion to that regard, and then we can close out the discussion on the focus group. Once again, we need a motion. What are we doing? Bob.

MR. GILL: I will make a whirl. We move that the process document provided be utilized to advertise and solicit members of the focus group.

CHAIRMAN GUYAS: Okay. Is there a second for this motion? It's seconded by Leann, and $I$ think it's clear that we've made some motions to modify this a little bit and that all that would be wrapped up in this. Any discussion on this? Is there any opposition to this motion? Susan is opposed. Any other

## opposition to this motion? The motion passes with one opposed. Okay. Leann, I know you had something to say.

MS. BOSARGE: A couple of things. First, let's start with 36B, and then $I$ will kind of get on to something else that $I$ want to see happen with this. For $36 B$, $I$ would like to make a motion that staff take 36B out to public hearings. By take it out to public hearings, if it's virtual or whatever, so be it, and that's just my language for getting public hearings.

CHAIRMAN GUYAS: Okay. We have a motion on the board to take Reef Fish Amendment 36B out for public hearing. Is there a second for this motion? It's seconded by Susan. Any discussion? Carrie.

EXECUTIVE DIRECTOR SIMMONS: Well, when you say public hearing, do you mean the virtual hearings, or do you mean in-person hearings, or do you mean the mailout? Can you clarify that, please?

MS. BOSARGE: However you plan to do it, and that's fine. I want to garner broader input from the public, over and above the nine-member focus group that we have, and so I think it's important to get that diverse feedback from the public on that document, so that we can look at that along with some focus group feedback, but $I$ would be remiss in making a decision on 36B without that broader feedback to go along with the focus group, and I think we're far enough along in that document that it's time, and we should look at feedback from both of those groups together and then make a decision on what we're going to do.

CHAIRMAN GUYAS: Thanks, Leann. Emily.
MS. MUEHLSTEIN: Just to talk through this idea for the public hearings and what we can do, I think we can set a number of webinars, as Ava suggested, as well as complete a direct mailout to shareholders and permit holders. The other thing I would like to suggest is that we put an ad on commercial Fish Rules, and potentially recreational Fish Rules, in order to sort of get the information out to the broader audience that might not be shareholders or owners.

CHAIRMAN GUYAS: Thanks, Emily. Carrie.
EXECUTIVE DIRECTOR SIMMONS: Thank you, Madam Chair. Ava, I guess, just so we all understand, the version of the document, Amendment 36B, that's on the website currently, for amendments
under development, that doesn't have the most recent changes from whenever we talked about this, the August council meeting, and these are running together, but incorporated into it yet, and is that correct?

DR. LASSETER: My understanding is that it would -- What's posted is probably the last version that would have been taken to the council meeting, and so, at that meeting, I think you did make some changes. I apologize, and I didn't look this up right before, and $I$ am pretty sure the last time you looked at it, which would be the version that's posted, you did also make those last decisions, from the presentation that $I$ gave, and so the document online has not been modified to reflect all of that, because we generally upload a new version for the next council meeting, and so, when you put it on hold at the end of that, we just -- I think $I$ have a version that $I$ started making the changes in, but I haven't posted it.

MS. BOSARGE: It's my recollection that we picked preferreds at that meeting on everything, and the changes we made to the document -- We didn't add anything to the document, and we actually removed things from the document at that meeting, and we streamlined it a little bit, and so $I$ don't think it is out of the realm to take it out to public hearings, either before the January meeting or, at the latest, before the April meeting, so that we could have that feedback, along with focus group feedback, in April.

CHAIRMAN GUYAS: Thanks. Greg.
DR. STUNZ: What I heard Carrie say -- Personally, I wasn't in favor of moving this out to public hearing yet, even though we picked preferreds, Leann, and $I$ understand that, because I thought there was more work, at least in my mind, that we could do to improve that document.

I felt that Bob's workgroup, when we were having that discussion, whenever that was the last time, was going to help improve not only this motion, $I$ mean not only $C$, but $B$ as well, and so I think it would -- In my mind, it would be best to wait to hear what this group says and not rush this. I mean, obviously, we've been debating this for a long time, and we want to get this right, and so I'm in favor of holding off for the public hearing, at least for now and until we can hear a little more from this workgroup and others.

CHAIRMAN GUYAS: Thanks, Greg. Okay Let's vote on this, because we're a little bit pressed for time, and we probably
need to move on, unless there's other motions that people have. All in favor of this motion, which is to take Reef Fish Amendment 36B out for public hearings, please raise your hand.

DR. SHIPP: Yes.
CHAIRMAN GUYAS: Three. All opposed. The motion fails three to eleven. Anything else IFQ related right now? Leann.

MS. BOSARGE: So we're pretty far down this focus group path, but I'm still going to throw it out there, and I don't know if it's something that we want to look into or not, but $I$ guess $I$ always thought -- So 36B, to me, is pretty streamlined, and it's something that really had been talked about since the program was first implemented, this idea of ownership and permits, and that had the sunset, in order to get the votes to implement the program, and, anyway, it was a pretty direct question, right?

Now, 36C, that document, to me, was the one that was all over the place, and I really didn't feel like it had a direction, and where was it headed, and what was the purpose, and I kind of always thought that maybe a good idea would be to -- We formed that ad hoc IFQ AP, or ad hoc IFQ, right, and it is a very diverse group of individuals.

If you listened to the meetings, you certainly would walk away with that, even not knowing any of the players in the room, because, I mean, there are shots across the bow constantly, and everybody is disagreeing, and so it's pretty diverse.

I kind of thought what we should do is go back to that group with a facilitator and have it be a roundtable discussion. Don't send them our document that really has no direction whatsoever, and it's all over the place, but have a roundtable discussion and say, all right, hindsight is 20/20. If you were redoing this IFQ, what would you have done differently, looking back?

Get an answer and write some things down, and then say, all right, well, guess what, we're not starting over, and we have a program that's up and running, and it's established, and it's people that are vested, and so are there any of these things that we can somehow get to, and how would you get to those, and, to me, that was the path that I probably would have taken.

I don't know if that can run in conjunction with our focus group. I do, Bob, think your focus group is a good idea, because it's a smaller number of people, and there's something
to be said for that, about getting results from a smaller group, and I also have a lot of faith in that ad hoc that we have, and is that something that we want to entertain as an idea as well? We can get feedback from both at the same time, and you've already populated one, and you just have to convene them. I don't know, and it's just an idea.

CHAIRMAN GUYAS: Thanks, Leann. It's something to think about, certainly. It is about 5:04, and we are scheduled to go until 5:30, and today is our last day with Dr. Nance in-person, and so, at this point, I think we need to move on, and we're going to jump way ahead, and back to Dr. Nance, so that he can talk about the SSC discussion on the final Great Red Snapper Count and LDWF red snapper abundance, and then we'll figure out where we are and decide how we want to take up the rest of the stuff on our agenda. Welcome back, Dr. Nance.

## DISCUSSION: SSC RECOMMENDATION ON FINAL GRSC REPORT AND LDWF RED SNAPPER ABUNDANCE STUDIES

DR. NANCE: Thank you, Madam Chair. I appreciate being here. I just wanted to go over the -- Let's bring up Slide 25. We had Dr. Benny Gallaway from LGL Ecological Research that presented an overview of a project commissioned by the Louisiana Department of Wildife and Fisheries to estimate absolute abundance of red snapper off of Louisiana.

