SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

SCIENTIFIC AND STATISTICAL COMMITTEE

Town & Country Inn
Charleston, South Carolina

October 21-23, 2025

Transcript

Scientific and Statistical Committee

Dr. Marcel Reichert, Chair
Dr. Walter Bubley, Vice Chair
Dr. Jeffrey Buckel
Dr. Jennifer Sweeney-Tookes
Dr. Luiz Barbieri
Dr. Jie Cao
Dr. Chris Dumas
Dr. Jared Flowers
Dr. James Gartland
Dr. Kai Lorenzen
Anne Markwith
Dr. Genevieve Nesslage
Dr. Kelsey Roberts
Dr. Fred Scharf
Dr. C.J. Schlick
Dr. Fred Serchuk
Dr. Alexei Sharov
Dr. Steve Turner
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Council

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Dr. Julie Neer
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Rachael Silvas
Meg Withers
Suzanna Thomas
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Attendees and Invited Participants

Lara Klibansky
Chris Bradshaw
Dr. Josh Nowlis
Dr. Jeremy Collie
Tracy Smart
Rich Harrington

Observers and Participants

Other observers and participants attached.

The Scientific and Statistical Committee of the South Atlantic Fishery Management Council convened at the Town & Country Inn in Charleston, South Carolina on October 21, 2025, and was called to order by Dr. Marcel Reichert.

WELCOME AND INTRODUCTIONS

DR. REICHERT: Welcome to the October meeting of the South Atlantic Fishery Management Council's Scientific and Statistical Committee. I'm Marcel Reichert, SSC Chair, and I'll be leading the meeting, with Vice Chair, Wally Bubley, and, of course, with the invaluable assistance from Judd, our council staff.

You've probably seen a couple of new faces, and one old, and sorry, Luiz, but one familiar face around the table. The council appointed two new members to the committee, Catherine, or C.J., Schlick, from South Carolina DNR, and Kelsey Roberts, from the University of Massachusetts.

Welcome, and, in addition, Luiz Barbieri was appointed to the Florida state-designated seat, replacing Dustin Addis. Dustin received a letter of appreciation, and I actually reached out to Dustin personally, and also, on behalf of the committee, to thank him for his contributions and his service to the SSC. Luiz, welcome back to our SSC. Luiz has been a member in the past, has been the chair in the past, and so welcome back, Luiz. I've asked the new members to briefly introduce themselves. C.J., maybe you can start us off.

DR. SCHLICK: Hello, everyone. I'm Dr. C.J. Schlick. I'm a stock assessment scientist with South Carolina DNR, split with Georgia DNR. We typically do a lot of things with the Atlantic States Marine Fisheries Commission, and I'm happy to join here as well.

DR. REICHERT: Thank you. Kelsey.

DR. ROBERTS: Hi, everyone. I'm Kelsey. I'm a research associate with the University of Massachusetts, the Dartmouth campus, under the supervision of Dr. Gavin Fay. I work with the NCLIM project. That's the Northeast Climate Integrated Modeling Initiative. My focus is integrating some climate projections into a groundfish model for Georges Bank.

DR. REICHERT: Thank you, Kelsey. Luiz, although probably -- You probably don't need much of an introduction, but maybe you can tell folks a little bit about yourself.

DR. BARBIERI: Well, that's the advantage of being an older guy, knowing a lot of the folks around here. Yes, and thank you for that introduction, Marcel. I'm glad to be back. I love this SSC, and so I'm really happy to be back, and so I'm Luiz Barbieri. I had the Marine Fisheries Research Program at the Fish and Wildlife Research Institute in Florida, and I work on stock assessments, population dynamics, and related items.

DR. REICHERT: Thank you, Luiz. I also wanted to mention that, also, in addition, the council reappointed Genny, Jeff, Jared Flowers, and myself for three-year terms. Congrats, everyone, and the council also appointed

Congrats, everyone, and the council also appointed Kathi Kitner and Adam Stemle for a five-year term to the SEP, and so, again, congrats, Kathi and Adam.

As you probably know, due to the federal shutdown, fellow members Amy Schuller and Christina Package-Ward are unable to attend the meeting. The same is true for a variety of other federal colleagues, including several presenters. That, obviously, had some implications for the agenda. We'll go through that in just a little bit. Anne, Jeff, Fred Surchuk, and Jason Walsh are attending this meeting remotely. Judd, are they all online?

DR. CURTIS: Yes.

DR. REICHERT: All right. I also want to welcome Amy Dukes, a council member, and Carolyn Belcher, a council member and our council liaison, and various council, and, before we get started, I want to remind the committee that this is a public meeting, that is broadcasted and recorded, and so let's do a round of introductions for voice recognition. Alexei, why don't we start with your end of the table?

DR. SHAROV: Good morning. Alexei Sharov, Maryland Department of Natural Resources, SSC member.

DR. FLOWERS: Jared Flowers, Georgia DNR, Coastal Resources Division, SSC member.

DR. SCHLICK: C.J. Schlick, South Carolina Department of Natural Resources.

DR. BARBIERI: Luiz Barbieri, Florida Fish and Wildlife Conservation Commission.

DR. CAO: Jie Cao, N.C. State University, SSC member.

DR. SCHARF: Fred Scharf, UNC-W, SSC member.

DR. GARTLAND: Jim Gartland, Virginia Institute of Marine Science, SSC member.

DR. DUMAS: Chris Dumas, UNC-W, SSC member.

DR. CURTIS: Judd Curtis, South Atlantic Fishery Management Council staff.

DR. REICHERT: Marcel Reichert, SSC chair.

DR. BUBLEY: Wally Bubley, South Carolina Department of Natural Resources and SSC Vice Chair.

DR. ROBERTS: Kelsey Roberts, University of Massachusetts, Dartmouth, SSC member.

DR. TURNER: Steve Turner, SSC member, retired.

DR. SWEENEY-TOOKES: Jennifer Sweeney-Tookes, Georgia Southern University, SSC member and chair of the SEP.

DR. LORENZEN: Kai Lorenzen, University of Florida, SSC member.

DR. NESSLAGE: Genny Nesslage, University of Maryland Center for Environmental Science, SSC member.

DR. REICHERT: Thank you. After three years, I still have to get used to being retired.

DR. CURTIS: Do you want to get the online members?

DR. REICHERT: Sorry. Thank you, Judd. Online members. Let's start with Anne.

MS. MARKWITH: Anne Markwith, North Carolina Division of Marine Fisheries, SSC member.

DR. REICHERT: Jeff.

DR. BUCKEL: Jeff Buckel, North Carolina State University, SSC member.

DR. REICHERT: Fred.

DR. SERCHUK: Fred Serchuk, SSC member.

DR. REICHERT: Jason.

MR. WALSH: Good morning. Jason Walsh, North Carolina Division of Marine Fisheries, SSC member and SEP vice chair.

DR. REICHERT: Thank you. Next on the agenda is review of the approved agenda. As I mentioned, due to the shutdown, we had to make some adjustments. We'll discuss the details when we get to the individual agenda items, but Judd will scroll through the agenda, and I'll highlight the main changes.

Agenda Item 3 is the one that is the first change, and maybe you can scroll down a little bit.

DR. CURTIS: Yes, Chair, and so, for the committee, I just sent a copy of the revised agenda and the revised overview. I emailed it to you. We'll get those posted as soon as possible up to the meeting webpage, but we can use that, or you can use that, as a resource as we're going through, and this is what you're seeing on the screen right now.

DR. REICHERT: Thanks, Judd. I appreciate that. Agenda Item 3, Judd will include the Science Center update in his overview, and then, Agenda Item 7, the golden tilefish, Dr. Chip Collier was kind enough to go through that assessment presentation. Thank you, Chip, for offering to do that, and we will review the assessment, and we are asked to provide fishing level recommendations based on the available information.

Agenda Item 8, that will be a recorded presentation to update the committee on MRIP FES. Agenda Item 9 is a little bit of an unknown, and so we'll talk a little bit more about it tomorrow morning, and see how that may affect our agenda, whether or not we postpone that or still have that agenda item.

Agenda Item 10, the MSY proxies, we'll focus our discussion on the joint working group, and the slides of Erik's presentation can be used as a reference. Obviously, Erik cannot be here to give that presentation, and then we will switch -- Because of some timing issues, we'll switch Agenda Item 11 and 12, and so we first have the wreckfish management procedure update, and then Dr. Harrington will provide the black sea bass genetics and stock structure presentation, and then Agenda Item 14, obviously, there will be no additional model runs, and so that agenda item is deleted, and it looks like, right now, that the remainder of the agenda will be unchanged. Judd, do you have any additional comments to that?

DR. CURTIS: No.

DR. REICHERT: Then any questions, changes, or comments to the adjusted agenda? Seeing none, anyone disagree with approving the adjusted agenda? Seeing none, the adjusted agenda was approved. Next up is the approval of the minutes of the May meeting. The overview, I think, said October, but it's our May meeting. That's Attachment 1b. Any changes to the May minutes? Steve?

DR. TURNER: Judd, I sent you a minor change.

DR. CURTIS: Yes, and I received that, Steve, and I'll make sure those get incorporated into the revised minutes. Thanks.

DR. REICHERT: Thanks. Yes, and those are some minor editorial changes.

DR. TURNER: Just, under one of my comments, "longline" should have been "long-lived".

DR. REICHERT: Okay. Thank you. Anyone disagree with approving the minutes with the additional edits? Seeing none, the minutes are approved. Next up is public comment. Judd, did we receive any written comments? Sorry, and I'll let you finish your notes. Judd is checking to see if we had any last-minute written comments. In the meantime, I'll ask if anyone in the room or online wants to make a public comment. No hands in the room.

DR. CURTIS: Mr. Chair, there have been no submitted written comments.

DR. REICHERT: Thank you. Anyone online that has a hand up?

DR. CURTIS: No hands.

DR. REICHERT: Thank you. No public comments. Next up is Agenda Item 3, Updates on Council FMP Amendments and the Southeast Fisheries Science Center. I did not assign anyone specifically, but we do need notes, and so please make notes, and, as I mentioned, Dr. Williams is not available, but Judd includes the notes from the Science Center is his overview, and so, Judd, why don't you take it away?

COUNCIL FMP AMENDMENT AND SEFSC UPDATES

DR. CURTIS: Thank you, Chair, and so, if you open up Attachment 3, that is a recent council active amendments document. I've listed them all here for the committee to review, or for their information, but there's a few of note that I wanted to cover, that either the SSC has seen before or that's been of importance for the SSC, but, before launching into those, I just wanted to provide a quick update from the center's perspective.

Erik was supposed to give a little bit more of a detailed plan, but, basically, the update, from council discussions around the council meeting tables and conversations we've had with the center, is that, due to the government shutdown, obviously, their capacity is more limited, and restricted. However, the plan is to continue providing the age-based stock assessments, where possible. There's no plan to step down to any less robust models, such as production models or DLMs, et cetera, where we had an age-based model previously.

Procedurally, some assessment processes are going to change, and this will be explained a little bit more in the following agenda item, having to do with the SEDAR process primarily, and one important caveat though, that the committee needs to be reminded of, is that management decisions still need to be made with existing scientific information, even though we may have reduced capacity availability in both quantity and quality.

The National Standard Guidelines specify that these management decisions can't wait for more scientific information to become available, and so just keep that in mind as we're going through assessments today and in the future.

Stepping over to Attachment 3, starting off with Amendment 61, which is the snapper grouper fishery management unit revision, the council is discussing to remove seventeen species that are currently in the fishery management unit for snapper grouper, and so this would remove them from the fishery management unit and incorporate them into either ecosystem component species or into another classification, in order to reduce the number of species maintained under that fishery management unit.

They're in the process now of going through a checklist of the needs that are to be determined for conservation and management of the seventeen snapper grouper species before they can be considered to be removed from the fishery management unit. There's a decision document from the September meeting that was reviewed at the council table, and they're continuing to work on this in December and through next year.

DR. REICHERT: Judd, real quick, and so, at some point, I assume this will be coming to us for review, or no, because this is strictly a management issue?

DR. CURTIS: No, there’s not going to be any SSC input needed for that regulatory measure. That's strictly a management decision. They are going through a series of ten criteria that are needed to remove the seventeen snapper grouper species from the fishery management unit. If there is a question of scientific questions of uncertainty that would be fitting of the SSC to review, then they can send that down to the SSC, but we're not anticipating that to be necessary at this time.

DR. REICHERT: Thank you.

DR. CURTIS: Moving on to the next two, they are somewhat tied together, having to do with black sea bass, and so you all -- This committee has been very involved in the black sea bass stock assessment review, and the various management measures that have been following, and so I actually want to start with the second one, Regulatory Amendment 56, and this was the amendment that was coming out of the most recent stock assessment, SEDAR 76 and the SEDAR 76 update.

At the last council meeting, the council decided to incorporate some of the concerns from the SSC having to do with the reduction in the stock abundance based on the index data. However, a lot of the uncertainties, as identified by the SSC -- They felt uncomfortable with moving forward with the projections analysis, in order to set new catch levels, and so, in the interim, they have adopted measures to reduce catch levels, although not quite to the levels of the new projections of the ABCs and OFLs, and in the process, but, under the concerns of the reductions in the index values, reductions in catch levels was somewhat critical, and so they're undertaking management measures to go about doing that.

Coupled with that amendment, and that's in the more interim basis, we have a more longer-term management measure, and that's Regulatory Amendment 37, having also to do with black sea bass, and this will look at another revised assessment, when we can incorporate the adjusted MRIP-FES values as well as some of the other data inputs that were of concern for the SSC, such as the MSY proxy and estimates of the stock productivity, looking at low recruitment scenarios, as well as selectivity curves of the discarded fish.

This is a process that we're still establishing what the timeline is going to look like, but, likely, the SSC will be reviewing terms of reference for this next revised assessment sometime at our April 2026 SSC meeting, and there's various management measures that are being considered in both Regulatory Amendment 37 and then the Regulatory Amendment 56 having to do with black sea bass. If I can just get through all these, and then I'll open up the floor for questions after we're done.

Snapper Grouper Amendment 44 and Reef Fish Amendment 55 is a joint amendment from the Gulf and South Atlantic, and this had to do with yellowtail and mutton snapper. A subset of the SSC reviewed these assessments, along with members of the Gulf SSC, in February, and catch level recommendations were made and reviewed by respective councils at their June meetings, and so that is currently going through the amendment development process, and it should be ready sometime early next year, I believe.

The last one to touch on, or highlight, is Abbreviated Framework 5, blueline tilefish. Again, another subgroup of SSC members, along with Mid-Atlantic SSC members, formed a joint workgroup to review the catch levels of blueline tilefish in both the South Atlantic and then up into the Mid-Atlantic, and then these levels, or these assessments, and the ABCs were reviewed by this body in May, and revised ABCs, ACLs, and sector ACLs, or the revised ABCs were determined, and the council is currently going through development of ACLs and the sector ACLs. Those are the highlighted amendments I wanted to discuss with the committee, and I can open up the floor to any questions, Chair.

DR. REICHERT: Thank you, Judd. Any questions for Judd relative to the amendments that the council is currently working on? Anyone online? Any hands up? Okay. Alexei.

DR. SHAROV: Thank you. I definitely should have been aware of sort of more details on this, but I guess the easiest is to ask the question. First, on the seventeen snapper grouper species, so if they're -- You know, what happens then once they're removed from the FMU? Are they going to be just -- Well, they're apparently unassessed, right, and so they're going to be grouped as the grouper species with the unknown status of the stock, and that is I'm trying to perceive sort of the management approach and how that would, you know, come back to us potentially in the coming years.

DR. CURTIS: Yes, and that's correct. These are all species that have not had a formal stock assessment, and they would fall then under the ecosystem component species, which are a similar category. They don't have a stock assessment, or OFL, or ABC, or evaluated ABCs from a stock assessment in place.

One area that this could potentially affect the SSC is that, based on the ABC control rule, all those stock risk ratings are relative to each other in the various fishery management unit, and so the removal of those seventeen species is then going to adjust, especially if those are ones that are unassessed and typically more, I don't know, safe species, if you will, and so we might have to think about how to reevaluate the relative scoring, and the relative risk, for the remainder of the snapper grouper species within that fishery management unit, so that our ABC control rule is not biased based on the inclusion of those seventeen species that will be removed.

DR. SHAROV: Thank you and one more question, if I could, on the black sea bass. I see, you know, since we went through the a lot of discussion of the stock assessment, stock status, et cetera, all the expected changes that would be included in the amendment are, you know, understandable, and appropriate, but I wonder if there is, since I haven't seen the document, any consideration of the fact that, while all these measures are certainly expected to move the stock in a positive direction, where we want it to, but, if the principal driving force of the consistent reduced recruitment is environmental, that we're not under control of, then we should be preparing ourselves with living with a population that has very different productivity characteristics, that is not going to meet the, you know, the parameters of the past, and so is that sort of included into this document or not? Thank you.

DR. CURTIS: Yes, and so certainly all those considerations we've been discussing, and I think the time for a more prolonged discussion will be when we're generating the terms of reference, which, of course, the SSC, the committee, will have a hand in building and making their recommendations.

One thing is I think the reductions in catch, and bringing them down a little bit, will then have an effect, where if it is indeed, right, the low recruitment that's occurring, and those catch levels are now reduced, and we're still seeing those drops in the index values, then we can be certain that it's not attributed to fishing, or at least the low recruitment issue is playing a significant effect, and re-evaluating where those benchmarks stand may be of critical importance for the next assessment, yes, and thanks, Alexei.

DR. REICHERT: Thanks, Alexei. Thanks, Judd. Anyone else? Fred, go ahead.

DR. SERCHUK: I mean, we spent a lot of time on black sea bass at our last meeting, and we took a lot of thought when we said it was depleted, and I'm not really quite sure that -- The state of the stock was so low, you know, that we almost put up a danger sign. I'm not really quite sure what's going to happen now with respect to changing our advice. Thank you, Chair.

DR. REICHERT: Thank you, Fred. Judd, and then I'll --

DR. CURTIS: Yes, and so, Fred, the council did act on some of the SSC recommendations, based on the decline in the fishery-independent survey, and so they're setting these new annual catch targets at about half the current, the F current, from the previous assessment, and so that information is being included.

What is still unclear is some of the uncertainty surrounding that selectivity curves, what those MSY benchmarks might actually be, and, to point to Alexei's concern too, right, if there is a shift in the productivity over time, then those benchmarks, long-term benchmarks, are no longer going to be relevant, and so that needs to be re-evaluated, and so those are some of the concerns of the council, but they also certainly agreed with the SSC's recommendation that, you know, the levels are dropping, and, whether it's fishing induced or environmentally induced, we do have a depleted stock, and so the reduction in those catch targets is targeted at achieving at least a reduction in fishing effort.

DR. REICHERT: Thanks, Judd. Anyone else? Any hands online? Seeing none, thank you. Thanks for that overview, Judd. Next up is SSC workgroups and SEDAR panels. Again, we have no assignments. The attachments are 5a and 5b.

DR. CURTIS: You skipped the SEDAR process.

DR. REICHERT: Did I? Sorry. I'm way ahead of myself here. The next one is SEDAR Process Modifications, Number 4. You know, I made a note that we had postponed this, I think twice, and so, anyway, Julie Neer will provide an overview. We'll give Julie a moment to come to the table. Sorry, Julie. Judd, maybe you can introduce this.

SEDAR PROCESS MODIFICATIONS

DR. CURTIS: Just looking at your overview document, we've got two main agenda items, Attachment 4a and 4b, that Julie is going to be presenting on. The other four attachments are background information that are summaries from the previous steering committee meetings, previous presentations that Julie gave to the SSC that may have not been completed, or even started, and so we're thankful she's able to join us, finally, and hasn't given up on us, and so, Julie, do you want me to thumb through them on this end?

DR. REICHERT: If I may, real quick, Jie and Amy and Christina were assigned, but I'm asking all members to make your usual notes, and, as a reminder relative to the notes, and to the report, I really hope, especially since we may have a little more time than in our usual SSC meetings, and I really hope that we can complete a good, full draft of the report by the end of the meeting.

That will help Judd and myself a lot, because normally we're scrambling to meet the deadline for the council briefing book, and so please keep that in the back of your minds and concentrate your notes on key discussion points and consensus statements. Remember that we have Judd's notes, and our transcripts to guide us also, and so we appreciate your help with that. With that, again, sorry, Julie, that I once again almost skipped over you, but please. Maybe you can tell us about the SEDAR process modifications.

DR. NEER: Okay, and so hi. I'm Julie Neer, for those of you who don't know me, or who are on the web and can't see me. I am the SEDAR Program Manager. I also have Emily Ott here with me, and she's actually going to give the second presentation, and we just wanted to give you guys an update on what was proposed changes, which are now actually changes that are being implemented, since it's taken a year to get on your agenda, and actually present, and so we're going to try and -- This first presentation is going to try and highlight the big picture, and how we got here, and then we'll get into a bit more details. Emily will give a presentation on the components aspect, which you guys can weigh in on. It's part of the role of the SSC in this new process.

All right, and so I'm going to give you some background. I'm going to focus on some of the procedural details that are rolling in. The components option, which is I'm going to get the highlight, as I said, and Emily is going to give you a more detailed presentation of that piece, and then the role of you guys here, the SSC, in this new process, to hopefully give you guys the overview of where you fit into the new process.

We had to make some changes to the SEDAR process. The goal was always to be very transparent, and very thorough, and that comes at the expense of timeliness, and, unfortunately, there's continued pressure to do more stuff faster. You guys need more information quicker. The SEDAR process is very thorough, and very well documented, but not swift, and so we've been trying to figure out ways, and the Science Center and SEDAR have been working for quite some time, and this is the first effort in a while that is kind of in conjunction between the two groups.

We believe this is a good path forward, because, over time, the projects have just gotten longer and longer, even when we've made efforts to tighten stuff up, and, as you guys know, it takes a long time to get the science done, and then, additionally, it takes a good bit of time for the management to act on said science, and then sometimes we're ending up three, four, five years after the terminal year of data before the management is going into effect, and that's a problem.

We're trying to work on both, from the management side as well as the science side, to provide more timely information, and more timely information in a more rapid process, and, additionally, resources are not increasing. They're likely to decrease. For all we know, they're decreasing today, with -- We lost a -- The Science Center lost a good chunk of people during the first RIFs, and we're not sure what's going to happen during the shutdown now, and so we need to find a way to increase throughput, and we may also have fewer people to help us do that.

This just kind of -- This little graphic, that Emily put together, kind of shows you -- We just wanted to lay out why -- We didn't try and exclude you guys from earlier stages of the process. The SSC received a general presentation when we first began this process back a year ago, in October of 2024. The SEDAR Committee met in February of 2025, and started to really come up with an implementation plan, and narrowed in on what we were going to do.

We tried to get on your agenda in April, as well as May, or we were on the agenda, I should say, but we didn't actually get to present. The steering committee then met again, and the SEDAR Steering Committee met again in August, and basically finalized the process that we're rolling out now.

The council received that presentation at its meeting in September of this year, and then now we're coming to you guys, just to give you sort of a heads-up, as opposed to -- What we're doing, as opposed to what do you guys think we're doing, unfortunately. There's still feedback. Each individual cooperator still has a chance to kind of tweak things here and there, but that's kind of where we are, and, unfortunately, we're kind of down this path a bit, but they're still always ready to take feedback from you guys.

This is sort of just a key takeaway slide. SEDAR was never designed to do every assessment for every species. There's far too many of them, and there's way too much going on to ever think that SEDAR would do it. That was from the very beginning. We never thought SEDAR would do all the assessments. It's really just to reaffirm that SEDAR is really -- The SEDAR process is going to be used for those assessments that really need a lot of external peer review, or there's a lot of new information that needs to be vetted, and it's not supposed to be used for every single assessment.

We're getting rid of that terminology between benchmarks, standards, updates, research tracks versus operational, all of those things. The names always implied quality, even though all assessments are the best they can be, and so we're trying to get away from that, and so all SEDAR projects are called assessments moving forward, but not all assessments will follow the same process.

For each individual process, or assessment, the structure will be made up of various components, and, for the SEDAR assessments, once we're running, the specific components included in each project, whether you have a data workshop or webinars or something else, will be negotiated between the center or the lead analytic agency, actually in the case of Florida, who does some of the assessments for us, and council staff, with input from the SSC and the councils, and so, for every assessment, there will be negotiations to figure out what pieces of the puzzle, or those components, will be included for that particular process.

Just a note on timing. These components should be finalized before we develop the terms of reference in the project schedule, and so, going into whatever we're doing, everyone should have agreed to what pieces or options are going to be included in that process, so that we can get a good gauge on how long things will take.

One of the big sort of changes is that the center -- For the assessments that the Science Center is the lead, they will take responsibility for the assessment component of the SEDAR process, meaning that we will not be holding SEDAR-run webinars, or workshops, for that assessment piece. Moving forward, there's a new approach we're going to try to help streamline things, which we'll talk in a bit more detail, but the data and review components of the SEDAR process are pretty much unchanged from what we've been doing the whole time, and we'll get into that as well.

The role of the SSC in model development will actually be expanded. It might sound like you're going to have less input, but we're hoping, the way we've structured this, you'll actually be able to provide feedback during the model development process, more than you were currently, and then there are other assessments that are done conducted extra SEDAR, or outside of SEDAR, and conducted internally by the Science Center, or perhaps Florida in the future, and sometimes referred to as update assessments, or lite assessments, interim assessment approaches, and they're conducted by the Science Center and reviewed by the SSC. That's similar to what we've done this whole time for what we used to call updates, and that's a similar approach. There's just varying levels of how much change, depending on the type of process.

Let's talk a little bit about some of the procedural details, and how this is all going to work, and so this is just a quick overview of the three stages of a sort of full SEDAR process of data, assessment, and review. That's kind of what "SEDAR" means, in case you don't know, Southeast Data, Assessment, and Review is what "SEDAR" stands for. That's where that name came from, and so, obviously, data, the data components remain unchanged. Data is going to be reviewed, and we will either hold data workshops in-person or via webinar. They're organized with SEDAR, and they're open to the public. That's nothing new.

I'm going to skip down to that review stage. Review components remain the same. We could have a review workshop via in-person workshop or webinars. It's organized by SEDAR, open to the public, things are posted to the website, all of that. Nothing there is changing.

The big sort of change in our attempt to make things a little bit more streamlined is in the assessment stage, this middle stage here. The councils will establish a technical team with a diverse scientific expertise and fishing experience, and this technical team will be used to be available, sort of on-call for -- As the center develops the assessment, if they need insight, or input, they'll reach out to either the science component of that technical team or the industry component of that technical team to answer questions and provide feedback.

The key piece of that is that they're not scheduled and noticed webinars. They're not open to the public. It's done offline, so to speak, but the center will provide a record of all these communications included as part of the report and make sure that they're available, documenting the conversations that went on, and this technical team is just making recommendations. It's really up to the technical -- And provide feedback.

The technical team is the one who are making the decisions. It's important to note always that the Science Center, when they produce the assessments, they're the ones also that ultimately, if there's a lawsuit or something, ends up having to defend the assessment, and so, given that, they've always had sort of -- We hate to say, but the final say.

The recommendations are provided from the panels, but it's up to them to decide what they want to incorporate in the assessment or not, based on the merits of how well that works for the scientific justification, and so this is the big change, is this assessment piece in the middle, but it's also what seems to take the longest when we're working through the process. Data always takes a lot of time, because of the issues with our datasets in the Southeast, but it gets better every day, as the data keeps getting more refined.

One of the main reasons why we're trying to do this, and make this change, and try this new approach, is that the assessment webinars are pretty inefficient, and they often don't produce much useful or consistent scientific advice. The panels are different every time. People might -- So, given that, individuals on the panel might have different expertise or interests that they try and grab on to and have conversations about.

The workload that is involved from the assessment side of folks, from the center side, with regard to stopping and producing presentations, and having these webinars, does take time away from what they could just be working on the models themselves, and so that's one of the arguments that the center made for this change.

They're not -- The webinars were not a terribly efficient or useful way to engage the stakeholders, especially since they often occurred in the middle of the day, when fishermen are out on the water, and they often also -- Unfortunately, stakeholders, especially the industry, often feel that they don't have much to contribute when you're into the sort of weediness of the science, when, in fact, they often could have --

You know, they could chime-in on something that you see a trend or something, and so trying to find a way to get them involved would be great, if we can find a way to make them available, and it's also true that, with regard to engaging just panels in general, finding consistent advice and producing information -- The assessments have gotten incredibly complex, and they're much more difficult for anyone to be involved in if you're not in the weeds of it every day, like the analysts are, and people come on every four to six weeks for a webinar, having not thought about it since the last time we had this webinar, and so sometimes they don't get a lot of use --

The analysts were not getting a lot of terribly useful feedback, and it's always difficult to find times when everyone can attend, even when we book these things four or six weeks out, or two months out. Even when people say they're available, sometimes they are not available when you actually hold it , and then sometimes you end up having to backtrack, and so that's not always great, and then, again, the issue with the changing workforce, which continues to change on us it seems like every day now, and so trying to find a better way to utilize our resources, that are dwindling, and this was a good time to do that.

The big change is this technical team. It is going to be made up of individuals with relevant scientific expertise and fishing experience to be available to provide feedback as needed during the development of the model.

Some of these details are more relevant for how it gets done, but I'm just going to share it with you, so you guys have a pretty good understanding of it. This team may be a standing group that covers multiple assessments, or may be developed for each specific assessment or group of stocks. Way back when, there used to be a mackerel panel, and there used to be a -- That focused on -- Whenever there was a mackerel assessment, that team was involved.

It's up to each cooperator to decide whether they want to set up one team or multiple teams, depending on the assessment. It seems like most of the cooperators seem to be leaning towards having a sort of standing team of technical expertise of the scientific side of the process that will be available and on-call for all the assessments, to help with some consistency of advice across

assessments, but that they will supplement that sort of standing team with the relevant fishermen for that particular stock.

If it's a snapper grouper stock, you might have guys from the snapper grouper fishery on the panel, but, if it's a mackerel stock, you would have guys from the mackerel, so that we have the right fishing expertise, but, in terms of the trying to provide technical advice, that seems to be the path that the cooperators are going down. We're just starting this, and so we don't know how it's going to shake out, but that seems to be the way people are going.

The lead analytic agency can reach out to the members of the team as needed, either as individuals or as a whole, and so if it's, you know, a technical question, they might reach out to the technical scientific side of the tech team and say, hey, let's schedule a webinar for you seven people to come on.

If it's an industry question, it might be easier to call up a fisherman and say, hey, when can I call you and have a conversation, and talk to two or three individuals, you know, people individually on their phone, when they're steaming four hours to wherever they're going fishing. We are lucky that the fishermen are much more able to communicate while they're out fishing now than they were in the past, due to technological developments, and we want to utilize that, if we can.

Technical teams may not be needed for all assessments, and so it kind of depends on how complex the assessment is, how much new data is available, or how many changes of, you know, the previous model might be needed to whether you'll be needed at all or not, and the technical feedback from the SSC members may be needed before this pre-decisional meeting, and may not be needed for others, and I'm going to talk about this pre-decisional meeting in a minute.

The point is that we don't know -- We won't know, until they get into the weeds of the assessment, how often the technical feedback might be needed, or when in the process it will be required, and then this last point, as I pointed out, is that, even though the fishermen sometimes feel that they're not -- That they have nothing to contribute during the model development, that's not usually -- That's not often the case. Often they do have something that helps the scientists interpret the data better, and so we do want to have a way to involve them, and they often beg off, when it's the assessment webinar stages in the previous process, and so we're hoping this will get their feedback in as well.

I mentioned, on the previous slide, this thing that we're pre-decisional briefing, is the correct verbiage, and the slang is SSC check-in. Basically, this has already been implemented in the Gulf. It was implemented not necessarily because this was a new process, and it just came up, but it turned out to be a pretty helpful way to get SSC feedback during the development process.

The point of this is, before the model is final, before they come to you guys with the here it is, they can come to you with a, hey, these are some of the key decisions we've made in this modeling process, and what do you all think?

The hope is that you don't get a full presentation of the model, and then they have to go back and try and make changes, and they come to you with a presentation on the key decision points, key things that may have changed since the last assessment, or how they're utilizing a new piece of data, that sort of thing, but, that way at least, the SSC can provide feedback prior to the completion

of the assessment, because I know this panel has struggled with you get the assessment, and you have issues with the assessment, and the Science Center says, well, unfortunately, we don't have any time to make those modifications now, and so here's all you get.

We're trying to avoid that, by giving you guys a chance to give some feedback in the development stage of the process, so that they can consider your recommendations and make modifications before they finalize it. When those check-ins happen, it will be just negotiated between the agency, or the lead analytic agency, and the council cooperators, to make sure it fits in the schedule of how things are going.

The hope is that, like I said, this will help alleviate some of that back-and-forth that sometimes, and struggle that sometimes, happens after the assessment is completed of whether the Science Center has time to make changes that you guys would like to see before having to make your actual catch recommendations, and so hopefully that will work.

There may not be a need for an SSC check-in. That will really be decided between the cooperators and the agency. You know, sometimes it will be like it's relatively straightforward, and we don't feel that the SSC needs to weigh-in, and I have a feeling, in most cases, since our things don't ever seem to be as straightforward as one would think, they'll be coming to you often.

As I said, this approach has been used for the Gulf SSC on two different -- At least one assessment, and it was actually really helpful, so that they came, and they gave a presentation on the key changes that they were making to the model, and the analyst also said, hey, I would like some feedback on this, and what do you guys think, and I have a couple of options, and what would you recommend, and what would you like to see, and then so they made those --

They were able to incorporate and flesh out all those questions, so, when they actually came with the completed model, the model review, and the management specifications that you guys recommended, actually were a much easier process, because they had already tackled some of your questions in advance. They knew what you were -- They were able to address them, and so hopefully this will help as well, and that’s why we're putting in the process, and we'll give it a shot.

DR. REICHERT: Fred, a clarifying question?

DR. SCHARF: Yes, and just can you define a little bit more what you mean by council cooperators?