The draft Great Red Snapper Count report imputed data for waters off of Louisiana from Texas data. The Louisiana red snapper management area was divided into three regions of west, central, and east, and each zone was further divided into four depth zones of ten to twenty-five meters, twenty-five to forty-five meters, forty-five meters to 100 meters, and 100 meters to 150 meters. Sampling of 106 sites, thirty-five on the west, thirtythree on the central, and thirty-six on the east, occurred during the summer and fall months of 2020.

Hydroacoustics were used to identify red snapper and estimate abundance. Submersible rotating video sampling was deployed at discrete sites near structure and paired with the hydroacoustic sampling. A generalized additive model was used to quantify total fish density, while a generalized additive mixed model was constructed to identify the proportional density of red snapper.

The LGL study estimates an absolute abundance of around sixmillion red snapper in the offshore waters of Louisiana. The standard error for this estimate was about 13.1 percent. Most snapper were thought to occur off the UCB, the uncharacterized
bottom, approximately 63 percent, following by standing platforms at 22 percent, natural banks at 10 percent, pipeline crossings at 3 percent, and, lastly, artificial reefs at 2 percent.

Red snapper abundance and biomass estimates from the LGL study were markedly less than the Great Red Snapper Count for Louisiana. Several SSC members commented that the difference could be heavily influenced by catch rates observed between the two studies.

The SSC discussed the limitations of interpreting the LGL study results without more information on the sampling design. The SSC requested written documentation from the Louisiana Wildlife and Fisheries detailing the sampling design used in the study, and so our next steps outlined from the SSC were, number one, evaluate the LGL study sampling design, determine if the LGL study can supplement the Great Red Snapper Count for Louisiana, and compare those independent study abundance estimates with the National Marine Fisheries Service bottom longline survey. This would require a future dedicated meeting to be able to do that, or part of our January meeting.

Dr. Stunz then reviewed the final results of the Great Red Snapper Count and the response to reviewer comments received in April of 2021. A stratified random sampling design was used in place of the original random forest approach. Additional variability was captured. Estimators and calibrations were redefined, and modification of post-strata based on suggestions from the reviewers.

The contribution of the uncharacterized bottom was reevaluated. Alternate estimator of variance was captured, which captured additional uncertainty, and another to reduce bias were developed. Final results were 118 million red snapper age-two, with a CV of 15 percent.

The SSC discussed how to get from an estimate of absolute abundance to a point where a catch level could be recommended. The SSC members thought that having the Great Red Snapper Count move through the SEDAR process, for thorough consideration, was most appropriate. The SSC was clear that the Great Red Snapper Count and the LGL study should be treated completely separately and not directly compared.

The motion was considered with the SSC, and the motion read: SSC recommends the design and data of the Great Red Snapper Count are suitable for consideration in the SEDAR 74 process. The SSC
also recommends further evaluation of the estimates of absolute abundance and the methods and analysis used for estimation of the red snapper population, and that motion carried with no opposition. That, Madam Chair, is my report.

CHAIRMAN GUYAS: Thanks, Dr. Nance. Are there any questions on this item? Bob.

MR. GILL: Thank you, Madam Chair, and I think this question is for Ryan, but I guess I'm a little bit confused how this is all going together. We have the recommendation from the SSC to take the GRSC to the Science Center and do their thing, in terms of the SEDAR process. On the other hand, we have the LGL study, which is undergoing review by LGL, and then it's going back, I guess, to the SSC at some point in time.

DR. NANCE: That's correct.

MR. GILL: How does this all integrate together, at the end of the day, and what does that timeline look like?

MR. RINDONE: At this point, the SSC needs to see more information about the sampling design for the LGL study before they can make any determination about what to do with that information, and so, right now, all they're really left with, in terms of studies that estimate the absolute abundance in the Gulf, and specifically Louisiana, is the Great Red Snapper Count. Right now, for absolute abundance estimates, that's it.

Now, once the LGL study, the sampling design for it, can be evaluated, then the SSC can consider whether that estimate should also be considered as part of the SEDAR process for SEDAR 74 for red snapper.

Given the nature of those data, and the fact that we're trying to use these absolute abundance estimates to help better inform some of these indices of relative abundance that are most often used for a lot of our stock assessments, red snapper being no exception, the SSC thought that the SEDAR process is still the best path to move forward on. There are so many other things that are at play besides just how many fish are out there that are two years old or older, and Dr. Nance can speak more to the nuances of the SSC's discussion on that.

CHAIRMAN GUYAS: Are there other questions? Dale.
MR. DIAZ: I think we're wrapping up, and I just want to take a minute to thank you, Dr. Nance. One, for being willing to be
the chair of this group, but the SSC did a long four-day meeting the last time, and I've been to two or three SSC meetings, and two days just kills me, and, I mean, it's like I am so worn out, and for you all to go over that technical stuff for four days in a row, just make sure that the $S S C$ knows that we appreciate it, all your hard work, and we appreciate the good scientists that we have on there, also. Thank you, Dr. Nance.

DR. NANCE: I want to say that the SSC members that are on that committee are great, and $I$ appreciate the council and their deliberations in putting those individuals on it, and I think we have a great group of scientists that are providing good information, and $I$ will certainly pass that on, and I appreciate, when $I$ come here, to be able to present to the council, and I appreciate that opportunity. Thank you.

CHAIRMAN GUYAS: All right. Thanks, Dr. Nance. We've got fifteen-ish minutes. Dr. Diagne, do you want to do vermilion snapper? I feel like this is déjà vu, where you get the last agenda item of the day, and we are kind of rushing you, and I feel like this happened at the last council meeting. Are you available to walk us through vermilion snapper?

## DRAFT FRAMEWORK ACTION: MODIFICATION OF VERMILION SNAPPER CATCH LIMITS

DR. ASSANE DIAGNE: Thank you. Fifteen minutes will be plenty of time to cover vermilion snapper. Thank you.

CHAIRMAN GUYAS: Awesome. We're ready.
DR. DIAGNE: I will wait for Bernie to put the document, please, and, before that, $I$ will just say that, as you know, this framework action is a follow-up to SEDAR 67, and the conclusions were that vermilion snapper is not overfished, and overfishing is not going on. If we scroll down to the purpose and need statement, we will quickly go over the purpose and need and then present the two alternatives that are included in the framework action.

The purpose of this action is to modify the OFL, ABC, and ACL, as applicable, and consistent with the most recent stock assessment for Gulf vermilion snapper and with the SSC and the Reef Fish AP's recommendations, and so it's a pretty straightforward purpose for this action.

If we scroll down to the management alternatives, we only have two alternatives here, a status quo alternative, Alternative 1,
which is going to be no action, and this alternative would retain the existing OFL, ABC, and ACL for vermilion snapper, as implemented in 2018 by Reef Fish Amendment 47, and the little table here gives us the OFL, ABC, and ACL. We would like to remember that, here, the measurement unit is in CHTS.

For that reason, the catch limits in Alternative 1 do not represent the best scientific information available, and so, as such, Alternative 1 is not a viable alternative, and so we are left, essentially, with Alternative 2.