DR. NEER: Yes, and I'm sorry, and so, in the SEDAR process, we refer to all of the sort of partners as cooperators, and so the cooperators for the SEDAR process are the three councils, Gulf Caribbean, and South Atlantic, the two commissions, the Atlantic and the Gulf Commission, HMS, for the shark assessments that are held, and then both the -- Who am I forgetting? Florida Fish and Wildlife produces assessments for us too, and so we consider them a cooperator, and so those are the -- The center is technically a cooperator, and SERO as well, but so, when we say “cooperators”, we basically mean partners, the people that are involved in the SEDAR process.

DR. REICHERT: Thanks for that clarification, Julie.

DR. NEER: So the components, and so one of the other roles that the SSC will be involved in, and what we're trying to do for all the assessments, is figuring out what each individual assessment will look like, and so what we're calling them is components. There's three main stages to the SEDAR process. There's a data stage, an assessment stage, and a peer review stage, and the components for each stage are sort of up for negotiation.

This is where we know we want to do an assessment on this species X, and what data do we have, and what new information is available, to help us decide how much detail and how much review is required to produce that assessment, and so you'll see there's up -- There's essentially five options within the data stage. The stock ID, do you need data scoping, or do you want topical working groups, or do you want data webinars to review some stuff, and do you want an in-person workshop or a virtual workshop, and Emily is going to get into more detail about these components in her presentation that's next.

You'll see that there's choices that are, based on the information available, what you want to do for the data pieces, what type of assessment process you want to follow, either topical working groups, which we've been doing for a while, assessment panel webinars, which is what we've done for forever, which we're currently doing for both the red snapper assessments underway now, or this agency-led internal assessment with this technical team, and then the review pieces are currently either a review workshop or a desk review, where we send the assessment out, and it's looked at.

This little infographic that Emily had to revise for us about seventeen times, as we kept changing things to the process, is just to sort of lay out and let you see how the different stages and pieces work, and, just to orient you, the green, teal green, boxes are where SEDAR would be involved. The grayish-colored are for where the agency sort of takes the lead, and there's not a lot of SEDAR process, or no SEDAR process, involved. The yellow is where the technical team would weigh-in, if there is one, and the blue is the cooperator pieces that are organized by the individual cooperator.

Just in general, what you see is, you know, if there's a SEDAR process, we're doing the green things, and they're going to happen. There's the data scoping that we would hold. The next big green blob, at the bottom there, is all the options that you could pick for data. Then there's some options to pick for how you want to run the assessment process, with SEDAR involvement or no SEDAR involvement, depending on that green blob or the gray blob, and, after the assessment piece, you could have an SSC check-in, or you could have a technical team, and you don't have to, and then it moves on to the far right, which is what sort of review do you have, and how much SEDAR involvement is for that review.

This shows all the choices. You wouldn't have a data webinar plus a data -- A data webinar, plus topical working groups, plus an internal-led assessment, plus topical working groups for the assessment. These are all the choices, and, at each stage, you have to pick the path you want to take, and so it's a little bit of choose your own adventure negotiations between the Science Center and the cooperator, but the SSC will hopefully have some say, and we don't think there's enough that we actually need a data workshop, but it would be good if we hold a couple of data webinars, or topical working group, to talk about the SADL survey that's coming online, that we haven't used, as an example.

This is all the choices along the process, and just note that, the more involved SEDAR is, the more green boxes you choose, the longer the assessment takes, essentially, because, every time SEDAR gets involved, SEDAR is involved, we just -- You know, we have to notice all the webinars, and it puts a much finer schedule on things, and there's a lot less -- It's a bit more restrictive, in terms of timing, because of things like that in the public process.

We're willing to do it. SEDAR is happy to run anything you all tell us to run, but just note that it's -- The more pieces you choose that have public involvement, the longer the assessment schedule, the longer the assessment schedule for any individual project usually translates to fewer assessments overall, because of limited resources.

This schematic is just sort of to help see how -- There are all the pieces you could choose individually, and what you choose is part of the negotiation and what you guys can help recommend pieces that you think would be useful, and then, so any individual assessment, we would -- Certain boxes would probably be, you know, circle/slash, that we're not doing this, and move things along, but we were just trying to show a way that these are choices and options and steps along the process from this graphic.

DR. CURTIS: I think, Julie, just one question that, looking at the schematic that I always get hung up on here, is the split between, you know, that technical team and the SSC check-in, and these are not mutually exclusive, right? You could still have technical team working on contributing to the assessment phase, and an SSC check-in at the same time?

DR. NEER: Yes. You could have either of those. You could have both of those components, or just one of them, and that's why we tried to do the two bubbles, and so it can be possible that you have a technical team, but the technical -- But they feel there's no need to have an SSC check-in, or more likely what would happen is the assessment team doesn't feel there's anything that they have questions for the technical team, and they have a pretty good understanding. It might be an assessment that we've done two or three times, but, before they finalize it, they want to get feedback from the SSC.

DR. REICHERT: Thanks.

DR. NEER: If that makes sense. Luiz.

DR. REICHERT: A quick question, because I want to make sure that we can get through the presentation.

DR. NEER: He can ask here, because we're almost done.

DR. REICHERT: Luiz, go ahead.

DR. BARBIERI: Thank you, Mr. Chairman, and so, looking at this, that first option there, a process run by the Southeast Fisheries Science Center, in this case, there is no assessment panel, correct?

DR. NEER: For that top row?

DR. BARBIERI: Yes.

DR. NEER: No, there is no assessment panel. There may be a technical team, if they need it. That top line, where they do everything internally, except it comes to the SSC, is essentially an update, where they update their data internally, and they do their data scoping internally, and they run the process. Maybe they need a technical team to provide insight. Most likely not, if it's a streamlined assessment process, and it's more update, similar to a previous update. They may come to the SSC check-in, but that top one is essentially what we used to call updates. They get the data, they do all the work, they come to you guys, and they go here's the assessment.

DR. BARBIERI: Right.

DR. NEER: That's the most streamlined process.

DR. BARBIERI: Right. Thank you, and so my point is, for those assessments, the only opportunity for SSC input is if the Science Center decides to schedule a check-in?

DR. NEER: Yes, and I don't think the decision on whether they need a check-in is -- I guess it's technically up to the Science Center to say we'll do it, but I have a feeling, if the cooperators request it, hopefully the Science Center would say that, sure, we're happy to come to your SSC and give you a little presentation, but I can't speak for the center.

DR. BARBIERI: Right, and so just a point for us to discuss later is, I guess, you know, because this SSC only meets twice a year, it has a pretty full agenda for both the spring and the fall meetings, right? I mean, it's difficult to fit in some of those things, and it may not actually accelerate the process of completion if we allow for the SSC check-in to happen, because it can only happen twice a year if there's no assessment panel.

You know, the example in the Gulf, which I saw worked out very well, right, but the Gulf SSC meets five times a year, and so there's always opportunities for them to come in and ask for input, and, by the way, the last time that this happened, as for the red grouper, the assessment panel was still in place, and so the input that the Science Center received was doing an actual webinar that was set up by the Science Center with the assessment panel as a whole. Then they came to the SSC to present those recommendations and the decisions that they made, accepting input from the SSC, and so not trying to throw a monkey-wrench into this, but just say, for us here, this might get complicated.

DR. REICHERT: Thank you, Luiz. I know Fred is online. Fred, if it's a clarifying question, but I would really like Julie to finish her presentation, and then let's do a round of clarifying questions and discussion.

DR. SERCHUK: That's fine with me, Chair. That's fine with me.

DR. REICHERT: Okay. Thank you.

DR. NEER: Yes, and, Luiz, just to your point, I mean, I know the South Atlantic SSC meets in-person twice a year, but you guys have been meeting at least three times a year, for the last several years, with a summer webinar-based assessment. I have no reason to believe you're, unfortunately,

not going to continue to do that. This was a point that was discussed, and, from discussions with council leadership and stuff, they said, well, if we have to have a half-day webinar, we could probably make that happen, to make sure that we can -- So, yes, you have two set webinar in-person SSC meetings.

We almost always have a summer webinar-based SSC meeting, and Judd is nodding his head that he seems to remember those conversations, and so, if we need to schedule something, we do -- That is actually one of the beauties of this, is that, since it's not going to be something with a full assessment presentation, where you have to do recommendations and stuff, it could be possible to schedule a half-day webinar or something when we need one.

DR. REICHERT: Judd, briefly, to that point, and then --

DR. CURTIS: Julie responded with what I was going to say in response to Luiz's question, and so we are meeting at least two webinars, in addition to the in-person meetings, and having the flexibility with the webinar then I think would actually be advantageous for this check-in process, because we can schedule, depending on when the need may arise, and then full reviews, and the catch level recommendations and ABC setting would happen in the in-person meetings.

DR. REICHERT: Thank you. Julie.

DR. NEER: Yes, and so let's just move on. There's one small little bit left, which is just dealing with the roles of the SSC, and so the way it is envisioned with you -- Where you guys would come in, which is probably what you care about most of all, was to provide guidance on the structure of the assessment process, specifically regarding which process components are needed.

Given your understanding of the data that was used for the previous assessment, or new information that might be coming online, such as I said, like the SADL survey, or another new index, or a new data source, you could provide the council with some feedback with regard to do we need an in-person data workshop, or do we think data webinars, or a topical working group, might be enough, and so we're hoping that the councils will take your recommendations into account when they meet with the Science Center.

Just an FYI that things are a little mushy right now with regard to the order of operations, because we're just rolling this out, and so that may not have happened, as you guys are going to see terms of reference to review today. We've already had some of these negotiations, but, once we get everything onboard, that's a goal that we were hoping, for the SSC to provide feedback for that piece.

Recommend data and assessment topics to be included through the terms of reference, which is what you guys have always done. That's nothing new. It's, you know, just giving you guys a chance to review the terms of reference, and the reality is you've always had some -- An opportunity to provide some insight with regard to what should be included in the process. We're just trying to sort of explicitly define what components are going to be included in that, so we, one, know how it's going to run, and, two, so we know how long the whole process is going to take, and so that's what we're trying to more define, is those pieces.

We still want you guys to participate in the data process, serve on topical working groups, perhaps be on a technical team, and, of course, serve at the review panel stage, and so your roles within the process are not changing much. How you do the piece is a little different, but your role in providing feedback throughout the process is pretty much the same.

Provide recommendations during those pre-decisional reviews, or briefings from the agency to you guys before it's final, and then, finally, review the assessments to provide that management advice, which is something you've always done, and, just really quickly, about the technical team participation and the topical working group participation, you guys have provided -- You have been involved in the topical working groups, which has usually a limited number of meetings, perhaps two to three for any individual topical working group, and so that workload is fairly well defined.

I know, as we've been rolling this out and talking to other SSCs and cooperators, there was some concern with regard to, oh my god, now the SSC workload is going to skyrocket, because of these technical teams, and we actually think the workload of the people that are involved might actually go down, because, while -- The bigger uncertainty is when you guys will be called on, right?

We won't know that there's a webinar every -- In the current process, you can say, okay, I'm on -- I signed up for the assessment panel, and now I have a webinar every four weeks, for six or seven months over the time, right, and you know your time, but there's a lot of meetings.

With the technical team, you might meet twice, and you might not know when, but we've already had a conversation that the Science Center is not going to go we need your feedback, and so we're meeting tomorrow, and, if you can't make it, tough. Like they still recognize people are busy, and it's got to get out to everyone's schedule and agenda, and so, while there's more uncertainty with regard to when you might have to provide feedback, you will likely be asked to provide feedback less, and have less sort of three-hour time blocks off of your schedule, as opposed to the current process, where you're expected to be on every webinar for seven months or whatever.

We haven't done it yet, but this is our assumption and understanding from how things have been working, versus how we're hoping to change them. We're actually hoping that that technical team piece will be actually less time than what you do currently when you sign up for an assessment process that is supposed to be four months long, and ends up being seven months long, because we keep having questions, and that's what often happens, and so I just wanted to address that point, because I have heard that concern from a variety of different folks.

I think that's it. Yes, and so that's the end of the sort of overview. I went kind of quickly, but I went a little slower than I thought, since I think we've got time for the agenda, and so I'm not -- I was told I didn't have to just do it all in ten minutes, like you guys tried to make me do the last two meetings. I couldn't have done it in ten minutes, clearly. I could have, but you would have understood nothing.

That's the kind of big picture overview. Emily has a presentation to talk a little bit more about the individual components, so you have a better understanding, so you can make recommendations, but that's it for the overview, if you want to have questions about that.

DR. REICHERT: I'm a little conflicted, and so do you think it would be good to get some clarifying questions, or may some of those be answered by Emily's presentation? I'm trying to think what would be better.

DR. NEER: I think if we have clarifying questions about the general process, but not the specific components, I can answer those, and then we'll let Emily give the components discussion.

DR. REICHERT: Okay. If there are questions that you know Emily will address, please let us know, and then we can cut that short. I saw Jim's hand up.

DR. GARTLAND: It was more technical, and so it can wait, if that would be useful.

DR. REICHERT: Okay. Fred Serchuk.

DR. SERCHUK: I have sort of a general issue. Before changing the process, have you looked at the number of years between assessments for these species? In other words, some species I would guess don't get assessed, or reviewed for five or six years. Others may be maybe done on a quicker time base than that.

I'm also concerned that we know the center is going to be -- They won't be able to be as efficient as it has been before, because they have less people, and I think this is a big concern. I would have thought it might be useful to look at the number of years between assessments that had already been done when they had a full staff and then think about, well, maybe they have 30 percent less staff now, and do we need to prioritize, because the time between assessments will probably take longer.

One of the things that I've noticed, coming from the Northeast, is that some of the assessments here have a longer time period. Some of the management measures are in place for a longer time period, because the assessments are not done as quickly. I know I put a number of points forward, but I'm thinking about if the center is a large part of it, and they're going to have less people, does that mean we're going to have to prioritize the time frames for the particular assessments, because they can't be all done as they've been done in the past, or at least on the timeframe that was done in the past? Thank you.

DR. REICHERT: Julie.

DR. NEER: Well, I can say that, on average, our assessments are about five years apart overall, unfortunately, but that is kind of what we're hoping to help shorten that time period with this process. If we don't have to take eighteen months to get through a regular SEDAR process, and we can cut that down to twelve months, which is what we were doing roughly seven to ten years ago, that six-month window could then allow the center, and the data providers in particular, because they are, unfortunately, still the bottleneck to getting stuff done, and the --

It would be possible to then do another assessment that's run in that sort of internal update approach, or some of the interim analyses that they're trying to look at, or what the center is referring to as an update lite, where perhaps they update some of the information, and like the landings might be available, and they might be able to update maybe one of the indices, but not all

of them, and then they rerun the model and provide you guys an idea to perhaps modify your catch recommendations with sort of a streamed-down process, and not every dataset gets updated.

The hope is that we will be able to jump on and get a few more things done to cut down on some of these timeframes, so they're not going four, five, six years apart. You might not get say a complete assessment, where every single piece of data gets updated in a shorter timeframe, but we're hoping to get -- To provide more information on a shorter periodic window than what we're doing now, and that's the hope.

Actually, if you look at the SEDAR grid of projects, we're hoping to sneak in sort of an extra assessment in there under this external to SEDAR process in 2026. By rolling out this approach, they're hoping to have an actual window that we can kind of do a slide and update of one of the assessments that have been previously done in that little bit of timeframe, assuming that this process is going to go faster, but, yes, our assessments through the SEDAR process are pretty far apart from one to another, and we're hoping to address that, but that's also this note that not every assessment should go through SEDAR.

It was never the intent. SEDAR is supposed to be the full view, and a lot of eyes on the process, and we develop one of these assessments, and then the hope is that it can be updated more quickly in between.

DR. REICHERT: Thank you, Julie.

DR. SERCHUK: Thank you, Julie. I appreciate it.

DR. REICHERT: Thanks, Fred. Anyone else online? I have several questions. Jennifer, go ahead, and then I have Steve and Alexei.

DR. SWEENEY-TOOKES: This might fall under the technical report that Emily is giving, but I was hoping you could talk more about the technical team, and the stakeholders, and how they'll be selected, but feel free to tell me to wait for Emily.

DR. NEER: That's fine, and so the technical teams are going to be selected -- Each cooperator is going to figure out who they would like to put on those teams, and, similar to how they select their teams now for any SEDAR component, they'll be appointed, and so I'm assuming, when we get to jobs somewhere later in the process, Judd will say, hey, who is interested in participating on a technical team, and you all will raise your hand, and the councils will ultimately make the decision on who they want to appoint, and the same thing for the industry representatives.

They'll probably go out to the APs, as well as others, and say who would be interested in being available for this assessment, or that assessment that's upcoming, and then the councils will provide a memo of some sort to the agency saying these are the individuals that we have recommended for the technical team for this assessment, and here is their contact information, and reach out to them, as needed.

I will note that there is right now -- We gave this presentation, or a variant of this presentation, to the council in September, and NOAA GC is looking into a few things for us on that piece of the puzzle, and so we're still waiting to get a little bit more feedback on that piece, but the appointment

process, the working model, is that it's going to be similar to how we make appointments for any SEDAR thing.

You have to be in the SEDAR pool to be able to be -- The SEDAR AP, what we call the SEDAR pool, to be appointed to be on that process, but you just apply, and you can get in there pretty easily, but the cooperators will say these are the people we want to appoint. They will let the agency know that these are the people who we want to be -- That you can reach out to as you need it. You look confused.

DR. SWEENEY-TOOKES: Thoughtful. Should we hold feedback at this point, Marcel, and wait until later? I'm happy to do that.

DR. REICHERT: Well, that's what I was kind of afraid of, that this would lead into discussion, and so maybe we can come back to this after Emily's presentation.

DR. SWEENEY-TOOKES: Yes. Thank you.

DR. TURNER: Thank you. Two related items. One is basically how does scheduling work? Who decides who's going to do an assessment, or when an assessment is going to be done, that part of the process? The second thing is I think we, as a group, are going to want our quarterly updates on what assessments are actually being done and what status they're in, which is less than sort of a full update to the SSC. We need to know what's going on.

DR. NEER: Yes, and so that is -- Those two things are -- The second question, with regard to providing updates, that's something easily that the SEDAR coordinator for the South Atlantic can work with Judd to make that available. The Gulf has a little table that Ryan updates and gives the SSC every meeting, and so that's easy to say, like this is where we are at each stage of each process.

With regard to which assessments happen when, there is negotiations that happen at the SEDAR Steering Committee. Each cooperator comes to the committee and says I would like to see gag, black sea bass, and king mackerel done in 2027, and then the Gulf comes and says I would like to see X, Y, and Z, and then the Florida says that we can do this one this year.

Then, once the center has a view of all the choices, all the requests, and we have an understanding of what pieces of each puzzle for each assessment is available, they tell the steering committee that this is what we can accommodate, and so you guys can make recommendations from the SSC up to the council with regard to what you think your priorities should be, with what species should be next, and then the council takes your recommendations into account, in addition to the feedback that they're getting from others, council feedback on which assessments, which species, need to be looked at next.

We provide the information, but, ultimately, it is the Science Center, for all the ones that they run, that they lead the assessments on, and they tell us how many they can do in the timeframe that we have available, and that's always been the way, because they are the lead analytic agent for 90 percent of the stocks that we do.

DR. REICHERT: A quick clarification to the last point you made, and so the Science Center looks at the requests, but their reply depends on who they have available, and the schedule, but it's

ultimately the council who requests the type of -- Well, there's no different types of assessments, but the type of assessment and the species, correct?

DR. NEER: Right. Yes, and the council would make recommendations to your SEDAR Steering Committee members, which is the chair of the council, as well as the ED of the council, and so John, and whoever the chair is currently, Trish. The people sitting on the SEDAR Steering Committee, they say this is what we would like to see, and we do this out to -- You know, we have 2026 is fine, and we're going to be working on finalizing 2027 very soon, and we also put on the -- There's a grid on the SEDAR website.

If you go on the homepage of the SEDAR website, to the right side, there's a little -- It looks like a little Tetris grid that we use for master planning, and it says that all the assessments that are being done across all the platforms, and it's good to have that view, because it's not just South Atlantic, but it's South Atlantic, Gulf, sharks, commissions, Florida, and you can see all the different things, but there's little boxes that say these are the species that we are doing, and these are the species that we've requested, and these are the species that are -- For 2028, some of the requests are out there.

Now, sometimes you request something, and then something else happens over here, and now we change everything, but it is, ultimately, the councils make a request, the cooperatives make a request, and the center says his is how many things we can accommodate, and often it is a negotiation of, okay, great, and we can do three, and you've given us four, and what three do you want, and that -- Those kinds of conversations usually happen at the SEDAR Steering Committee level.

DR. REICHERT: Thank you, Julie. Alexei.

DR. SHAROV: Thank you. It's, I guess, a comment and a question. You probably need more questions at this point, I'm still, honestly, struggling with sort of summarizing of what is the principle improvement in this process? Why are we doing this? So could it be summarized in two or three sentences, what actually do we achieve, because, the way I see it, there are two principal partners.

There is the Science Center, that provides the service that --They work, and then they produce the assessment, and there is a council who is receiving this, with particular, you know, questions, which are formulated in TORs that should have been addressed, and so what is an improvement that the center is getting out of this? Is it possible to, sort of in simple words, summarize it?

The way I see it, it principally looks like they just want more independence, and just be able to work on the assessment on their own, and only consult when necessary, as opposed to being, you know, regularly overseen, or controlled, or is that the correct understanding of the process? Then, on the council side, and including the SSC, what do we get as an improvement?

DR. NEER: Right. Yes, you know, you're correct. The main change to this is to hopefully streamline the development of the assessment process, with the Science Center doing more of it internally, having fewer public webinars, and that approach to it -- That will hopefully allow them to be more efficient in getting the modeling work done, since they are really the technical experts.

While we do have some people who can provide feedback, the bulk of the people often on the panels don't have the technical expertise, or, additionally, they sit on a webinar for three hours and go, I agree, I agree. I agree with all your recommendations, because the Science Center is -- You know, these guys are doing this every day, all day long, and they're embedded in the assessment.

When we bring the panels in every four to five weeks, they're trying to play catch up, and so, yes, the main timing improvement, which will hopefully allow it, is allowing the center to have a little bit more independence to do the work. When they have questions, they can reach out, and to help the SSC not be totally cut out of the process, and that's why we're having to have the technical team, and as well as the SSC check-in, and so, before things are finalized, you guys do get to see it. As opposed to just having two or three SSC members on the assessment panel, the whole SSC should get to see it before it's finalized, and so those are the two main components. The center can work more independently to get it done, and then you guys get to see the key decisions before it's final and provide feedback on that.

DR. REICHERT: Thank you, Julie. Okay. Let's take a five minute break, and we can set Emily up for her presentation, and then we're coming back. After Emily's presentation, what I would like to do is go to public comment, and then we can move into our questions, and discussions, because I've already noticed that questions kind of start moving into the discussion, and so that's planned for after the break, and so we'll take a five minute break. Thank you. A ten-minute break. We'll be back at 10:05.

(Whereupon, a recess was taken.)

DR. REICHERT: Welcome back. We are setting Emily up for her presentation. Emily, take it away.

MS. OTT: All right. Hi, everyone. For those I have not met, or for those online, I'm Emily Ott, and I'm the SEDAR coordinator for primarily South Atlantic stock assessments, and so, if you've been part of a South Atlantic stock assessment in any capacity in the last year, you've probably heard my voice on the faceless webinars, and so this presentation is supposed to serve as supplemental information to Julie's presentation that she just presented on.

It dives a little bit further into the details of the components that she discussed in the process modification, and so this presentation is an overview of the SEDAR components, and we've actually written up a detailed document of all the components, which is on the SEDAR website, and so I can point everyone to that, if people are interested in really reading the report of all the details, and then this presentation was also presented at the last SEDAR Steering Committee meeting, back in August, and there's just been a few minor tweaks, which is why it has a date of September.

Diving right in, a couple of these slides are an overlap to Julie's presentation, and so this outline here is just to show that the three main stages in the SEDAR process remain, the data, assessment, and review stages. It's four stages if you count stock identification as its own stage, and then listed under each of these stages are the various components that can be selected. As Julie mentioned, it's the choose your own adventure assessment.

Then this infographic you already saw in the last presentation, and the main takeaway here, which Julie already dove into, is just looking at the colors on the infographic, and so each color is going to show you which component, or which entity, will be responsible for coordinating each component, which is the main change of the SEDAR process.

Okay, and so, starting with the data stage, the data stage remains the key role of the SEDAR process. It's the first stage, and so it serves as the foundation of the assessment. The cooperator still appoints individuals to participate in the assessment, whether it's serving on a panel or a topical working group, and then the level of participation of these people vary depending on the project structure, and so depending on the component selected for the assessment.

Julie and I both maintain email distribution lists for the various assessments, and so individuals that are interested in being informed in the assessment, but maybe were not appointed to the panel, can be added to these email distribution lists and receive information on the meeting dates, the project schedules, and then any other logistics pertaining to the assessment.

Listed below here are the five components that can be selected within the data stage, and just to note, because SEDAR still coordinates the data stage moving forward with this new process, any meeting, webinar, workshop within these components needs to be federally noticed in the Federal Register and will be open to the public.

The first component within the data stage is stock identification, which just identifies the stock boundaries for a given assessment, and this component only really needs to be selected if it's the first time a stock is being assessed, or if there's new information, such as genetic information or other relevant information that calls for a reassessment of the stock boundary, and this is typically a webinar-based process, again noticed in the Federal Register and open to the public, and this will be a panel of appointed individuals with relevant expertise.

All right, and on to data scoping, and so this is also a webinar-based process, and the purpose of this webinar is to identify potential datasets and data providers for potential use in the assessment, and the scope of this webinar, or I guess how rigorous this webinar is, depends on the process structure, and so, again, those components selected for the assessment.

Then, the data topical working groups, these are small working groups assembled to discuss a specific subject matter related to the data, and so, for example, data topical working groups that have been assembled in the past have been reproductive dynamics, specific landings stream issues, and, because these people are assembled to discuss a specific topic, they are limited to discuss that subject matter, and so other discussion outside of that is limited.

These groups are typically comprised of members of the analytic team, the SSC, stakeholders, and then any other technical experts, and their goal is to provide feedback and recommendations to the analytic team conducting the assessment, and this group also meets via webinar.

Data webinars, so this is a panel of appointed individuals, again, appointed by the cooperator, and this panel meets through a series of webinars, again noticed in the Federal Register, and they review select datasets up for consideration, and so this is not open to review all datasets. This is just looking at select datasets, and it does allow more time than a topical working group would

allow for, and so it's a little bit of a longer process, and all of the discussions and recommendations made in these data webinars are documented.

Then the last component of the data stage is the data workshop, and so this data workshop can be in-person or virtual. If an in-person data workshop is unavailable, both will have the same criteria, and this is, again, a panel of appointed individuals by the cooperator, and this is when all datasets are up for consideration, and so this allows for the most time to review the data, and is the least restrictive, as far as the data that you can discuss, and a workshop report is produced to document the discussions and recommendations at the end of this process.

All right, and then, moving on to the assessment stage, and so, as Julie mentioned in her presentation, this is the stage that is going under the most changes according to the process, and so a little bit of a summary on the assessment stage.

A cooperator appoints individuals to participate in the assessment, with those categories of participants and level of participation varying depending on the component selected for the assessment, and there is still an email distribution list, if people want to stay informed on the assessment, and then the three components listed here under the assessment stage -- The first two should look familiar, the assessment topical working groups and assessment panel webinars. This is what has been offered in the past, and the third component is the new component we're discussing, the agency-led internal assessment, and I'll get into the weeds of that when I get to that slide.

The assessment topical working groups, the exact same thing as the data topical working groups with the exception that this group focuses on assessment subjects, and so any modeling and analysis. An example for this group is red tides, that's been assembled in the past, and this group is still comprised of members of the analytic team, SSC, stakeholders, and other technical experts, and their goal is to provide feedback and recommendations to the analytic team conducting the assessment, and, again, these people meet via webinar.

The second component that's offered in the assessment stage are assessment panel webinars, and so this is how SEDAR is currently run, with a panel of appointed individuals, and this panel will meet through a series of webinars to discuss all aspects of modeling, and so all aspects of modeling are up for consideration, and all discussions, data updates, final model recommendations, diagnostics, and results are documented after this process.

So, again, this is the large change with the SEDAR process, this third component within the assessment stage, the agency-led internal assessment, and so this is when the lead analytic agency develops the assessment without structured input from an assessment panel or topical working group, and so this assessment stage, if this component is selected, is conducted completely outside of SEDAR.

We're recognizing the value of feedback and stakeholder engagement. We are -- Or the SEDAR Steering Committee did develop those two components, to still allow that avenue for feedback and stakeholder engagement, the first component being the technical team and the second component being an SSC pre-decisional check-in.

Again, that technical team with relevant expertise would be available to provide feedback as needed during model development, and this is more of an informal way to get feedback, and so they would be assembled in an ad hoc format compared to SEDAR, where all of the webinars are very structured, and they have to be noticed in the Federal Register, and sometimes the structure of those organized meetings limits the flexibility.

Then, lastly, the third stage of the SEDAR process is the external peer review stage. This, again, has not undergone any changes, and so, just to recap, the review process intent is to provide an independent peer review of SEDAR stock assessments, with the intent of the review to ensure the assessment and the results are scientifically sound, and so, as this assessment moves from the science to management, decision makers are provided with adequate advice that reflects the uncertainties and the data and the methods, and then there are some limitations to this review panel.

They cannot provide specific management advice, and the review panel recommendations are advisory in nature, as are all panel recommendations, and then the review panels also may not conduct alternative assessments.

There are two components, one of two components, that you can select in the review stage of the SEDAR process, the first being a review workshop and the second being a desk review. For the review workshop, this is an in-person review of the data and assessment. The review panel consists of three reviewers appointed by the CIE, or the Center for Independent Experts, typically two reviewers from the cooperator's technical body, and so, in the South Atlantic's case, the SSC, and then there's also an option for the cooperator to appoint one additional reviewer outside of the cooperator's technical body.

Then the second and final component within the review stage is the desk review, and so this is a written review of the assessment. This is when the review panel, which consists of typically three reviewers appointed by the CIE, and so the Center for Independent Experts, and then an option of that one additional reviewer reviews the assessment without any contact from the assessment team, and so this is historically how it's been done in the past.

However, there has been some discussion investigating an option for analysts to provide reviewers with a virtual presentation of the assessment, and allow the CIE reviewers to ask clarifying questions, with the goal of providing some potential additional context for the reviewers, if needed, and hopefully improve the quality of the review, and so that is all I have for the component details, and I'm happy to answer any questions. Thank you.

DR. REICHERT: Thank you, Emily. Any quick clarifying questions? Otherwise, I would like to go to public comment, and then we can start our questions and discussion for both Julie and Emily. Okay. Any hands up for public comment? No? Anyone in the room like to make public comment? Seeing none, thank you. Any questions for either Julie or Emily, or continuation of the discussions we had? I have Jim, and then Fred.

DR. GARTLAND: So I was just thinking about the technical team, and is there an intention to have almost like a kickoff meeting with the technical team? The reason I ask is this has been informally tried in the Northeast, and, the assessments where this has been informally tried, it's been really successful. We're doing a stock assessment right now for longfin squid that had a kickoff meeting with stakeholders and technical experts, and it's actually guided a lot of our

decisions since, and so, if that wasn't part of the thinking, it might be worth considering, just to kind of help get everybody on the same page and set the stage, and so just a thought.

DR. NEER: So is this kickoff meeting after the data or -- Because we would still have a data component, which would be public.

DR. GARTLAND: It was actually before, and it helped -- In at least one case that I know of, it helped identify data that were previously not unknown, but of unknown quality, that turned out to be actually pretty useful.

DR. NEER: So we have the first stage of our process -- If we don't do stock ID, the first stage is -- Part of the data part is a data scoping webinar, which is open to the public, which is everyone on all the panels are invited to participate, and that's the stage where we initially say, okay, this is the data we're expecting, and is there anything else we're missing, or is there anything else we should look at, and who should we contact, and so I think we could certainly -- We hadn't really thought about inviting the technical team to that piece of the puzzle, but I don't see why we couldn't do that, if the cooperators would be interested.

I mean, actually, it makes sense to give the technical team a bit of an insight of this is the data, you know, the overview of the data, and then it can be up to the individual technical team members whether they wish to follow the data process or just jump on at the -- That's actually something I hadn't thought about, but I like that idea.

DR. REICHERT: To follow-up on Jim, a question for you, Jim. In that kind of kickoff, are other components of the assessment discussed, for instance like type of model or whatnot, because that would then go beyond kind of what's normally being discussed as a data scoping call, and so just as a clarification, Jim.

DR. GARTLAND: Sure, and so, again, the Northeast ones have been kind of informal ad hoc, if you want to think of it that way. It's been more talking about the data, and more talking about some life history things that maybe haven't been considered in the past, and some in particular stakeholder observations that maybe hadn't been brought to the forefront before.

Just one of the other things I wanted to mention is one of the things we've found, and, again, I think all the input is valuable, but sometimes the quietest and busiest stakeholders are usually -- That I've found anyway are the ones who come up with the, wait, that's neat, and let's follow that, and so, just as the technical teams are being put together, it might be worth digging a little bit on the members.

DR. NEER: Yes, and so our assumption is that, you know, we would still have people appointed to the data stage of the process, and that's like -- Those are all the normal public pieces too, and so, yes, but. As you're saying, it might not be a bad idea to at least invite those members who are going to be on the technical team, to make them aware of whenever we're having data webinars or whatever, so that, if they want to listen in, they can.

DR. REICHERT: Before we go to Fred, Judd, to that point.

DR. CURTIS: Yes, and thanks, Jim. I think that's a good addition that we could look to include as part of the task for that technical team. You know, there are several other avenues where that information can get integrated. You know, the terms of reference is one that goes through this committee's review, where, if you have an idea of a data source, or additional information that should get vetted through the data workshop, or by the analyst, if it's not going through a data workshop, we can include that information there.

Then, for the data scoping calls and the data webinars too, we'll have SSC members appointed to those panels still, when they do exist, and typically we'll recommend, you know, if there's new data streams, something like to build a new index out of, that would be -- You would hold a data workshop, or a webinar at least, for that, and so that's when we can get that input as well, but I still -- I like that idea, and I think, if the assessment technical team is willing to jump in to provide some guidance on the data inputs as well, that's useful.