Essentially, for this alternative, Alternative 2 would set a constant catch $A C L$, which is equal to the $A B C$, for the years 2021 to 2025, and, of course, consistent with the recommendations made by the SSC, and that's the time interval between 2021 and 2025, and then the ACL would be maintained at that level until modified in a future council action. These are the two alternatives included in this document, and $I$ am going to pause here and take questions, if the committee has any.

CHAIRMAN GUYAS: Hang on, Assane. We've got a question for you from Bob.

MR. GILL: Thank you, Madam Chair. Assane, did the SSC just provide a constant catch yield, or did they provide a yield stream from which they derived a constant catch? Normally, we tend to see constant catch as an alternative to a yield stream, but this doesn't seem to be the case here.

DR. DIAGNE: My recollection is that is not the case, but $I$ may be mistaken here, and I would look to John, perhaps, Dr. Froeschke, if he could add something to that.

DR. FROESCHKE: I don't recall, but I suspect, since the stock was very healthy, and it is probably over BMSY, that it resulted in a declining yield stream, and so they may have elected to go with the constant catch, and I would have to check.

CHAIRMAN GUYAS: Okay. I don't see any other hands up right now, Assane, if you have more to present.

DR. DIAGNE: Then $I$ would just ask the committee whether -About the next steps, and our plan would be to bring a document ready for final action next time, but that would presuppose the selection of a preferred alternative. Although there is no analysis in the document, given that Alternative 1 is not a viable alternative, then, by default, $I$ guess we would assume that Alternative 2 is going to be the preferred alternative when
we write the document, unless the council wants to offer a motion in that direction.

CHAIRMAN GUYAS: Right. Thanks, Assane. Bob.
MR. GILL: Thank you, Madam Chair. I would like to make motion that, in Action 1, to make Alternative 2 the preferred.

CHAIRMAN GUYAS: All right. Thanks, Bob. We will get that on the board.

DR. SHIPP: I will second it.
CHAIRMAN GUYAS: All right. Thank you for the second. Is there any discussion on this? This is a pretty straightforward one, relatively speaking, at least the way our day has gone so far. All right. Our motion is on the board now. In Action 1, to make Alternative 2 the preferred. Is there any opposition to this motion? Seeing none, the motion carries. I think, with that, Assane, I think we more or less are ready to take this final the next time we see it.

DR. DIAGNE: Yes, Madam Chair. We will bring, in January, a document ready for final action. Thank you.

CHAIRMAN GUYAS: We've got one hand from Kevin though. Hang on just a second. Kevin, go ahead.

MR. ANSON: I meant to catch it earlier, but Assane moved from the purpose and need into Action 1, and I am just curious, and I noticed, since we've had some stock assessments, and some results of stock assessments, and trying to take administratively care of those, that the purpose and need of some prior framework actions to modify the OFL and such, based on those stock assessments, referred to -- Their language is a little different, in the second paragraph at least, whereas -I'm looking at the red grouper one, and it says the need is to revise the OFL, ABC, ACLs, and ACTs, although this wouldn't apply, necessarily, to ACTs and such, but consistent with the best available science for vermilion snapper, and $I$ just wondered, just to make it consistent with the other documents. Again, it was something that $I$ think we had made some emphasis in changing in those other documents, for those species, and I just didn't know if we needed to carry it over to this one too, for consistency purposes.

CHAIRMAN GUYAS: Thanks, Kevin. Go ahead, Assane.

DR. DIAGNE: Thank you, Madam Chair. Thank you, Mr. Anson. we will certainly revise the need statement to make it consistent across documents, but the intent is the same.

CHAIRMAN GUYAS: Anything else on vermilion? All right. It looks like we're good to go. The items that we have left, and we have six minutes remaining, are yellowtail and other business, and so, Mr. Chair, I will look to you about how you want to handle the rest of this committee.

MR. DIAZ: Okay. Being as we have a question-and-answer session scheduled for this afternoon, and $I$ know that some folks are already outside for it, and the agenda items that we have left will probably take at least thirty minutes, and so I don't see us taking them up now, and can you handle that other business item during Full Council, when we get to Full Council?

## CHAIRMAN GUYAS: Yes.

MR. DIAZ: So we'll take care of that there, but I am going to try to apply something that I learned from Madam Chairwoman Bosarge, and we're going to start at 8:00 in the morning, instead of 8:30, and we'll take up the last agenda item and try to get through that in thirty minutes. I don't want to cut into Ms. Boggs' time, and she's got a full agenda for Data Collection tomorrow, and so, if it's all right with everybody, we're going to start at 8:00 in the morning. Ms. Somerset, can you tell us a little bit about what we're doing tonight with the virtual public hearing, please?

MS. CARLY SOMERSET: Sure. Thank you. We will be doing our question-and-answer session immediately following when we wrap this up, and it will be a virtual and in-person, and so feel free to stay. We're going to be focusing on the SEFHIER reporting, the for-hire reporting requirements, first, but we'll also take general questions after we've taken some of those, just because the implementation date for the VMS portion is coming up soon, and so we'll get that started, and we'll get the webinar up as soon as we can, and we'll get that going for everybody.

MR. DIAZ: What's your estimate of time for when we're going to start that, just so folks will kind of know?

MS. SOMERSET: As soon as we get the webinar going, and so five or ten minutes, at the max, if that's okay with you, Mr. Chair.

MR. DIAZ: Yes, ma'am. Thank you.
(Whereupon, the meeting recessed on October 26, 2021.)

October 27, 2021
WEDNESDAY MORNING SESSION

The Reef Fish Management Committee of the Gulf of Mexico Fishery Management Council reconvened on Wednesday morning, October 27, 2021, and was called to order by Chairman Martha Guyas.

MR. DIAZ: Good morning, everyone. We're going to go ahead and get started. We have one item left to cover this morning that is left over from Reef Fish, and Ms. Guyas is going to guide us through that item. Ms. Guyas.

CHAIRMAN GUYAS: All right. Thank you, Mr. Chair. We will resume the Reef Fish Committee, and we are on yellowtail snapper, which is Tab B, Number 8(a), and Ryan is going to walk us through that one.

## DISCUSSION: DRAFT SNAPPER GROUPER AMENDMENT 44 AND REEF FISH AMENDMENT 55: MODIFICATIONS TO SOUTHEASTERN U.S. YELLOWTAIL SNAPPER JURISDICTIONAL ALLOCATIONS, CATCH LIMITS, AND SOUTH ATLANTIC CATCH LIMITS

MR. RINDONE: Thank you, Madam Chair. This is formally going to be Snapper Grouper Amendment 44 and Reef Fish Amendment 55, and it's kind of a working title, but, generally speaking, Modifications to the Southeastern U.S. Yellowtail Snapper Catch Limits, Jurisdictional Allocation, South Atlantic Sector Allocation, and South Atlantic Commercial Management Measures.

What I am going to try to focus on in this presentation is the stuff that is targeting things that will affect the Gulf Council, and so we're going to walk through this, and we're kind of in the options stage at this point, trying to figure out exactly what to put in for actions and alternatives for you guys. The South Atlantic Council mapped out quite of what they wanted for actions and alternatives for their portion of the yellowtail management.