DR. REICHERT: Yes, and just -- I've heard two recommendations relative like yours, and I think it was Steve's recommendation. We can go come back to that later. Jennifer, to that point, before I go to Fred?

DR. SWEENEY-TOOKES: Thanks, Fred. I appreciate it. Before we leave this topic, thank you, and this is what I was thinking earlier, Julie, when I asked that question, and I love the idea that Jim is bringing up of doing these big meetings ahead of time, and perhaps even before this technical team is formed, and I mention this because we finished a project on citizen science throughout the whole Southeast region, and one of the things that we heard over and over, in our qualitative interviews with people who are not members of APs, who do not go to council meetings, who do not join webinars, is that they feel very disassociated from the whole process, through no one's fault, right, and this is sort of how the process has unfolded.

There was a lot of sentiment that we hear from the usual suspects over and over, and that this is the somewhat vocal minority, that are not necessarily representative. I am not in any way saying that our AP members are not incredible, because they are, but I wonder if there is a way to try to pull in perhaps even more people who are not necessarily already part of the process. What this looks like, that's a whole big challenge, right, that faces all of us, but I wonder if these sorts of preliminary, hey, decisions are going to be made about this topic, and come, and let's get this on the ground, and see if there can be new voices pulled to the table.

DR. REICHERT: Jim, is there a reply, or comment?

DR. GARTLAND: Just to that real quick, that's exactly what I was getting at, and one of the ways that I've seen it handled is through direct invitations even. You know, if it's like, hey, we really want you to come here, sometimes people make time to do that.

DR. REICHERT: Jennifer.

DR. SWEENEY-TOOKES: That's in fact what worked for the sampling for that project, was using out to -- Using a randomized sample from the database of permits, and reaching out to people directly, You Person, who has maybe never been contacted, and we want you, and can we talk to you.

DR. REICHERT: Thank you. Fred.

DR. SCHARF: Yes, and I just kind of wanted to talk a little bit about just the SSC role, and I really like the idea of expanded input from the SSC during model development, because I know that, you know, in the past, many times when there's been issues, or challenges, with assessments, it's often because we've been constrained, because of the titles of different assessments, on the kinds of data that could be use, or the kinds of analyses that could be run, and so I think that there's a lot of potential for this expanded input by the SSC in the early development stages to be really beneficial.

I would -- I have sort of a question and a comment related to that involvement of the SSC, and the first was, in the beginning of your presentation, you had a -- There was a statement in there about sufficient new information that would trigger the SEDAR process, and so just a question, a question a little bit about that, about how that's going to be decided, but then more a comment.

You know, at least sort of my view on the process is there was a statement in there about the SSC having expanded input on model development. What I would like to see in that comment is that it says the SSC will have consistent and expanded input on model development, meaning I feel like the SSC check-in, even if it's an internal agency model, should still be mandatory, and that, even if it's thirty minutes during a webinar, we have some input on what they're going to pursue as opposed to us getting it on the backend, and they say, well, we just decided to do an update, and then we say, well, there was this new data available, and we would have preferred if you' had incorporated that, and so --

DR. NEER: Yes, and, to that point, the SSC check-ins were actually a component that was recommended and put forth by the Science Center as a way to move forward. The reason we're like you may not need it, depending on the assessment -- If it is strictly more of just an update process, then maybe you don't need it, but I certainly think, if you guys want that for every assessment, you should recommend that you would like to see an SSC check-in for any level of assessment, and that recommendation will go up to the council, and the council can relay that information to the agency, if you feel that's important.

I think my interpretation, of what I'm hearing from most of the cooperators that I've talked to, is that they really liked that piece of that SSC check-in component, and would probably advocate for you guys to get that done, but, again, I don't speak for the agency, and so, yes, but I think -- I think, also. if you're willing to be like, you know, even if it's just like a thirty minutes on a webinar thing, it gives you some idea, and part of the rationale -- It came out of -- That option came out because of what had happened with red grouper.

They were working on it, and they had had a topical working group, and this was in the Gulf, and when the analyst said -- They got the feedback from the topical working group, and then, when she started doing all the work, she says, you know, I really have questions. I have a couple more questions, and I would really like the SSC to provide feedback, and they took the initiative to say, hey, can we get on the next SSC agenda, to come and get some feedback from the SSC before we go too far down a path, and it worked really well, and so that was why -- That's the model where that piece came from, and so that's how it made it into this new process.

From listening, I thought it was actually really helpful, and it's an attempt to get at that -- The term that the Science Center uses is “SSC rework”, which is it comes to you guys, and you go this is great, except for this right here, and we really want to see something else, and we're going to try and get that done before the model is finalized, and so that's where that's coming from, and so hopefully it will work.

DR. REICHERT: Thank you. I have Luiz, Kai, and then Steve. Luiz, go ahead.

DR. BARBIERI: Thank you, Mr. Chairman. Well, a couple of things. One, I want to reinforce what Fred just said, and I think that's -- Fred, I thought that was a very good point to make, right, because one of the efficiencies here, and that goes to some of the points Alexei made earlier, in terms of what kinds of benefits are we getting from this revised process, right, and so one of the main points is to avoid that back-and-forth post-assessment when an assessment comes for review, and, if these are going to be those update-type assessments, it's not going to go to the CIE, and so it's going to come to the SSC.

If the SSC doesn't really have the opportunity to provide input throughout the process, it actually generates further delays, right, and, in some situations, the center may find that they are incapable to address all of those things, but we don't find out until kind of like after the fact, and so I think that's a very important point.

I'm thinking that -- You know, Judd brought this up earlier. If this is something that we need to think about, in terms of the terms of reference, right, and if those assessments that are going to be conducted exclusively by the center internally, right, and not go through the SEDAR process, we're going to still review, right, and approve the terms of reference, and so that might be an opportunity, right, to put that step in there. I like that idea, Judd.

DR. REICHERT: Judd, to that point?

DR. CURTIS: Yes, and, in response, Luiz, you'll see then, in the terms of reference that I've drafted for the SSC to review in this meeting, which we will in a little bit, that is one of the bullets we've added now for the new terms of reference is to formulate these assessment development teams, and so the SSC can wordsmith that language to, you know, reflect any additional concerns or comments that you might have, but that would be part of the new terms of reference that are generated for each assessment going forward.

DR. BARBIERI: Excellent. Thank you.

DR. REICHERT: Thanks. Kai.

DR. LORENZEN: I have actually a follow-on from this, I guess, because -- So I’m -- I like the idea of streamlining the assessment process, because I agree that maybe this is a more effective and efficient way of doing that, but I also think that, you know, often you will get to the end, and the SSC review here is at the end, and there's no feedback from the SSC review, and so it seems we end up here, and all we can say is yes, or we say no, and then they'll say, yes, but you have to take it anyway, and so I would really -- Often it's only possible -- You know, you may have done all kind of the right things on the way, but then you have the end product, and it doesn't pass the red-face test.

You know, we've been there a number of times here, and also in other SSCs I'm involved in, and so I really feel there ought to be some feedback loop at the SSC review stage, and it could be restricted, and maybe it can be restricted to, you know, one opportunity to, you know, request some changes and come back, and so I do think we can get some efficiencies in the early stages of the process, but it's really important that there is an opportunity, once, you know, the whole thing comes in front of us, to still review it, and still ask for some changes, because sometimes, you know, that's only when it becomes apparent that something may need to change, and so really, in terms of the process, I think, you know, the more we can economize in the early stages, but maybe have a bit more opportunity for feedback at the end, that would work for me. Thank you.

DR. REICHERT: Thanks, Kai, but isn't that part of that blue --

DR. LORENZEN: I don't know if the intent is that the SSC check-in sort of provides that opportunity. I understood that to be a very quick and small thing. I mean, is that -- Would that be we're putting the whole assessment in front of the SSC before we finalize it, or is it more as, guys, this is what we've been doing, and, you know, in a few months, you'll have the end product?

DR. REICHERT: But correct me if I'm wrong, and, at the end, that blue square-ish type of block on the top line, if -- That's our final opportunity for that feedback loop, and so I don't think -- That's different from what we are doing now. I think what the process is trying to do is catch some of that in an earlier stage, but it doesn't mean that we don't have that opportunity at our final review, or maybe I misunderstood your comment.

DR. LORENZEN: I think the comment is that, increasingly, we're not getting the opportunity to request changes, because, you know, the Science Center will say, well, no, you know, this is the end of the process.

DR. REICHERT: Thank you. That clarifies, and I agree with you there. I've got Julie, and then Fred, to that point.

DR. NEER: Yes, and so I think it's both things. I think this SSC check-in is -- The length of how long that check-in will be will really depend on the assessment that's being conducted, and so they've done two of them in the Gulf now. The red grouper one was quite extensive, the first time, because there were many questions that the analysts had, because that assessment hadn't been updated in six or seven years, and there were several new data streams, and so there was a lot to talk about at that particular check-in.

They've done another one, which was more of an update, and there wasn't a lot of new information. I can't think of the species right now, and that one was maybe thirty minutes, and so I think the length of that pre-decisional briefing check-in thing, where you guys can provide feedback, will kind of be determined by how much changes, new information, whatever is available for that particular assessment, and so it could be anywhere from like a quick thirty minutes, and these are the key things, and here we go, or it could be like we have two new data streams, and, when we put this data stream in, now this is causing these other things.

The length of how long -- How big that check-in will be, it's supposed to -- The goal is it's supposed to highlight key decisions that are changing from the last time we did this assessment, or, if this is

the first assessment, I think it could be quite extensive, and so the hope is to get through most of those questions at that pre-decisional briefing, but I do -- To your point, Kai, sometimes it's not until you put everything together, and then you finally run it, that it doesn't meet that red-face test, and so I still think, as an SSC, you still have the option, in your review, to say this is all great, and, yes, we talked about this and this, and they implemented what we wanted, but we're still having issues with some component, or the X marks the spot number, or whatever.

I think that's always still your opportunity, to say we would really like to look at something else, and then it becomes, again, this negotiation between if the center has time to do it now, or later, or whatever, and that's actually after SEDAR is done, and so this check-in is before the SEDAR process is complete, and then, when you guys do your final review, I don't think your ability to request more is still going to be there. Whether it can be accommodated is always the question.

DR. REICHERT: Thank you. Kai, I saw your hand up in response, and then I have Fred and Judd, and then we move on, and I have Steve, Wally, and I have a couple of questions myself, and so, Kai, go ahead.

DR. LORENZEN: This is just -- I mean, it's true so that, you know, we currently have that opportunity, but, as we discussed, it's often not sort of realized, but I just wanted to add that, from my perspective, it's really important, in terms of the trust, or lack of trust, that we have in the process, with a lot of stakeholders, that, at that SSC review stage -- Because that's really when a lot of people start paying attention.

They're not paying attention during the nitty-gritty of the process, and then, I mean, the optics is not good of the SSC saying, yes, we want to see this and that and the other, and the Science Center saying, no, actually, no, and this is the end of it. I think, you know, there are reasons for -- You know, not only technical reasons. They are reasons to do with the management process, and the trust, or lack thereof, that we're experiencing of why I think it's important to be able to, you know, have a good review and have the opportunity to influence the final product at that review stage. Thanks.

DR. REICHERT: Thanks, Kai. Fred, and then --

DR. SCHARF: Yes, and so I just wanted to agree with what Kai is saying, and just what Julie said before. Oftentimes, when the final models are run, right, they produce output that sometimes is not predicted, and very difficult to explain, and so -- As Kai said, in some recent years, there's been resistance from the center, for a variety of reasons, and mostly resource-driven, whether they have time, or staff time, but to do additional analyses during the final review stage.

The concern is that, if we insert this step here of the check-in, right, that there's going to be even more pushback to say, well, that wasn't brought up at the check-in, and so now you can't bring it up now, and we need to make sure that it's explicit that that's not the case.

DR. REICHERT: Thank you, Fred. I've got Judd. Luiz, to that point, or is it another question?

DR. BARBIERI: It's to that point, Mr. Chairman, if you don't mind, Judd.

DR. REICHERT: Go ahead.

DR. BARBIERI: Well, I suggest, right, that we present this as a formal recommendation. I mean, you have to be -- What Fred and Kai articulated as a formal recommendation from the SSC to be presented to the SEDAR Steering Committee at the spring meeting, this being because -- Of course, it's going to have to be approved, or reviewed, by the council at the December meeting, but because, you know, the SEDAR Steering Committee is chaired by the Science Center Director, right, and so we are really formally expressing a concern, in terms of final review process, that we don't believe has been effective, right, and that our opportunity for input needs to be expanded, and that this is something that, you know, even though we agree with this plan as-is, there are some contingencies there that need to be addressed. Thank you.

DR. REICHERT: Thanks, Luiz. Judd.

DR. CURTIS: Thanks. I'm capturing some of these notes, and I agree. I think, if this is the feeling of the committee, then you should formalize an actual recommendation to the council that will be relayed in December. To address kind of Kai's concern with the feedback loop and iteration, so, to me, and this is kind of our thought process internally, as council staff, is that the interplay between that technical team and the SSC check-in would be that point along the process that would provide the opportunity for that true feedback loop, an iterative feedback loop, if necessary, before it goes to a full SSC review.

You know, the committee is welcome to disagree with this process, or recommend an alternate process, but the idea here would be, then you have this feedback loop before it gets to the final SSC review, and so you can think of that last box along that pipeline as not necessarily like the model review, but more of, you know, acceptance of the model, and then setting of the catch levels, which would be extracted more than a true model review, which would be done in the earlier phases, or at least work out most of the kinks throughout that iterative process.

Now, the tradeoff there is, right, you have -- That puts maybe a little bit more pressure on the technical team to act as a de facto preliminary review body before it goes to the SSC check-in, the full SSC, and then the SSC review, but you might get a more fine-tuned product by the time the entire SSC gets to see it, and so that's one of the tradeoffs that you would be experiencing, if you were to go that route, or the risk is, right, if you don't have as much of a polished product, then you might have to go through several iterations on the backend, which could take several meetings. The benefit of the prior approach is, because they're doing that mostly through a webinar-based, or through a smaller group, it might be easier to schedule those and have more frequent iterations of those reviews.

DR. REICHERT: Thanks, Judd. I saw your hand up, Genny, to that point, and I do agree with you, but, in the current process, we had SSC involvement in the assessment process, and then still -- Because the expertise of the full SSC is different than those that may have been involved in the assessment process, and then still there were other questions that came up during the full SSC review.

I agree that that feedback loop, or the technical committee, may be able to do that, as you call it, the pre-review, but I don't think that may ultimately solve all problems, because, you know, we've done something like that, in terms of SSC involvement in the past, and so I agree, and, when we

get to the reviewing the notes, it would be good to have your input, in terms of that recommendation, because I think that would be really helpful. Genny.

DR. NESSLAGE: I'm just curious how the previous process, where when the SSC requests new analyses, or alternative analyses, or alternative model runs be done, that usually has to go through the council's process to the center, where, at each one of these steps in the process, will that have to happen, because that has been, in the past, a situation where, if there's something that's easily done, or that the center agrees with the SSC, it's done without too much kerfuffle, but, if they don't agree, it requires a memo, and approval of the council, and so I don't know how that's going to come out in the memo, or in the minutes, there, what I just said, but I'm just curious how, and if, that part of the process will change with this new SEDAR process.

DR. REICHERT: Thank you, and I haven't forgotten about Steve, Wally, and I have some questions too, but I have Julie, to that point, and I saw Kai's hand go up, to that point. Julie, go ahead.

DR. NEER: Yes, and so this is to Genny's point and the point before. Just I want to be clear, because since there's no agency folks on the call, their intent of that technical team is not to go through every decision that they make in the modeling approach. It is to only convene that team when they need guidance, or questions, and so it is not like an assessment panel that we've had before, but only smaller and offline.

It is really letting the agency conduct the assessment, and, when they feel they need feedback, they will reach out to this technical team, and so I want to be clear that it's not the same process, but just offline. It is a different process, and so that is why that SSC check-in will be whenever they had -- During that check-in, I think this is where you need to make your recommendations clear as an SSC.

During that check-in, they should discuss and present any sort of those key decisions that they made when they discuss things with the technical team, but they should also present any recommendations that they made those decisions on their own, without communicating to the technical team, because they can, as the agency, as they're modeling, say, well, we've really got to make a decision here, and we're going to go Path A, instead of Path B, and so they should present any key decision, that is maybe taking you one way versus another, to you guys at that SSC check-in.

That SSC check-in is still part of the SEDAR process, and they will get feedback. The analysts will take your recommendations while they're still developing, and so that's that first piece. I wanted to clarify how that technical team is operating. It's not the same as what we've done before, but just offline.

Then, to Genny's point, at that sort of SSC check-in, that is a relatively, hopefully, easy iterative, that we can look at that, and thank you for that recommendation. I see your concern, and we'll do that, and we'll incorporate it. That next piece, the piece of when it comes back to you and it's final, quote, unquote, and the SSC has additional recommendations, requests, whatever, that is outside of the SEDAR process.

That becomes the you guys have requests, and you're uncomfortable, and you would like to see whatever, and then it goes through the process, whether it needs to be, sure, we're happy to do that, and no problem, and we'll knock that out and have it to you for Thursday, or, well, I don't know if we need a time, or we need a memo, blah, blah, blah, and that always is that negotiation meeting.

That piece is not going to change, you know, depending on what the requests are, but I do think it's important to look at it in terms of your recommendations, where you do want to make it clear that, you know, the SSC check-in is a piece where you're seeing development, but you're not seeing the final model, and so you still may have questions when you get the final model, and you want to sort of reserve the right to still bring those questions up.

I think that's a piece of the discussion that we have not had yet at the steering committee level, that you -- I understand your approach is you don't want to say, well, because you guys did the SSC check-in, then you're done, because you haven't seen the complete package until it comes at the end, and so, if that's important to the committee, I would suggest you put that in your report.

DR. REICHERT: All right. I have Alexei, to that point, or is that -- Do you have another question, because I do have Steve and Wally on the list, but did you want to add to that point? Then I'll come back to you in just a little bit. Steve, you've been waiting for a while. Thanks.

DR. TURNER: Thank you. I think, in the past, I've seen some situations in which the analysts have taken SSC recommendations and regarded them as fixed, and perhaps they've resulted in difficult results in the analysis, and so I regard this process as providing the analysts a little more flexibility. Perhaps they look at what the SSC recommends, and does one analysis that way, and then moves forward on something they think might be more realistic.

I hope this -- I think this process should speed things up, especially for the less-important species, or the less-difficult assessments, and I should say it that way, but I am -- I also want to be sure that the assessment scientists don't necessarily regard a recommendation from the SSC as fixed, because I think that's given us problems in the past, and they're something to look at, and come back to us about, but not necessarily fixed. Thank you.

DR. REICHERT: Thanks, Steve. I agree. I have Wally. Wally, go ahead.

DR. BUBLEY: Thank you. I have quite a few questions about the technical team, and how that's kind of, I guess, stepped through that process, but so, first off, who can be appointed to that, because -- This might be out-of-date, because this was coming from the February SEDAR Steering Committee report, but it says that the appointed individuals will need to be in the respective cooperator SEDAR Advisory Panel.

DR. NEER: So that's true. That's still true, and so, if you are on an SSC -- Just so, in terms of appointments, so, if you are on an SSC, or on an AP, you are automatically in the SEDAR pool, and you can -- Technically, there is a SEDAR AP. It doesn't meet independently, but, due to FACA regulations and stuff, anyone who is participating and providing recommendations needs to be appointed, and so, if you're on an SSC, or an AP, you're automatically in there, and we can appoint you. You raise your hand, and we put you on the panel, and the council sends me a memo, and we move forward.

If you're not already on that, one of those things, but you wish to participate, you just submit an application to the council, and then they go through the background process and everything they need to do, and then you could be appointed to the panel.

So, in terms of a technical team, it can be anyone who is in that SEDAR Advisory Panel for each cooperator. Each cooperator has their own process of how they appoint people to that panel, which is why that language is kind of like very broad, but, as long as someone is appointed to that panel, then they can serve on a SEDAR, and as any role during a SEDAR process, and so does that -- So it can be anyone that the council, in terms of getting them on the AP -- In terms of who the council picks, that's really up to that.

DR. BUBLEY: Right, and it goes along with that somewhat, and part of that too goes along with the fact that it's mentioned as being a standing group as well, and so to have -- I mean, we deal with a fair number of species, and a lot of different topics come up, and so, I mean, this standing group could have to be really, really diverse, and really, really large, and that brings into play some of --

I mean, just thinking of it from my aspect with South Carolina DNR, I mean, we have people that might be more well-versed in reproduction, or other aspects of life history, or some of the -- Again, going and just using my DNR hat, but we've got our survey that -- Like some of these things are going to be really specific to specific people, and I might technically be the only one who is on one of these advisory panels, and so how long can we -- Do I have to be the talking point for everybody? Do I have to reach out to everyone, and then be that person, or is it -- What's the -- How easy is it going to be to get other people on that?

DR. NEER: Right. Okay, and so I understand. So it doesn't have to be a standing committee. It can be. Chip will address the South Atlantic's approach to why they're thinking one versus the other. While he's coming to the table, I'll just finish, and so it doesn't have to be a standing committee, but it can be. It's entirely up to the cooperators.

In terms of getting your other people on it, you may -- South Carolina DNR might have already been in the SOPPs that are written by the South Atlantic Council with regard to who they can put on it. You guys might already be in the panel. I don't know. That's why it's up to following each cooperator's processes of who they might -- Like some of them just say that, if you're at a state agency, you're in the pool, and you're fine, and we can appoint whoever we want.

Now, that said, if you wanted, for a specific assessment X, and you want you and Tracey and somebody else, and then you want a different set of you and two other, or you're not even on the next one, how that list of names gets transferred to the agency is up to the individual cooperator. Chip.

DR. COLLIER: No, and you're absolutely correct, where state agency folks and federal agency folks are already a part of the advisory pool, and so, if somebody from your agency wanted to be part of a SEDAR process, that's not an issue. They can be part of it without getting additional improvement from the council.

The other thing to remember is we still have the ability to have the technical working groups, and so, if you're talking about an issue like reproduction, that can be a topical working group that would

address that issue, and hopefully, when we're talking about trying to streamline these processes for the stock assessment, we're not going off -- The analysts aren't going off chasing different pieces of information. They're going to take that previous stock assessment and rerun it, unless it comes from the SSC here, where they say, in the statement of work, or in the terms of reference, we want this investigated, and we want it to really be a kind of hypothesis-driven process, looking at, all right, we're seeing these potential issues starting to creep up, and let's investigate it.

That way, we can have the topical working group that can really focus down on specific issues, like reproduction and natural mortality, certain pieces like that, but we also have a technical team that's going to be more expertise in the stock assessment process, and they're going to be looking at that stock assessment and saying, all right, these are good assumptions to make in that, and they're not going to be the experts in all life history or all the landings.

In our technical team, what we're going to be looking for is people with stock assessment experience, and it doesn't just have to be SSC members. We're thinking about it, and it could be a lot of the Beaufort assessment team. They could be on that technical team. They could be all working together and trying to solve the issues that this one assessment might be having, as well as additional members from the SSC, and additional folks from state agencies.

Not all state agencies have everybody represented here, like you had mentioned. I see it as a good opportunity for those folks to be engaged in the process, and, you know, maybe this is a learning experience for some of the younger staff. They can talk to the old people, that have been around and say, well, let's test this. They say, well, we've tested those several times, and it doesn't make a difference, but we'll give it a try here as well, and so I just see it as a good opportunity, and it's a lot more flexibility than we've had in the past.

DR. NEER: We prefer “more seasoned” to “older”. Thank you.

DR. REICHERT: Thanks, Chip.

DR. NEER: Really quick, can I address that?

DR. REICHERT: Yes, Julie. Go ahead.

DR. NEER: Chip makes an excellent point. You can have a topical working group for a specific topic, like an index, or reproduction, and, actually, you'll see that when you get to the terms of reference for one of the assessments coming up. There is a topical working group recommended for a specific topic.

That's where you can put those subject matter experts for that particular topic in there, and then you can still have the technical team that's looking at the model development piece, as opposed to an individual piece of data, or a specific assessment piece, but, most likely, if it's an assessment piece. like selectivity or something, where we might previously have had a topical working group, it will probably fall to the technical team to have those conversations.

DR. REICHERT: Thanks, Julie. Alexei, I had your hand up.

DR. SHAROV: Yes, and I think the one really new thing here is this technical team in this process, at least for me, and the other elements were sort of -- You know, were around, and I wonder, you know, about the perceived function and the level of involvement of the technical team. The way it's been described, it seems that it is expected to be very flexible.

Literally, the presentation says that the technical team would be available to provide feedback as needed during model development, and so I'm guessing, in some cases, they will not be needed, and that is there will be a technical team, but the assessment lead may decide that they don't need any advice, and, in other occasions, I guess if it's more like a benchmark assessment, there might be a need for that.

I'm wondering sort of how much of an involvement is expected to be there, and, you know, whether those technical team -- Well, if they're designed to -- If the team is sort of like, you know, the ambulance. The assessment lead has a question, or the group has a question, and then they come to them, and they ask it, as opposed to what Jim earlier talked about, the Northeast experience, where they had the assessment working group, where there is external assessment scientists, or biologists, from academia or elsewhere, and they are working as a team, you know, from the start through the end of the process. They're a part of the assessment team. That's seems to me different from what is proposed here, and so I'm just curious as to what the expectation is on that group.

DR. REICHERT: Julie, go ahead.

DR. NEER: So having a group of external people part of the assessment process is really what we do now with an assessment panel. It's these other people, in addition to the agency folks who are leading the assessment. That's how we have done it up until now. It is really -- Like you said, it's really just going to be -- Depending on how the assessment is going, and how complex it is, and where there might be questions, the technical team is really sort of on call, and, if they have questions, they'll reach out to you, and, if they don't have any questions, they won't, but you'll still have -- It sounds like you guys want an SSC check-in before anything gets finalized.

Even if the technical team is not called in to address a specific issue, or any issues, while the model is being developed, before the model is finalized, they're going to come to you and say these are the changes we made to the previous assessment, and this is where our concerns were, and what do you all think, and you'll still have an opportunity to provide feedback before the model is finalized, but it's not -- As I said, every assessment may not need their technical team.

A technical team will be appointed for every assessment, so it's ready in case it's needed. I believe anything that's going through the SEDAR process will, but it doesn't mean you're going to be called upon, and so you're correct. That's the change that we're making, is that the technical team is available if needed. If the analyst thinks they don't need your help, or guidance, they won't reach out to you, and then, when they come to the SSC check-in point, and provide what they've been working on, you'll have feedback, a chance to provide feedback. Chip is coming to the table.

DR. REICHERT: Chip, go ahead.

DR. COLLIER: Well, I just worry about the process, if it's the agency determining if a check-in is needed, and so I think, if the SSC recommends a technical team, or an SSC check-in, they need to have that, because, if somebody gets appointed to a stock assessment, and then nothing -- They

never get contacted, that is going to lead to less faith in the system, and so I think it's very important that, if a technical team is recommended for an assessment, that they have at least the introductory meeting, like Jim had mentioned, and then another meeting in the process to say we went through all this, and we're not seeing any issues, but you're happy to provide guidance.

I mean, as long as you're meeting with the folks, and giving them an opportunity, I think that is something that should be done, as opposed to just appointing somebody, and then they never hear anything, and they wonder what happened.

DR. REICHERT: Thanks, Chip.

DR. NEER: Just a quick clarification on that.

DR. REICHERT: Yes. Go ahead.

DR. NEER: So, Chip, are you recommending that -- I already heard that the SSC said that they wanted an SSC check-in for every assessment. Do you want the technical team to also meet every assessment, whether the analyst -- No, and so you're just referring to the check-in is something that this SSC wants, but the technical team may not be called upon, because you kind of used those two terms interchangeably, and I want to make sure I understand the recommendation.

DR. COLLIER: So, in our terms of reference, when we're writing them up, we're going to be specific in whether or not a technical team is recommended from the SSC, and, if the SSC is recommending a technical team, that is going to be formed, and we expect at least one meeting to occur with that technical team.

DR. REICHERT: Yes, and so I saw Luiz, Jennifer, and C.J.'s hand up, and so, before we go there, I had a couple of questions about that, that very point, to Kai's comment earlier, because earlier, Julie, you said that the yellow technical team, and the blue circles, were more or less at the discretion of the assessment team, whether they needed an SSC check-in, or whether they felt they needed a technical team check-in, or a webinar.

I've heard recommendation by the SSC that the SSC would like to see at least one SSC check-in, whether or not there's a technical committee or not, to allow for that feedback that Kai and others mentioned earlier, and I completely agree with that, and so is that understanding kind of the consensus of the committee, and then we can wordsmith that later, when we write the report? Okay. Good. Thank you. That helps my thought process.

DR. NEER: I'll say, again, cause the agency is not here, that their thought was that you may not need a technical team for every assessment, but, if you would like one, then you should request one, and that will be transmitted. That request will be transmitted up to the center.

DR. REICHERT: So I have Luiz, C.J., and Steve. Have I missed any? Wally, you? Jennifer. Sorry. Hold on. Okay. Luiz, to that point, go ahead.

DR. BUBLEY: I'm not sure if I'm going to cover the same topic that you were with it, but, I mean, is this something that has to be embedded in this process here, or could it be like an

assessment-by-assessment basis, where you put it in the terms of reference where there must be a mandatory check-in at that point? Would that be easier?

DR. NEER: Yes, and so I think you can do it in two stages. I think this SSC can recommend initially that you want an SSC check-in for every assessment, and make that recommendation, and so it's clear going out. I think you can also put it in your terms of reference, when you develop it for any individual assessment, saying you want an SSC check-in.

In terms of the technical team, that's the other piece of, and so there's the SSC check-in and there's the technical team, and I want to make sure that we're understanding. It sounds like you guys want an SSC check-in, regardless of the assessment. If SEDAR is part of it, or the center is just doing it entirely internally, like an old update, you still want a check-in before it's finalized, and so everything that they do, every assessment, has a check-in. That's your recommendation. The technical team, it sounds like the council is going to put in the terms of reference whether they think they have a technical team, and, if they have a technical team, they want that team to meet at least once. That's what I'm hearing for the recommendation.

DR. REICHERT: Yes, and I think that's consistent with what we want to do.

DR. NEER: Right, and so I think it goes into the process in general that we have it, and then we also have it in specific assessments, that you're clarifying this is what you want.

DR. REICHERT: Thank you. I've got Luiz. Go ahead.

DR. BARBIERI: Thank you, Mr. Chairman. So, to all these points, which I agree with, but, reinforcing what Chip mentioned before, if these are added to the terms of reference, right, obviously, the assessment has to meet the terms of reference to be acceptable, and so that formalizes that process that, you know, in a way makes it mandatory, right?

Another point is, as this is presented to the council, and to the SEDAR Steering Committee subsequently, you know, the issue -- The SSC here is not trying to be confrontational with the center, and much the opposite. The idea is that, for this process, we envision, for like this to really be effective and create efficiencies and save time, it's best for us to have the opportunity to provide that input earlier, you know, sooner than later, and so the idea is to help the council and the Science Center to have those assessments move through without a hitch.

DR. REICHERT: Yes, and I agree, and, in addition to that, I feel that, you know, that ultimately has a higher likelihood to provide a better product. Thank you. C.J.

DR. SCHLICK: So my comment really echoes that, and where I would really stress kind of that kickoff meeting recommendation is where a lot of this information has talked about it beforehand, and able to be put into the TORs, as they're being drafted, and a lot of the questions of new data sources, the technical team, who is going to be participating, and all of that is hashed out early in the process, before things actually get started.

DR. REICHERT: Thank you, and so I've got Chip and then Julie to that point. Julie.

DR. NEER: So I just want to clarify the order of operations. Our kickoff meetings don't start until after the panels have been appointed and terms of reference are final, and so it's not -- When you guys see the terms of reference here, to help provide feedback, and before it goes to the council, that's your opportunity to kind of weigh-in and talk about data and process and things you want looked at. I just wanted to be clear about that.

To note though, for that top box there, for some of these processes that the center does, they're -- Everything internally, those sort of updates, there is no public piece until you guys get to the SSC check-in, but those really streamlined processes are usually ones that have, in theory, until, of course, you get all the updated data, less likelihood to have flags that would require additional feedback. We don't know -- We know there's no additional datasets, or there's no whatever, but so the SEDAR -- Everyone that has a SEDAR process will have that data scoping call, but, things that are run entirely internally through the center, we don't have that external call. I just wanted to be clear.

DR. REICHERT: Thank you, Julie. Chip, go ahead.

DR. COLLIER: Yes, and I just want to point out, with that top line there, that's expected to be about a three to four-month process, and so getting an SSC check-in in that process is going to delay that quite a bit, and so I think it's important for this SSC, and also for the council, to remember that, if you're not very comfortable with the assessment, you don't want to go in through that top system very fast.

I think we need to be very careful about saying we need SSC check-ins for every assessment. If something is two to three years old, that's what we're hoping is going to be going through this top line, is an assessment that's pretty fresh, and not an assessment that was done six or seven years ago, and so maybe we can check on that SSC check-in every time, because we don't want delays in the process.

We're trying to get this to be a lot more -- Get it going faster. If you look at how quickly the red snapper assessment was done, that updated assessment that they did last year, that was just a few months. If you look at what was done for golden tilefish, although that was just changing the commercial landings data stream, they got that data stream in September, and have turned it over to you all for this meeting in October, and so it can be done quickly if we're not adding a bunch of new data.

Maybe an SSC check-in is not needed for every one, in order to get some more throughput, but that will be a decision based on the science that's available, what you all are comfortable with reviewing, and also what the council is wanting to get through, the number of assessments that might want to get done within a year.

DR. REICHERT: Thank you, and I think that's important to note, because, ultimately, this whole process is set up to speed that process up. That's why I really liked Steve's recommendation earlier that the SSC, during its meetings, get updates on ongoing assessments, and that may be where we hear from the Science Center that, listen, this is really a straightforward update, and not a lot has changed.