The impetus for this amendment is to address the outcomes from the SEDAR 64 stock assessment, which found yellowtail to be
healthy, but there were a couple of corrections made in this model from the last model, and that resulted in a lower estimate of the overall biomass of yellowtail, and so, even though we've incorporated MRIP-FES here, the actual biomass estimated to be present was revised downward a little bit.

You guys should give us some feedback as we go through this presentation and let me know what you think about what we're proposing putting in here for actions and alternatives for the Gulf Council, and then we will get a document together for you guys to look at next time.

We manage yellowtail jointly with the South Atlantic Council, and yellowtail is primarily a Florida stock. More than 99 percent of the yellowtail landed in the Gulf are landed off of Florida, and more than 99 percent of yellowtail landed in general are landed off of Florida, whether it's the Gulf or the South Atlantic, and we split management with the South Atlantic Council at the jurisdictional boundary near the Tortugas.

I guess just a little interesting thing, and so this bar right here is from a commercial vessel, and this is how yellowtail are dehooked when commercial fishing for them is going on. They drop the fish down into that hatch there right behind that bar, and they pull the line down over that horizontal bar, and the hook just pops right out, and this is a really efficient dehooking method for these fish, and, given their small mouths and everything, that's why we made that revision a few years ago to allow the use of j-hooks for yellowtail, because they dehook very quickly with this method. I just thought that was interesting.

The fishing season for yellowtail is August 1 to July 31, and this was designed to allow any closure to occur during the peak of the yellowtail spawning season, due to the warm nature of the waters in which most of the biomass exists, which is around the Keys and southeast Florida, and yellowtail do spawn year-round, but it peaks in the summertime. There is no commercial possession limit, and the recreational limit is ten fish per person per day with a minimum size limit for both sectors of twelve inches total length.

For the Gulf Council, it's apportioned 25 percent of the total yellowtail stock $A B C$, and we manage with a stock ACL, meaning that there are no sector allocations, and, based on the last application of the council's ACL/ACT Control Rule, we have established an 11 percent buffer between the Gulf's portion of the $A B C$ and the Gulf ACL.

We have the post-season accountability measure for yellowtail, and it states that, if the ACL is exceeded, then, the following year, the season is closed when the ACL is expected to be met.

There is a little bit more to the management in the South Atlantic Council's jurisdiction, which gets 75 percent of the stock ABC, and they have sector allocations over there, with 52.56 percent going to the commercial sector and 47.44 percent to the recreational sector, and this is based on an allocation formula that they've used for several species.

The commercial accountability measures are, for in-season monitoring, when the $A C L$ is reached, and this should say the sale of yellowtail is closed, and, for a post-season, if yellowtail snapper is overfished, and the ACL is exceeded, then the following year's ACL is reduced, and so, if the stock is in a bad way, they payback provisions are used.

For the recreational accountability measures, for post-season, again, if the $A C L$ is reached, the following year's season is reduced, to make sure that the $A C T$ is reached. Overall though, like $I$ said, if the stock is overfished, and the ACL is exceeded, the following year's ACL will be reduced by the amount of that overage.

We are here because of SEDAR 64, which had a terminal data year of 2017, and so it's starting to get a little dusty on that one, and that's why we put it on the SEDAR calendar for 2025. This stock assessment updated the recreational catch and effort data using FES, which adjusted those estimates back to 1981, and, of course, the recreational landings and effort under FES are greater than previously estimated through CHTS, and this could have impacts on the allocation between the Gulf and South Atlantic Councils. Importantly though, yellowtail is still considered to be healthy and not overfished and not undergoing overfishing.

The stock ABC is 4.05 million pounds whole weight, and this accounts for -- This does account for discards, and the ABC is split 75 percent to the South Atlantic and 25 percent to the Gulf, and it's based on the historical landings from 1993 to 2008, and so a 50 percent weighting to the average landings from that time period, and then 50 percent weighting to the average landings for the last three years of that time period.

This jurisdictional allocation used data from the Marine Recreational Fisheries Statistics Survey, which predated MRIP,
and you can see the proportions of the ABC allocated to each council down there, and so about three-million pounds to the South Atlantic and about a million pounds to the Gulf.

Both councils' Scientific and Statistical Committees met about yellowtail, and the resulting catch limits begin higher than the current MRFSS catch limits, but we're using the MRIP-FES data currency here, and so that's important to remember, and so the current limit in MRFSS is 4.05 million pounds, and the proposed MRIP-FES limits for 2021 to 2025 and subsequent years are shown down there, and we're fishing down to that lower equilibrium, and that's because the stock biomass is above the biomass at maximum sustainable yield.

Some actions to consider are modifying the jurisdictional allocation for yellowtail between councils, based on FES, modifying the catch limits, the OFL, ABC, ACLs, and the South Atlantic Council's ACTs, modifying the South Atlantic sector allocation to account for $F E S$, and modifying the South Atlantic commercial trip limits.

If we applied MRIP-FES using the same formula that gave us the $75 / 25$ split we have now, it would result in a revised allocation to the council of 81 percent to the South Atlantic and 19 percent to the Gulf, and this just recognizes that there is more recreational fishing that's going on in South Atlantic waters, and so the majority, historically anyway, of yellowtail landings in the Gulf have come from the commercial fleet, but we've seen increases, recently, in recreational landings, and so we're starting to see more yellowtail even off of Tampa Bay, which has been kind of fun.

It's important to note, as far as the landings are concerned though, that Monroe County counts as part of the -- The Monroe County landings count towards the South Atlantic Council and not the Gulf.

This table here shows you the proposed catch limits under the current 75 percent/25 percent split, and so it would be very similar to what we have now. This shows what it would be under the 81 percent/19 split for updating to MRIP-FES, and, just as a frame of reference, in recent years, the Gulf has not been landing its portion of the $A B C$, and, in some years, it's landed only about half of its ABC.

You guys are generally pretty familiar with how all of this works with the catch limits, and so we don't use an ACT for yellowtail in the Gulf, and we have a buffer set between the

Gulf's portion of the $A B C$ and then the Gulf ACL, and we use the ACL/ACT Control Rule to determine that buffer, and so to account for management uncertainty.

If we compare the last four years of yellowtail landings, which accounts for the season change to that August 1 to July 31 fishing year, you can see -- Again, remembering that these average landings that are shown in that right-most column, those are in MRFSS, and the ABC that is shown for the 25 percent to 19 percent, those are both in FES.

If we're looking at this, you guys can think about -- Thinking about the fact that the majority of these landings are commercial, and even if there was a marked increase in the estimate of the recreational landings, and, after we do some more digging into the data and do a seasonal closure, we'll know more about whether the Gulf would face any sort of quota closure as a result of the new proposed catch limits.

CHAIRMAN GUYAS: Ryan, we've got a question from Bob.
MR. GILL: Thank you, Madam Chair. Ryan, on that graph, we've got apples and oranges, and so, from the same timeframe that you're talking, the up to 0.543 average landings, was it consistently below the $A B C$ during that same time, on an apples-to-apples basis, because you can't tell from this one.

MR. RINDONE: It generally was, and I used that time period to show that, because it's all the same fishing season, and we had received some updated recreational information for the landings in FES, but there were oscillations in the landings, from about 38,000 pounds to 250,000 pounds to 12,000 pounds, and, because of those very wild swings in the MRIP estimates of the recreational landings, we wanted to do some more investigation before we dug deeper into trying to put those data in front of you and use those for analysis.

Clearly there should be some questions, if we have a 200,000pound swing in the course of a year, and then it goes back down to 12,000 pounds a couple of years later, for the estimated landings in FES, and so we just wanted to dig into those data a little bit more before we put those in front of you guys for any kind of decision-making.

I realize that this is apples and oranges here, but just remembering that, historically, the majority of the yellowtail landed in the Gulf have been commercial, and so, even if 10 percent of these landings were recreational, which, in most
years, it's much less than that, but, even if it was 10 percent, and you multiplied that threefold, in most cases, even under the 19 percent scenario, until we get to the out years, like 2024 and 2025, it would be unlikely that we should be looking at a closure under those circumstances, all other things assumed being equal, but, again, we have to dive a little bit more into those data that $I$ was just talking about before we put those in front of you.

## CHAIRMAN GUYAS: Leann.

MS. BOSARGE: Thanks. I appreciate this table, and that was actually very helpful. Those are MRFSS, and I get what you're saying, that 0.543 is in the MRFSS, but most of it's commercial, and so the first question is, when you say most of it, what usually like 85 percent of it or so?

MR. RINDONE: Better than 90 percent, historically.
MS. BOSARGE: Better than 90. Okay. Then you did take a look at that back-calibrated FES numbers that we could plug into there, and you said sometimes it's like 12,000 pounds, and sometimes it's 200,000, and so the question -- If it was, we would, obviously, be over the $A B C$ some years, with these wild fluctuations.

MR. RINDONE: Yes.
MS. BOSARGE: Do we have a payback, because, if we do, we would actually have no commercial season the next year, because the payback would be double the quota for the next year.

MR. RINDONE: I mean, you wouldn't have any kind of season, because it's a stock $A B C$, and so it's the recreational and the commercial sectors fish off the same number.

MS. BOSARGE: Right. Well, that's what I am getting at. We would have a zero TAC the next year.

MR. RINDONE: We don't have a payback, and it's that the ACL is closed in the following year when it's projected to be met, and so, if it goes over in Year $X$, then, in the following year, $X$ plus one, the season is closed when it's projected to be met, but it doesn't close the first year.

MS. BOSARGE: So we would probably have an extremely short season, and that would project, if you landed double the quota, or triple the quota, the year before.

MR. RINDONE: Right, and, given the variability in the landings, at least based on the data that we received, where it's fluctuating 100,000 or 200,000 pounds between years for a stock that is still, at least historically anyway, has been a predominantly commercial fishery, and we acknowledge that that's changing, and that there's more yellowtail being caught recreationally in the Gulf. It would result in it probably being pretty difficult to accurately predict what the season should be.

MS. BOSARGE: Last question, if $I$ may, and did we have the same wild swings under CHTS? I guess you would have to look at it on a percentage basis.

MR. RINDONE: I would have to look at that.
CHAIRMAN GUYAS: John.
DR. FROESCHKE: Just as a follow-up to Leann's question though, in the event that you have highly variable catch rates year over year, in the event you have a very high one, unusually high, and then you had to do a projection on the following season and close, the projection is more complex than just saying, well, the catch rate in the previous year was three-times higher, and so we're going to assume that it's going to be that next year.

We would do a similar process that SERO has done, where they use a projection took that incorporates a number of years and things like that, and so it wouldn't necessarily mean that the next season is bound to be as short as it could be, assuming the catch rate stays at a very high level.

CHAIRMAN GUYAS: Tom.
DR. FRAZER: Just to clarify, right, you're not carrying forward any overage, and you would just --

MR. RINDONE: No.
DR. FRAZER: I just wanted to make sure.
MR. RINDONE: There is no payback provision for yellowtail in the Gulf. Again, yellowtail are not overfished or undergoing overfishing, and our current buffer between the ACL and the ABC is set at 11 percent. If we use the most recent management regime of that August 1 opening date, and we look at the landings in the Gulf, based on the way that the data are
collected for the commercial and the recreational fleets, and the fact that we haven't had any overages, it gives us a total stock ACL buffer of 8 percent.

The options that we're going to propose to you guys are to keep our current 11 percent buffer, use the 8 percent buffer, or just set the $A C L$ equal to the $A B C$ for the Gulf allocation, which is something that you guys often consider when a stock is not overfished or undergoing overfishing.

This shows you the difference between the Gulf ABC and the Gulf ACL under the different scenarios, and so, if we keep the current jurisdictional allocation of 25 percent to the Gulf, those three left columns will show you what the ACL would be under the 11 percent and the 8 percent ACL buffers, and, if we drop to 19 percent, using MRIP-FES to redo the jurisdictional allocation, you can see the same thing in those two right-most columns, the 11 percent and the 8 percent buffers. Of course, if we set the ACL equal to the ABC, then that's implied by those columns.

The South Atlantic actions are going to be similar to the Gulf, for a couple of them anyway, to modify the South Atlantic's acceptable biological catch, determination of optimum yield, and the annual catch limits, and it will modify the South Atlantic's sector allocations, using that same Bow Tie approach for its commercial and recreational sectors. Modify the South Atlantic's sector ACLs and ACTs, using their formulas for that, and also an examination of the South Atlantic commercial trip limits, and that's partly in an effort to try to extend the commercial fishing season.

Right now, they don't have a commercial trip limit, and so I've been on a couple of those yellowtail trips, and some days you just really hit it, and you can land a thousand pounds of yellowtail in a matter of a couple of hours, and then some days it takes all day to land 300, but, when they're really getting after it, they can land quite a bit of fish, and so, by instituting commercial trip limits, part of the thinking is that they can extend the season and carry it into the summer and hopefully provide some consistency for that fleet. That's what we have.

CHAIRMAN GUYAS: Thanks, Ryan, and so $I$ have a procedural question. This is sort of a joint amendment, but it's not, because it's not like CMP, and so, I mean, we have Gulf actions, and I think we have South Atlantic, and would we be voting on the South Atlantic ones, ultimately, and they would be voting on
the Gulf ones, or everybody is kind of doing their separate thing here, and so it's just all in one document?

MR. RINDONE: It's all in one document, and the Gulf would need to select its preferreds, and then the South Atlantic would need to select its preferred, and I think, because it is going to be a joint document, and I guess I would look to Mara, and what do you think about that? I don't know that we've talked about that specifically.

MS. LEVY: I can give my thoughts, and, also, I will note that, from my office, Jocelyn $D^{\prime} A m b r o s i o ~ i s ~ t h e ~ l e a d ~ a t t o r n e y ~ o n ~ t h i s, ~$ and she is on the line. I think you would have to agree on the allocation between the Gulf and South Atlantic, and so that's why having one document is helpful in that regard. With respect to the other actions, I think we would have to talk about it. I mean, I can see that you could just -- The Gulf could vote on its own Gulf actions, and the same for the South Atlantic, on its own South Atlantic actions, but I'm not sure how many conversations we've had about that. Jocelyn might have some further insight on that, but we will definitely let you know.

MS. JOCELYN D'AMBROSIO: I agree with what Mara said. There is allocations that would need to be decided on, and I think it's probably okay for the Gulf to vote on its actions and the South Atlantic to vote on its actions, and then the document, as a whole, I think, would need to be approved, and so it would take close coordination, but I don't -- If you're wondering about if the South Atlantic is going to choose the buffers and things like that for the Gulf, I believe that's not something necessarily to worry about, but, the holistic picture of management, I think there should be agreement on that.