Then, you know, we may decide that that SSC check-in may not be necessary for that particular assessment, but, you know, again, we need to find out how that works, but I do think your comment is important. If we recommend a check-in every assessment, that that may lead to some delay in some assessments.

The flip side of that is that, if there is an issue identified during the SSC review, then that also causes a delay, and so it's kind of like, you know, where do you want to take that risk, but I do appreciate your comment, Chip. Thanks for that. Steve, Jennifer, Kai, and Wally, and then me. Kai, go ahead. I'm sorry. Steve, go ahead.

DR. TURNER: Chip made my point. Thank you.

DR. REICHERT: Jennifer.

DR. SWEENEY-TOOKES: I'm going to say the same thing, but with more words, because I meant to start with this earlier, to say I really love the stakeholder engagement in these technical teams, and I'm really excited to see this happening, and I think that there is an opportunity for there to be some real representation, but, as we've sort of workshopped this process, I really want to caution us that this representation needs to be sincere when we seek these teams, right, and plus-one for Chip.

If we form a team, and we meet with that team, that team needs to know what's happening after that. If we form a team that has stakeholders on it, and then they never hear anything again, and we go, oh, no, it's fine, and we decided it wasn't necessary, what we've said is we've decided your input was not necessary, and so we just have to be really careful, and I know we've like revised your beautiful flowchart probably in this room like another twenty times, but if we can just make sure that, if that yellow circle appears anywhere early on, it does appear later on, just to make sure that they get checked back in with, because to not do that is just going to further erode any trust in this process over time, and I know none of us want that to happen.

DR. REICHERT: Let's make sure that we make that point in our report. Steve, to that point, or can I come to you back later?

DR. TURNER: You can hit me later. It's quick though. Kai.

DR. LORENZEN: Sort of coming back to the review briefly, I think we should not forget that doing the assessment and reviewing the assessment are really two quite different things, and I think we're sort of trying to frontload a lot of things by sort of having a lot of input early on, and that it makes perfect sense to do that, but, you know, just as when you do your science, I mean, you get a good team, and you do your science and everything, and you get really, really hung up in it, and then you send it to reviewers, and they say, okay, but have you thought about this, and so on.

I mean, that's why we do science that way, and it's sort of the same here. It's good to have good input into the assessment process, and so on, but then the review is a different set of eyes, you know, on the assessment, and I think it's only really meaningful to do the review if that can result in some changes and modifications.

Otherwise, it's not really useful, if the only thing you can do is say yes, and so, you know, just coming back to, I think, to my mind, it's okay to compress the assessment stage, and not to have too much sort of oversight at that stage, as long as we have a review at the end that allows, you know, requests for some changes, and I think that can still, you know, result in efficiency gains, if we are not holding them back in the early stages by, you know, just interfering too much, as long as we can have a meaningful review. Thank you.

DR. REICHERT: Thanks, Kai. To that point, I have Julie and Steve.

DR. NEER: So just remember that some of these assessments will also go to a CIE review, or an external peer review of some sort, before it comes to you, and so that is an opportunity for feedback, and it changes in the process, but not -- Every assessment will not get that sort of external peer review.

I mean, depending on funding, that whole piece might, unfortunately, go away. We've already had to pull back on some already, but the hope is that we'll still have that component for the more complex, more new information that sort of -- I hate using any qualitative terms, but the ones that seem to have a lot more questions, and a lot more potential changes, we'll still have that CIE component, and it's this middle -- We know there's no CIE component for the essentially straight updates. It's this middle tier, where there's not a CIE component, but there's you guys as the review body, that we want to make sure that you guys, as Kai said, have the opportunity to make additional requests, and a feedback loop.

DR. REICHERT: Steve.

DR. TURNER: I'm hoping the technical teams can actually do a lot of that, cover a lot of that review, and handle a lot of the problems prior to finalization, and so there's fewer problems at the end.

DR. REICHERT: Thanks. Kai, did I see your hand up or --

DR. LORENZEN: Yes, but it's actually -- It's a slightly different topic, and so I don't know if I'm -- If other people have something right on this.

DR. REICHERT: Let's go to Jim, and then we can come back to you, and I have a couple of questions that I still want to add, and so, Jim, go ahead.

DR. GARTLAND: I appreciate it. This is a minor point, but, looking at the flow chart, which is awesome, is it worth putting some feedback loops in the flow chart? Do you know what I'm saying? Like so, for example, we keep talking about the SSC review being the end, and then we request things, and sometimes it happens and sometimes it doesn't, but can we make the interplay between the review and the assessment more explicit by putting some sort of loop in there to make that point?

DR. NEER: So I already thought that we should put arrowheads in both directions from the SSC check-in back to the assessment team, because that is back and forth, and that is the intent of that, and we'll do the same thing for the SSC check-in and the technical teams.

For the review at the end, that's post-SEDAR process, and so I think you guys should just -- Like there's no way really to put that on this graphic, because this is supposed to be how SEDAR works, but I think you should clearly state that in your report, since that's a big issue for this SSC, is that you want it noted that, you know, you still would like to be able to request additional stuff after the final assessment comes to you, but I do think we should put the opposite, so you see, at least at that middle stage, before it comes to review, that is supposed to be an iterative back-and-forth process, and we can add another arrow, but we can't add very many more boxes to this. You won't be able to read anything.

DR. REICHERT: Thanks, Julie. Kai.

DR. LORENZEN: Yes, and this is really -- I like the putting explicit feedbacks, and the back and forth in, and I think that that's really helpful. I was just thinking about, you know, the fact that having the need to have SSC input, or the SSC review, often puts us back by like six months or so, because we don't meet so often, and I'm wondering whether, you know, one can change that, and so I'm on the New England SSC as well, and we have a schedule of a lot more shorter meetings, and so, often, they're only meeting for a day, and now this is the geography of New England. Most people can just drive there, and so that's -- We don't have that, but it does mean that, you know, the delay between a product being there and the SSC looking at it is much shorter.

I'm wondering whether, you know, for the purpose of some of these assessments, we can do the same, you know, if needed, by a webinar meeting or so, whether -- You know, I don't -- I prefer in-person meetings, very, very clearly, but I'm also looking at this, and, if this is a major source of delay, I mean, other ways we can change that.

DR. REICHERT: Thank you, and so is that a request, a recommendation, or a thought?

DR. LORENZEN: Right now, it's just a thought, and maybe we can discuss.

DR. REICHERT: Okay. Let's develop that thought during this meeting. Thanks. I had a couple of questions, and so correct me if I'm wrong. For the technical -- For the SSC check-in, or the technical team, you said that, when there's a need, that meeting can be set up relatively quickly, and I'm -- A lot of the questions I had, or a lot of thoughts I had, obviously, come back to the workload of the SSC, because I'm still a little vague, in terms of how the overall workload of this new setup compares with how we currently operate.

I think it's about the same, but one concern I had is, if you set up meetings on a relatively short-term, my experience with trying to set up meetings, even with only five people, is that it's very difficult to get everyone, whatever, for Tuesday next week at one o'clock, and so that's a little bit of concern for me, and not a major point, but I just wanted to mention that.

DR. NEER: Well, and, when we're saying relatively short-term, it means that we don't have to do it two months in advance, or six weeks in advance, which is usually what happens when SEDAR holds a webinar. We send out a doodle poll, and you guys all fill that out, and then that has to be noticed thirty days, or twenty-eight days, in advance of the meeting, and so it's six weeks out.

These groups, the technical teams, will be allowed to meet without a Federal Register notice, because it's not a public piece of the puzzle, and, you know, we've spoke to the agency, and they're

not hopefully going to say, oh, well, we need a meeting. I mean, they might say, hey, when is the soonest everyone can meet, and can you do it next week, but, if you can't, it might be two weeks, or three weeks, but that's still cutting, you know, in half the time that it would take to have to notice something, and so there is still going to be -- You know, it's still significantly faster than if SEDAR is involved with that piece of the puzzle, or at least that's the hope.

DR. REICHERT: I get that, but, you know, the more people you miss in the technical team, that -- Then, you know, you kind of defeat the purpose. I also had a question. In one of our previous SSC meetings, we went through the key species discussion, and that schedule, and so I'm wondering if that schedule, or that setup, is part of this new setup. Is that still part of the overall plan?

DR. NEER: Not as such, and so the way they were initially presenting it, a year ago, where they wanted key species that you guys would pick, and those were locked in, and every five years they would be assessed, and every seven years, and in between there would be this, and that has sort of fallen by the wayside. It became very difficult, as they tried to manage it.

They could do it for like one cooperator, and then they did for the Gulf, but then, when you tried to figure everybody else in, it didn't really work. The process of -- But the thought about key species is still really what happens. It's not -- It seems to be the species that are of most concern for management, which is, you know, the core twelve or so for every cooperator, it's good for them.

They like to know, and we're back to -- We were like we would like to know, two to three years out, what species you guys think you're going to want to be looking at, and that way we can plan, and, again, that goes back to that grid, which maybe, after lunch, we can just put that up there really quickly, so you can see where everyone can find it, if you want to see what's coming up, and what's being recommended, but, yes, that structure of this one will be done every five years, that locked-in, that's -- The Science Center quickly realized that that in theory was a great idea, but operationally did not seem to be something that we could accommodate.

DR. REICHERT: Thank you. Then Florida has done several assessments, and so, on the top part of that, I assume that that's not just for Southeast Fisheries Science Center, or this whole process is not just for the Southeast Fisheries Science Center, but it's for collaborating partners, also?

DR. NEER: Well, that really depends on Florida, and so, initially, at the steering committee, I know they had said that we're going to do that, and then we had some Florida council members say that Florida is not going to do this, and so I'm not sure what's going to happen.

The current Florida assessment that's underway is using the old process with an assessment team, as is both red snappers that are being done right now in the Gulf and the assessment, and Florida is currently not doing anything for a couple of years, due to state assessments that they have on their docket, and so Luiz can speak to this, but I bet Florida is going to sit back and see how it goes, and, when they come back on the agenda, they will make a decision.

DR. REICHERT: Luiz.

DR. BARBIERI: You took the words out of my mouth, Julie, right? It's always good to be, you know, the first one to come second, right? You get to learn about the process, but we would prefer, really, to not operate along the lines of that first row, right? I think that, especially the nature of us being a state agency, and, you know, being involved and integrated into the SEDAR process, but I think it creates, you know, a perception of do we have all the checks and balances, right?

I feel that, I mean, our decision to engage from SEDAR 3 onward, right, was deliberate, and, instead of doing something on the side, to be integrated into this process, so everything that goes before the SSCs has as much integration as possible within the council processes, and then full review, if necessary, but that would be a preference at this point.

DR. NEER: Yes, and, just to that point, the other wrinkle, which will always happen with the Florida assessments, is they're all joint, at least -- Even if they're not managed jointly, they're all one stock, and so it would be -- We'll have to see how it would function with SSC check-ins, with separate SSCs giving feedback and stuff, and so we're reserving judgment on how Florida is going to play in the thing until we get some more information.

DR. REICHERT: Thank you. I have Fred Serchuk, to that point. Fred, go ahead.

DR. SERCHUK: I'm still a little bit concerned about the process run by the Southeast Fisheries Science Center, and I say this because I know what's happening up in New England, and the center up there has basically said, look, we're not going to be able to do the same number of assessments that we've done before, because we've lost 30 percent of our people, and that 30 percent cuts across people that would do sampling, people that would do analyses, and people would serve on committees.

I'm a little bit concerned about how we're looking at the process, in terms of meeting council needs, but, at the same time, recognizing we're not going to get the same level of support we had beforehand from the center, and not because they don't want to support it, but they don't have the personnel now that they had before, and have there been any discussions about that, because I think that's a big stumbling block. Thank you.

DR. REICHERT: Thanks, Fred. Julie.

DR. NEER: Well, we did talk about this. We got an update at our February meeting, the steering committee, and then again at the August meeting, with regard to the cuts, and the center has essentially said, with the RIFs and retirements both, that they will likely not be able to support as many as they have in the past.

They have, unfortunately, never been able to support all the councils' desires across the stock assessment enterprise, because remember that our one center does three councils, two commissions, and HMS, and so they've always struggled to meet that need. I think that's part of the -- We were working on this process before that happened, and it's only going to increase our desire to try and do more with less, and that's one of these pieces, but, yes, the center will always continue to provide us feedback on how many assessments they can do for each cooperator.

Right now, it's roughly three for the councils. It may go down to two, depending on where we end up after this, but, you know, we're going to have to just work with what we have, and, Fred, just

so you know, it was a similar issue in the Southeast. We've lost data people, and we've lost assessment staff, and we've lost survey individuals, and we've lost, you know, across-the-board, and so it's the same struggle that's happening in New England is happening down here.

DR. REICHERT: Thanks, Julie, and, to that point, we've heard many times that the data -- About the data bottleneck, and, you know, that's -- This is the assessment process, and that doesn't address any of those data bottlenecks. Is that being discussed, or addressed, in this new setup?

DR. NEER: Well, the data at the Southeast Center has actually been improving over time. It's still the bottleneck, but they have really -- They've invested quite heavily in some data processes methods, and streamlining their working papers, and streamlining their approaches for processing some of the data, as well as management databases and other things, and so it is actually getting better.

It's still going to remain to be the bottleneck, as we lose individuals. Hopefully some of these new processes that they put in place will be able to continue to run, now that they've lost the key individuals that were setting them up in the first place, and that remains to be seen.

Data is still always going to be our bottleneck, one because of personnel and two because, in the Southeast, our datasets are still evolving, and changing relatively frequently, and radically in some cases, which is not the case for some of the other regions, which is unfortunate, but I believe the center is -- It actually has been working better, and then our state partners have always been excellent at getting data to us in a timely fashion.

DR. REICHERT: Thank you. Kelsey, I saw your hand up, but, relative to that, in the past also, the frequent schedule changes have really affected the data providers, because they are looking at the schedule, and then they work on making sure that the data is available. Do you expect, or does the group that developed this expect, that this may lead to fewer schedule changes in the future? I know that's difficult to -- It's probably difficult to answer, because there's always brush fires that come up, but that I think in part may help with the data issues.

DR. NEER: So we really haven't had any schedule changes. Usually within two years -- The SEDAR process has been operating with two years out, and we've pretty much locked the species in, and that's been in place for six or so years at this point. The changes usually happen when we try to add something in at the last minute, because something happens, and then something might slide, and so it's not like we've decided we don't want to do this, and we want to do -- What usually happens is, oh, we suddenly have to do this now, because we thought we could wait, and we can't, such as the example with yellowtail, so that it postponed hogfish, which was just an unfortunate thing, but we try really hard to not swap those species out. Again, this grid I think will help also with that after, just so you can see where people can look to find that information.

DR. REICHERT: Thanks. Kelsey, go ahead.

DR. ROBERTS: Just really quick, and forgive me, everyone. I'm still learning this process, but a little bit of familiarity with the climate vulnerability assessments and the ESPs that are happening in New England. To Julie's point about having to work -- To do more with less, I think is -- I believe is how you phrased it, and they're moving to this -- They're calling it a report card approach,

or a snapshot approach, to try to essentially streamline the entire process, due to all of these staffing cuts, and so it also helps with science communication, too.

As a report card approach, you have a little bit better ease into like the kind of management language as well, and not a 178-page document, and so you have these three to six-page report cards that they're kind of developing specific to the climate vulnerability assessments. I don't know if that's going to catch on a little bit more, but that is something that they are working on, and I think black sea bass is done, and I think there's another one that's on the deck as well.

DR. REICHERT: Thank you, and this -- Earlier, you mentioned there's no terminology to identify different assessments anymore, but then you did mention update, lite assessments, interim assessments, but those won't -- It's just everything is going to be an assessment.

DR. NEER: Right. Everything is going to be called an assessment within the SEDAR process, at the center, but then, those assessments that are done outside of the SEDAR process, those sort of have terminology assigned to them, even though we were trying to get away with them, mainly to help explain like -- If it's just, in the old terminology, an update, it means we're updating all the datasets, but there might be cases where we're deciding that we're going to --

That management information is required, and so we're going to go ahead and update the landings, and we're going to update maybe a key index, but we're not doing life history, and we're not doing every index, and we're not -- Like because the video is behind, or whatever, or so that's what they're calling those lite assessments. Then there's even those interim analyses, which are even less, where it's simply tracking an index over time or something, which is pretty common in the Gulf to get those, but not so much in South Atlantic.

DR. REICHERT: But that's exactly why I'm asking the question, because the name -- For instance, the interim analysis is an entirely different approach than an update, and so I think that's important, that, if we are maintaining that terminology, that we all know what that means when it comes to the SSC, and so that's why I was asking the question. Thanks.

DR. NEER: The overarching term for that is what the Science Center is using is extra SEDAR, which means it's processes that they're using to provide some sort of updated management assessment advice for management use outside of the SEDAR process, and, on that grid, it's got its own new color now, and so you can see that they're doing projects that are also happening outside of SEDAR.

DR. REICHERT: Thank you, and my last question is when does this start? I assume there's kind of a gradual introduction, and we will be seeing kind of the --

DR. NEER: Well, that depends on the cooperator, and so we're rolling this process out right now for gray triggerfish, SEDAR 100, in the Gulf of Mexico, or, sorry, the Gulf of America. They have just finished their data process, and they're rolling into their assessment phase, and they're using this technical theme approach, and so that's underway right now. The South Atlantic I think is going to begin with the gag, which you guys are going to see terms of reference and provide feedback of that now, later today or tomorrow.