MR. RINDONE: Jocelyn, you were a little difficult to understand there at the end. Could you repeat it one more time?

MS. D'AMBROSIO: Sure, and $I$ was just repeating some of the things that Mara had introduced. If you're talking about the overall allocations and that whole holistic picture of management, then that's where you want there to be agreement between the councils, but we can continue to discuss it, but it seems like the individual sort of Gulf-specific actions -- The Gulf would vote on, but, again, I can continue to follow-up with others and continue to provide advice on that.

MR. RINDONE: Jocelyn, just procedurally, so when the councils are looking at the amendment, and we're presenting this in front of them, would it be helpful to put maybe just a header or
something in front of the actions that says this is a joint action, this is a South Atlantic Council action, this is a Gulf Council action, just so that the councils know specifically what they need to be having concurrent preferreds on and what they need to deal with on their own accord?

MS. D'AMBROSIO: Yes, I think that's a great idea.
MR. RINDONE: Okay.
CHAIRMAN GUYAS: Okay. Bob and then Tom.
MR. GILL: Thank you, Madam Chair. I recognize this is largely a South-Atlantic-driven document, and certainly that was the way it was handled in the SSC, but, from a council perspective, I think consideration of a constant catch alternative ought to be in there, and you have a roughly million-pound difference between starting year and ending years, assuming they used five years, and so you're talking a considerable change, and I think one consideration might be a constant catch alternative to accommodate that rather large swing. Thank you.

## CHAIRMAN GUYAS: Tom.

DR. FRAZER: Just, again, for clarity, the mutual decision point has to do with allocation between the two councils, and $I$ am trying to understand, maybe from Mara, what is the process to kind of have those negotiations, if there are in fact some negotiations.

MS. LEVY: Well, I mean, I think it's kind of like what you do with CMP, right, and you would pick a preferred, and the South Atlantic would pick a preferred, and that's how you would -- I mean, unless you're going to have some joint meeting to discuss it, and you just have to come to the same conclusion on what you want that to be.

MR. RINDONE: I would see it -- I would envision it to be similar to the CMP process, and so, for the actions that are labeled that this is a joint Gulf and South Atlantic Council action, like the jurisdictional allocation and the stock ABC and the council-specific ACLs, and those are going to be ones that we're going to need to agree upon, and then it would be similar to the CMP process, where we would say the Gulf and South Atlantic Council preferred alternative is Alternative 2 or whatever.

For the council-specific ones, you guys can move through those,
but until -- Basically, this document needs to be fleshed out in such a way that, at the end of it, both councils are going to approve it, because it has joint actions within it.

DR. FRAZER: I appreciate that. I mean, the initial step, right, in order to move to all of those subsequent types of decision points, you have to decide whether or not the Gulf Council is going to have 25 percent of the allocation or an adjusted allocation of 16 percent or whatever it is, and so I don't think that's going to necessarily be an easy discussion, and so what $I$ am trying to figure out, in anticipation of that, is how do we actually put a working group or something together to make sure that there is some agreement, moving forward, because it will be difficult.

CHAIRMAN GUYAS: We can bring back the South Florida Committee. I am kind of saying that as a joke, but, I mean, this is why the committee brought this together. Leann.

MS. BOSARGE: A couple of things. One idea, Tom, is we have been known to have joint meetings, council meetings, with the South Atlantic, and we did that -- Gosh, it's been a while back, but, anyway, we had a lot of mackerel discussions going on at that point, and we had a joint meeting with them, and it was interesting, but I think it was productive. Then that was all about that, and, Ryan, I think one thing that would be helpful -- You're looking for input to bring stuff back to us, right?

MR. RINDONE: Yes, ma'am. I was just pitching this in front of you to make sure that the things that we're proposing for actions and alternatives are reasonable, and so, thinking about what you've seen today, and the main things for the Gulf Council are options for the jurisdictional allocation would be to retain the current $75 / 25$ split or to revise it using the FES data to the 81 percent/19 percent.

For the setting of the Gulf ACL, with respect to the Gulf's portion of that jurisdictional allocation, the ACL could be set equal to the Gulf's portion of the $A B C$, and we could use our current 11 percent buffer, and that was calculated when we used MRFSS, but just carry that 11 percent and use that, or we could update it, based on the most recent years of information, and have an 8 percent buffer between the ACL and the ABC.

MS. BOSARGE: Okay.
MR. RINDONE: Those are really the only Gulf-specific actions, is what's the split and what is our ACL ultimately going to be,
and the rest of it is going to fall to the South Atlantic Council, the things like the commercial trip limits and stuff, and that's all to them.

MS. BOSARGE: Okay, and so $I$ think one thing that would be really helpful on that allocation discussion is to see what the South Atlantic landings have been by sector, right, over or under their allocations and then the total quota that they have, because they have sector allocations, right, commercial and recreational, and so, if you could bring that back to us in MRFSS and FES, sort of like you do for us with our allocations, that would be great, so we can understand that, because that plays a role in how much we shift, right, because if there is some underfishing going on over there, then we may think twice about going from 25 to 19, and we may find some medium ground, or some compromise, there. That would be very helpful for me to see.

The other thing that -- I'm trying to be proactive here, and I'm a little pessimistic, given what you told me about the fluctuation in the rec landings, and, although we don't have a payback, if we have a year where you have a large spike in rec landings, due to variability in the data, what's going to happen is you will -- On a TAC that small, you're very likely going to exceed your ABC, and possibly something worse than that, and I don't know, and so we may end up in a situation where they come to us, NMFS comes to us, and says, well, you're overfishing, and you've got to end overfishing immediately.

Then, because of some fluctuations in data, we're looking at, on a fishery that's mainly commercial, and we have maybe one data point that was outside the realm, recreationally, and we're trying to implement bag limits and shortened seasons and so stuff that's maybe not necessary, and so, to be proactive, I would like to see some of this data in a very big table format, and you said you were going to look into it, and I would like to see how many intercepts there are.

Bring me back some info on how many yearly intercepts we're getting on yellowtail, because it is a south Florida fishery, right, Martha, and so MRIP is a Gulf-wide survey, and we know that sometimes there are some issues, when you try and pick out a little piece of coastline and get really precise data. Maybe there is something we can do on the frontend to remedy that, and maybe there is some way to beef it up, and I don't know, but I want to be proactive, and I don't want to wait until we're in an overfishing spot and put new regulations on an almost purely commercial fishery because we had one intercept somewhere
recreationally, and so can you bring us as much info as you can get on that?

MR. RINDONE: We will dig out all we can.
MS. BOSARGE: Okay.
CHAIRMAN GUYAS: I see you, Mara, but, if we do that, let's see if we can break it down by MRIP region too, right, because the Keys is going to be one story, but we have heard of the yellowtail kind of creeping up the coast on the west coast, and it would be kind of interesting to see the intercepts there, and are they increasing in frequency and that kind of thing.

MR. RINDONE: From an FWC perspective, it's pretty much all still in the same zone though, and it's all that West Central Florida Zone.

CHAIRMAN GUYAS: Monroe County is separate though.
MR. RINDONE: Right, and Monroe County Keys is its own, but that's all going to the South Atlantic. You've got the five data collection zones for recreational, and it's Northwest, West Central, Keys, Southeast, and Northeast.

CHAIRMAN GUYAS: I guess, depending on when we look at this, we might be able to pull what we have for the State Reef Fish Survey, but it just hasn't been running long enough with yellowtail, probably, to give us a good picture, because we do have smaller regions for data collection there, which is more informative.

MR. RINDONE: Well, and even if that could serve as like a heat check to the recent data that we have received from the Regional Office from FES, and that would probably help, to some degree, and we'll look at that, and we'll pull the APAIS intercepts, and we'll figure out all we can.

MS. BOSARGE: Bring me anything I guess -- Do you all put that on your Reef Fish Survey? Is yellowtail on there?

CHAIRMAN GUYAS: It was added last June, and so we only have a year of it right now, but we added the south Florida species and extended it to the Atlantic side and the Keys, and it did not cover the Keys before.

MS. BOSARGE: Well, maybe any -- I mean, it doesn't have to be specific, or, really, it should be specific, but any specific
information you have, and $I$ am just spit-balling here, but maybe we can find a way for your data to supplement the MRIP data in years where we have a very low intercept, and I just want to get ahead of it, and I can see it probably becoming an issue.

CHAIRMAN GUYAS: Mara and then Kevin.
MS. LEVY: Thank you. I was just going to ask Ryan, and so are you looking for specifics from the council about the range of alternatives and such, because, right now, there are two allocation alternatives, and the end year of that allocation is 2008, and so I don't -- I mean, how is it not reasonable to at least look at some more recent years? I am just wondering where -- Jocelyn can chime in if she wants, but I am not exactly sure where the IPT is in the process, but it seems like, from what you said, you were looking at bringing back two alternatives in the document.

MR. RINDONE: If the council wants to propose using the most recent ten years, or the most recent twenty years, or something like that, we can certainly put those forward as options as well. The South Atlantic Council, historically, has liked to use this weighting of a long time series and 50 percent of the weighting going towards the total series and then 50 percent going to the most recent few years, which more heavily weights the more recent landings than it does the total time series.

Typically, in the Gulf, we just look at the average landings by sector across the single time series, but you guys can certainly propose different options, if there's something else that you would like to see, and it doesn't have to be done the way that it's always been done.

MS. LEVY: So is the second alternative here -- Because it wasn't clear, and so, right now, it's 50 percent of average landings from 1992 to 2008 plus 50 percent of average landings from 2006 to 2008. Would the new alternative update those years, or I can't tell, from this, whether it would be using those same years, but just using the FES data.

MR. RINDONE: It would use the same years with FES data.
MS. LEVY: Okay, and so it's not even using that same formula, but then updating the years, and, I mean, I think maybe -- I don't know what the council is going to want to do, but I don't know what the IPT talked about, but maybe there are some other options that the IPT could talk about or the council could come up with.

Then, just before $I$ leave the mic, Bob had asked about a constant catch, and I believe, right, that the SSC gave the ABC in the declining catch level, and so, if you want a constant catch, the SSC either has to give you that, or the only constant catch you could basically choose is the lowest, right, because you can't go over it, once you get down there, and so I just wanted to raise that as an issue.

CHAIRMAN GUYAS: Thanks, Mara. Kevin.
MR. ANSON: I had a couple of thoughts as well, and Leann brought up some of those, and then Mara as well, but $I$ have several questions. Just to confirm, Ryan, what you said is, for yellowtail only, all of the landings that are brought into the Keys are associated to the South Atlantic Council's jurisdiction, correct?

MR. RINDONE: Correct.
MR. ANSON: Because they do ask if you're fishing in the Gulf, on the survey at least, the APAIS survey. Where you're landing, regardless of where they're fishing, all of those are being attributed to the South Atlantic?

MR. RINDONE: Right. Monroe County is credited to the South Atlantic.

MR. ANSON: So the issue then, as far as being proactive, what Leann had mentioned, I think that's something that ought to be considered. Yes, I'm concerned as well about FES and the fluctuations and how just a few samples can really change what the landings are, and so $I$ would be interested in including some sort of options to address that.

Then this issue with the years and going to your comment related to seeing more off the Tampa area, and we've got a situation with climate change, and so being proactive in that sense, or at least trying to account for that in the most recent time series, and I think we ought to look at including some times, or years, for allocation, or determining allocations, between the councils.

Now, this is just dealing with, right now, one state, east coast versus west coast, and so it's not too critical, but at least, if we go through the exercise, maybe as far as that accounting of those intercepts and the numbers of intercepts and where they're occurring, that might give us some indication as to the
relative change, east coast versus west coast.
On paper, at least, it looks like there's more habitat on the west coast, and so, if they are moving up north, there might be a chance for more fish actually to accumulate on the west coast versus the east coast, and so those types of things would be valuable

Then the issue with the constant catch, and just a question, and is it because of the declining OFL, and is it because of just the uncertainty, or -- I mean, we're not changing anything relative to the amount of harvest that's going to be occurring, and so I am just curious, and it's a rather large difference in OFL at the beginning of the time series to five to six years later. You're essentially 25 to 30 percent less, that OFL, and can you explain that? Ryan, do you recall why the --

MR. RINDONE: Sure, and so the stock assessment had estimated that the spawning stock biomass at the terminal year, at 2017, was quite a bit greater than spawning stock biomass at maximum sustainable yield, and so there's this surplus, if you will, of biomass out there above what's necessary to maintain the spawning stock biomass at maximum sustainable yield, and so the projections allow for an increased harvest in the short-term, and you eventually fish down to that lower equilibrium.

The thing to remember with the catch limit recommendations that came out is that they were agreed upon, and had to be agreed upon, by both the Gulf and the South Atlantic SSCs, and so, in just differences in how each SSC typically provides catch recommendations to its council, that could be part of why there weren't multiple alternatives offered of like, if you want to do annual yields, do this. If you want to do constant catch, let's do that, but, if you guys really wanted to see constant catch, then we could put that back in front of the SSCs, and we would just have to get both of them to agree on revised catch recommendations based on that.

CHAIRMAN GUYAS: Kevin.
MR. ANSON: To that, I guess, thinking ahead or such, since there is a little bit of a different philosophy between the two SSCs regarding that, procedurally, is it available for the SSCs to choose either or, and, for instance, could the Gulf SSC choose the constant catch and the South Atlantic choose their declining OFL catch series?

MR. RINDONE: No, I don't think so. I think that they would
need to agree on what they were going to do, insofar as it relates to the $A C L$ in the short-term. If the Gulf Council wanted to set it at something below the ABC, such that the ACL wouldn't exceed the ABC, but it could be held at some constant level through time, then you guys could look at that, but, because of the joint nature of how the stock is managed, the determination of the catch limits, I think that they would need to agree on, but we could seek some clarification on that and see if the South Atlantic wants to have a declining trend versus the Gulf having a constant catch.

I think just thing that becomes kind of cumbersome with that is that, at some point, in the out years, it could be possible, depending on the number that's chosen, that the combined Gulf and South Atlantic ACLs exceed the stock ABC.

If the South Atlantic takes an annual yield approach, and that's on a declining trend at some lower asymptote, but we fix the Gulf constant over say a three-year period, under the presumption that we tend to revisit these things with some regularity, usually, we could end up in a situation where there's an imbalance, and so that's the main reason why having them done the same way is preferable, but the South Atlantic Council staff could go back to the South Atlantic Council and ask them about a constant catch situation, and they may say they think that's a great idea. Then that makes the process a lot easier, as opposed things being disparate.

CHAIRMAN GUYAS: Let me add one more thing to the mix, and $I$ know the AP has talked about this, and the message from our Gulf Reef Fish AP was basically don't mess this up, and everything is fine right now. Whatever you all do, don't mess this up.

Looking at what the South Atlantic is working on, or they're going to be looking at commercial trip limits, and so all of these people that have these commercial permits, and most of them are in the Keys, and some of them have both permits, and some have Gulf, and some have Atlantic, and, you know, they're docked on one side or the other, and they're kind of all, for the most part, working out of the same areas.

I think it probably would be worthwhile for us to look at whatever trip limit the South Atlantic is looking for for commercial, just for consistency's sake. I mean, I don't know, necessarily, and maybe this is a Mara question, or Jocelyn, since this is her jam, if you have both commercial permits, Gulf and South Atlantic, and you're jumping from side to side, and the South Atlantic has a trip limit and the Gulf doesn't, what
are the implications of that, and how does that work, and I understand from a state and federal perspective, but not necessarily from two separate council jurisdictions.

Just for simplicity's sake, it might be helpful for us to look at that item as well, to look at the commercial trip limits, and maybe we decide not to move forward with it, but $I$ just think that we probably need to, just given the population of people that are going to be -- The overlapping permits and just the small area in which all these people are working.

MR. RINDONE: Okay. Do you have any idea of about what you want to see for that, or do you want to see what the commercial landings tend to be by trip first, and so, I mean, like I was describing, sometimes it can be pretty variable.

CHAIRMAN GUYAS: I don't know. I mean, the only reason $I$ say that is just so that we -- If the South Atlantic is going to go down that road, we need to at least thing about it too.

MR. RINDONE: Okay, and so maybe, for the time being, whatever the South Atlantic thinks is appropriate for establishment of commercial trip limits, like whatever poundages they think are appropriate, to look at those first.

CHAIRMAN GUYAS: Yes, and I know that they've had, on their side, commercial fishermen asking for trip limits, and I can't remember, off the top of my head, what they were, and $I$ have not looked at the data close enough to be able to really give a recommendation at this point, but I just think we just need to keep our eye on that, and, if we're going to think about, we probably need to put it out there now, but, again, I get the message that everything -- The management that we have in place now in the Gulf is working, and $I$ am not trying to mess that up, but just trying to think bigger picture here. Jocelyn.

MS. D'AMBROSIO: Thank you. On that trip limit question, I think sometimes, depending on if you're fishing in areas that cross jurisdiction, it can be an enforcement issue, just trying to make sure you're understanding where the fish were caught and whether they're compliant with the trip limit, and so sometimes it makes sense to see if you want to do things compatible, but definitely a good issue to raise.

On the constant catch front, if $I$ could go back to that for a second, I just wanted to say it sort of depends on how you get to a constant catch and what we're talking about maintaining constant. If we just want an ACL that doesn't change, you can
probably take the declining catch advice from the stock assessment and just find an ACL that would meet all of the requirements under the National Standard 1 Guidelines, and so the ACL not exceeding the ABC, and the ABC usually is reduced from the OFL, and so you could find an ACL that works constant within that framework.

If you wanted to change that catch advice coming from the assessment, that would certainly need to go back to the SSC, and that's where you would want to have the same approach in the Gulf and South Atlantic, because those measures are for the stock, and you want to have the overfishing limit for the stock and the $A B C$ for the stock, and so there is two ways to do it, but $I$ am just trying to be clear about what you're trying to do, and, obviously, if you're maintaining the declining advice, and you have an ACL that tries to meet all those requirements of Magnuson, you might need to pick that lowest ACL, but that's just something to think about, how you would want to get to a constant value and an agreement with the South Atlantic, if you're changing the values for the stock ACLs and ABCs.

CHAIRMAN GUYAS: Leann.
MS. BOSARGE: On the trip limit topic, $I$ am hoping that maybe Bill Kelly or somebody is listening in right now, and $I$ would really like to hopefully -- He's the one that usually gives us feedback on yellowtail, and we may have some other fishermen in the room, or listening in, but $I^{\prime} m$ hoping that maybe we can get a little feedback on that idea of a trip limit for yellowtail, because I do kind of -- I don't know, but, to me, it creates an inefficiency if it's not needed, right, and you just put a limit on them, and that makes the trip slightly more inefficient if they could in fact exceed that limit.

Anyway, I have a little bit of reservation about throwing that in just to make things easy from a jurisdictional perspective. Of course, I don't know how often they are crossing the line, if they're really fishing back and forth within that trip constantly, if that's happening or not, but maybe we could also get some more information from law enforcement, where, if you do hold both permits, just where are the boats physically at at that moment or what, and so thanks.

CHAIRMAN GUYAS: Go ahead, Ryan.
MR. RINDONE: I just wanted to note to the committee that we are going to bring this information in front of the Reef Fish AP, at its January 5, 2022, meeting in Tampa, and, based on the
discussion, $I^{\prime} m$ thinking $I$ should give it a little more time than $I$ have, but we will certainly get some feedback for you guys for the January council meeting on sentiments from the Reef Fish AP.

CHAIRMAN GUYAS: Okay. Then, if the Reef Fish AP talks about, I guess this has got to go back to the South Atlantic, and I am trying to understand the timeframe here and kind of what Tom was saying, the path forward, I guess, with working with them, and so we're thinking this is going to be a back-and-forth, and I don't know.

MR. RINDONE: The problem with doing it in separate documents is that you guys would still ultimately have to agree on whatever the council jurisdictional allocation is, and that, ultimately, affects everything downstream from that, and so, even if you did it separately, if you disagreed on that, it keeps the rest of the document, for both councils, from going forward, and so it will be necessary to have agreement between the councils before these can go forward, and the Gulf Council can't submit that we like 25 percent, and the South Atlantic says we think the Gulf should have 19 percent, and then Andy says, no.

CHAIRMAN GUYAS: I get that. I'm just trying to think what is the most efficient way for us to get there, right, especially since we're dealing with some potentially thorny topics here, with allocations and all that, and so I don't know, and I guess I need to think about it more, but it might be -- The idea of kind of having some kind of sub-committee or group or a joint meeting may not be a bad one, to at least hammer out the allocation issues and look at ABCs and all that.

MR. RINDONE: Myra Brouwer is the lead for the South Atlantic, and I will talk to her and the IPT, and we'll see if we can't figure out some way to get some joint small committee or something like that, and representatives of the council, similar to the south Florida situation, or maybe some new idea, and just talk to the council leaderships and figure out the best way.

CHAIRMAN GUYAS: Cool. Anybody have anything else on yellowtail? I think we've probably pushed our limits on time on this this morning, and so thanks, Mr. Chair, for giving us the time.

MR. DIAZ: Thank you, Ms. Guyas.
(Whereupon, the meeting adjourned on October 27, 2021.)