DR. REICHERT: Okay, and so when we get -- Forgive me, and I should know this, but, when we get to the terms of references, it's clear what process will be followed. Okay. Thank you. That's all I have. Any other -- Steve, go ahead, and Genny.

DR. TURNER: On the technical committees, I understand that the SSC will recommend whether there's to be a technical committee or not. I think there should be at least two meetings, a hello meeting and at least a goodbye meeting. If there's only a hello meeting and you never get called, you're going to wonder what the heck happened. Thank you.

DR. REICHERT: Genny, go ahead.

DR. NESSLAGE: Thanks, and maybe I missed it, but is there a plan to review and revise the process at some point, maybe five years down the line? I think you really are going to need that, and to have people's expectations be set that the kinks will get worked out, and there will be minor modifications, is really critical.

DR. NEER: So, currently, there's nothing written down, but, if history tells us anything, we change the SEDAR process way more often than we would like to. I've been doing it for almost twenty years, and I don't even want to talk about how many -- That's why the SOPPs are ten years old, because I keep wanting to do -- We are revising the SOPPs based on this process, to hopefully have those new and revised and out final, instead of six different documents to find out what we're doing today, but I think you can make that recommendation to the steering committee to formalize that.

That's not a bad idea, to have a sort of a check-in stated, a let's see how it's going kind of approach. I will say that this is the first sort of change that SEDAR and the center both seem to be in lockstep. Some of the previous changes, we were kind of dictated to go do this, and we had concerns. We've worked really hard.

The SEDAR staff has worked really hard with the center, and the center has had a lot of communication with the councils, hoping to try and streamline this before they rolled it out, and so we're feeling good about this one. We'll see how it goes, but I think that's a good recommendation to have a circle back and we always -- We meet twice a year, and one of the always agenda topics is how is the process working, and what do we need to tweak.

DR. REICHERT: Thank you. Last chance for questions, and then I recommend let's take a look at the notes that Judd made, and see if we can formulate some of our consensus statements, and, again, take a look at your own notes and see if we captured -- If Judd has captured everything. We can -- We, obviously, will come back to the report on Thursday, but I just want to give everyone an opportunity, since the discussion is fresh in our minds, to take a look at that. Jennifer.

DR. SWEENEY-TOOKES: Knowing what a pain it is to put the report together, what is the most effective way for us to do that? What is the most effective way for us to get our notes that we've taken to the both of you in the format that you need and want? Is it bullet points, emails, or how can we make this efficient for you?

DR. REICHERT: Judd.

DR. CURTIS: Email attachments with bullet points will be good.

DR. REICHERT: Yes, and then Judd can include them.

DR. SWEENEY-TOOKES: Thank you.

DR. REICHERT: You can copy me. Yes, and that would be good. The kickoff meeting, I would like to put that in the form of a recommendation. That was the point I think that Jim made. Let's see what I -- Genny.

DR. NESSLAGE: If you're moving stuff down to the recommendations section, I think Kai's suggestion that at least there would be wording to recognize that there might be requests coming at a final SSC review, so it's not a surprise to the center, and, also, the recommendation, I think from Jennifer and others, and Steve as well, that, if a team is formed, that they would be regularly updated. I think you had that one up above, that that would be a recommendation as well, to avoid eroding trust in the process.

DR. REICHERT: Yes, and I think that was Steve's recommendation, that the SSC be updated on ongoing assessments at their meetings.

DR. NESSLAGE: No, and I think it was about the actual SSC -- Or what are they called? Technical groups.

DR. REICHERT: Okay. That's a different recommendation. Okay. Sorry.

DR. NESSLAGE: Yes, and so I was just trying to grab the ones that are actual recommendations and pull them down. Where did it go? Sorry, and I was looking away. That that be kind of rephrased. We can wordsmith later, but that that be a recommendation.

DR. REICHERT: At least we have a placeholder for that.

DR. NESSLAGE: Yes, and then, if I may be so bold, that the maybe five-year check-in process on the process be a recommendation as well.

DR. REICHERT: I agree, and one question I have for the committee is, initially, I wrote down a recommendation to that, and I think that was the original -- It originally came from Kai to have an SSC check-in for every assessment, and then, you know, Chip made a good point, in terms of timeliness, and so how do we want to phrase, or rephrase, that? Kai.

DR. LORENZEN: My recommendation was mostly that, at the final review stage, there would be opportunities to request changes, or modifications, and so it wasn't about the check-in, as such, but it was the final review should be meaningful, and we should be able to make requests. There should be a feedback loop from that.

I'm still unclear about this check-in thing, because I would say, you know, it may hold things back, and not actually make us gain very much, if it's just, you know, them telling us a few things that they've decided, but there's no real way of looking at the results, and so I'm not sure how useful that is really going to be in practice.

DR. REICHERT: Yes, and I think what Julie said, and I don't want to put words in her mouth, is more like, when the assessment team identifies an issue where they would like the SSC's input in more than a pre-review of the entire process, but, Genny.

DR NESSLAGE: Yes, and, to that point, I remember -- I think it was snowy grouper was a good example, where the analysts identified there were problems with redefining M, and Rob and Katie came to us and were like, hey, we need your input early, before -- Way early, and I thought it ended up with a -- It seemed like it ended up to be a much more smooth process.

That's the kind of thing I'm imagining, where the center is like, whoa, and we have a big change, and we have a big issue, and we want and need your help, but that means that, if there's fewer check-ins, or if there's no check-ins required, I'm fine with that, as long as Kai's suggestion that there be some flexibility during the final review process, to have some back and forth, like there would be in any normal peer review process, that we have that opportunity and it not be bogged down with kind of procedural issues between the council and the center, and that both the council and the center recognize there may need to be some back and forth. Otherwise, it's going to be shut down, and I think anglers, and industry, are going to really have a bad product to work from in management, and so just --

DR. REICHERT: I would recommend to delete "more". There needs to be flexibility during the review process, and then the first one, request the SSC should receive at least one check-in every assessment before the final, and that's the SSC check-in, and that's the question I have, whether we should make it that strong, because, you know, I'm sensitive to what Chip said, in terms of the possible delay in the process. I've got Fred, and then Jim.

DR. SCHARF: Yes, and so to that point, again, we've talked about the fact that one, you know, we're meeting quarterly now, even though we don't meet in-person quarterly, but we're having winter and summer webinars. We could certainly add focused webinars, and I think the point of the check-in is coming back to some of the ideas that Genny just reiterated about key decisions that are being made during model development that we need to have input on early in the process.

It might only be two things, and so it takes forty-five minutes for them to say, hey, these are two key decisions, and this is what we're deciding, and provide some feedback, because, otherwise, they go down a path with model development, and we get to the review stage, and we're at a point where we're almost having to start over again, because they didn't consider a different path, and so I think it's important that we have that opportunity, even if it's just an update, and it's simple. I think we're meeting often enough to provide those without it holding up the process, but that's my opinion.

DR. REICHERT: Does that mean that you would still make a recommendation by the committee to receive at least one check-in for every assessment then? Okay. Jim, to that point?

DR. GARTLAND: I agree with that, but I also see the wisdom in maybe reassessing that, particularly for the top line of that flow chart that we had, and so could we modify that with something like and reevaluate the need for these check-in -- Reevaluate the need for a check-in with every assessment within two years, so that we put a timeline on ourselves to see like -- We do the check-ins for everything, right, and then, that top line, if we're like, geez, we did three of

them, and we all looked at each other for fifteen minutes and then got off the call, it's like, okay, maybe we don't need everyone for that, but, the full process, yes, we probably want to keep that, right, and so maybe, like I said, we just put in a modifier there, so that it's like a note to self that we're going to review this, as an SSC, in two years, to see if it's still necessary.

DR. REICHERT: Or the flip side that, yes, indeed it did delay the assessment unnecessarily.

DR. GARTLAND: Or it delayed the assessment, but, man, I'm glad we did it.

DR. REICHERT: Okay. Exactly. Thank you. Luiz, I saw your hand up.

DR. BARBIERI: Well, to that point, I mean, to agree with Jim's points there, but to also remind us, if these are going to be included in the terms of reference, and the terms of reference are reviewed by this committee, we're going to have an opportunity to pick and choose which assessments, and, because most of these species have been assessed before, and we already are over one-hundred numbers in SEDAR, we kind of know where the landmines are, so to speak, and which ones are going to be the most complicated, in terms of having issues, versus not, and so we could use that process to say, you know, this is going to be basically an easy assessment, and let's not even, you know, make this mandatory, and go from there.

DR. CURTIS: Yes, and, to that, Luiz, and the rest of the committee, you'll see these types of issues are written into the terms of reference, right? We have identified some of these landmines, so to speak, additional datasets that should be input into the next iteration of the assessment, through council feedback, SSC feedback, AP feedback, and so the terms of reference really are kind of that chance to review those final either model parameter inputs, data inputs, et cetera, before the type of assessment is proposed.

DR. REICHERT: I've got Fred, C.J., and Steve, but I also saw Jennifer's hand up earlier.

DR. SCHARF: So, just to that point, so would it be easier to just change the language that, if the -- You know, that the decision about whether a check-in is necessary is made during development of the TORs, and so, when the SSC is reviewing the TORs, we decide whether we need a check-in or not?

DR. REICHERT: But you never -- You know, at that point, you don't know what's coming up, if there is an issue, and you don't know that at the TORs. I mean, looking at the TORs, you can see there is -- Whether there is a high or lower chance that something may come up, but you never know, and so that's -- C.J., to that point?

DR. SCHLICK: I was going to recommend that you recommend it for every assessment in the SEDAR process, and so those that are automatically going through external review, as well as any additional termed by the TORs, and so any that you've defined as these may have potential issues, and so you automatically have your external peer reviewers covered in this process, but then you can also add in those few extras that may be problematic.

DR. REICHERT: I like that. Thank you, and please help us, you know, draft or add to those notes, so we can add them.

DR. SCHLICK: So, in the top line, at least one for every SEDAR assessment, or additional assessment, as defined within the TORs.

DR. REICHERT: Okay, and then just -- I would like to make it clear that that review is an internal SSC review. It's our review of our procedures, and so it's not like some other external review, and "internal SSC review", or something like that. So then the -- Did you have Steve's recommendation that the SSC receives an update on status of assessments during its meetings, during every meeting? I think that's very useful.

DR. TURNER: Let's say quarterly meetings.

DR. REICHERT: Okay. That means actually during our every regular meeting, one or two webinars and two in-person, correct? Okay.

DR. CURTIS: We'll term that something different than a check-in.

DR. REICHERT: Yes, and this -- Well, yes. Anything else? Steve.

DR. TURNER: With all these SSC check-ins, it's going to slow the process down. Therefore, I think the SSC has to take responsibility for speeding the process up. Therefore, I suggest, in addition to our four meetings, which are our four regular quarterly meetings, we add four tentative meetings in between, which are likely to be canceled, but they can be used for an SSC update, an SSC check-in, so that we can speed the process up.

If there's nothing coming along, and the center doesn't need it -- Six weeks or eight weeks in advance, if the center says, yes, we're ready to give you an update, there's a meeting scheduled, and those meetings might be half-a-day, or they might be one day, and I assume they would be like half-a-day, but I don't know that this is a decision we need to make now, but it's in the context of what we're doing here, and so I think we need to take responsibility for speeding the process up.

DR. REICHERT: I like that statement, and correct me if I'm wrong, Judd, but we -- If the need is there, we can -- There's a possibility for us to call an additional SSC meeting to address a particular issue, correct? I assume those meetings always need to be in the Federal Register, and so there's a time issue there.

I would like to make that recommendation a little broader and say, given this new process, because the SSC wants to be -- You know, given its own responsibility to help with speeding up that process, to allow the possibility for an additional meeting specifically to address an assessment issue that has come up.

DR. CURTIS: Yes, Marcel, and so that's correct. Because these are full SSC meetings, these would need to go through the Federal Register notice process, which means they have to be noticed at least thirty days in advance.

Additionally, right, the additional SSC meetings would incur potential increased costs and things for the council to consider as well, and so, as part of the meeting in December, at the council meeting, they're talking about the optimization of SSC, and SSC processes as well, and so this would be a good time that I can bring this to the table for the council to discuss, and if they're

willing to hold, or allow holding, of an additional one or two meetings to accommodate these changes in the assessment process, but there's considerations that are there as well too, before we just decide to have two more meetings a year.

DR. REICHERT: These are webinar meetings, yes.

DR. TURNER: Just related to that, the reason I suggested four was you could put them on people's schedules, and then you cancel them, cancel them way in advance, but we are busy, and maybe not retired people like me and Fred, but most people are really busy, and so, if they're on the schedule, and we anticipate that it's going to be canceled, fine, but it's on somebody's schedule.

DR. REICHERT: Thanks. Yes, and I like that idea. I would also like to percolate that a little bit, and so we can come back to that on Thursday, and so, if we don't, Steve, please remind us. I kind of like the idea, because at least it's on the agenda, and, if they're on the schedule, they can be in the Federal Register, and then canceled without any issues, correct, or is that complicated? Okay. They don't like -- Okay, and that's why I'm asking, and so we shouldn't be doing that, but, anyway, let's think a little bit more about that, and get a little more information about that. Okay.

DR. CURTIS: Before moving on, so, with these consensus statements, or recommendations, I'll circulate this document as well to you all, via email, so you can read what we've got drafted down for the mornings, and then you can use that to help with your notes for review of the final recommendations on Thursday.

DR. REICHERT: Thank you, Judd. Chris, go ahead.

DR. DUMAS: Just a minor point, and so, on the topic of the technical teams, I see up there a recommendation for a kickoff meeting, but, following up on Jennifer's point that it would probably be good to have two meetings, also have a wrap up meeting. That might be mentioned in the bullet point about stakeholder representation needs to be sincere, to ensure buy-in, and a way to do that is to have that second meeting, that wrap-up meeting, and I think that was Jennifer's point. I think everyone agreed to that, and I just think it didn't make it into the bullets.

DR. REICHERT: Jennifer, go ahead.

DR. SWEENEY-TOOKES: I sent you really, really detailed notes on that part, Judd, if you want to just copy them over. Thank you, Chris, for saying that.

DR. REICHERT: We'll add those notes, and then you guys can take a look at that. All right. Any last thoughts? Then let's recess for lunch, and we'll be back at 1:30. Thank you, guys. I appreciate the involvement and the discussions.

(Whereupon, a recess was taken.)

DR. REICHERT: All right. Welcome back. A quick update on the agenda. What we'll do this afternoon is we'll go to Agenda Item 5, the SSC workgroups and SEDAR panels, and then we'll move the terms of reference up to tomorrow morning, and, after 5, we'll move to the golden tilefish review, and so just to give everyone a heads-up.

Agenda Item 5, I didn't assign anyone, but we, again, need feedback from all of you. The attachments are 5a and 5b. I want to remind the committee that we punted this discussion several times, because of a lack of time, and we will come back to the working groups later in the meeting, and Judd will provide a little bit of an overview, or at least an introduction, to that right now. Judd.

SSC WORKGROUPS AND SEDAR PANELS

DR. CURTIS: Thank you, Marcel, and so we've got -- This agenda item is broken into two parts. The first is just a quick update and briefing on the existing panel memberships from both the SEDAR panel and then also the various SSC workgroup memberships that we have. and so I'll run through this, just so people can update themselves on where those stand, what you've volunteered for in the past, and then you'll notice that there's several gaps, or vacancies, that we need to fill later on in this meeting, and we intend to do that towards the end of the meeting.

That's what the last agenda topic is of the same name, is to populate those various workgroups. We'll have several that need to be populated, and so start thinking about those areas of interest that you might want to volunteer for. We'll be soliciting volunteers for membership towards the end of the meeting for these various workgroups, and this would be a good chance to kind of update on some of the various assessments, where they are in the process as well. On the screen, and I've modified this a little bit compared to what the attachment was in, just based on some recent information, and so we'll update you on those as we go through it.

SEDAR 94, the Florida Keys and east Florida hogfish, is still progressing as planned, and we've got membership for those different assessment components and the assessment and the reviews phases right there. Moving down to SEDAR 90, which is South Atlantic red snapper, the data workshop was completed in May, and we're currently in the process of doing the assessment phase, and so this is still the old model.

It's not the new model that you were just briefed on with the SEDAR process modifications, and so we still have a full assessment panel for SEDAR 90. We will be looking for review members, or SSC members to serve on the review panel, for SEDAR 90, which, if you click on the schedule, will bring up the attachment. The review panel is scheduled for next September, 2026.

DR. REICHERT: Just, Judd, can you remind me, and do we need three SSC members for the review, plus maybe a chair, or is the -- How is chairmanship going to be organized, or is that still an unknown?

DR. CURTIS: So that could potentially be two review members and then a third member, SSC member, to serve as the chair. This will be a CIE review, and so we anticipate three CIE reviewers as part of this review panel. Initially, I think our discussions, when we looked at terms of reference for this assessment, SSC members wanted three review members there. I don't know if it was clear if one of those would serve as the chair or not, and so that's open for discussion, I suppose, but, yes, and I would say at least two members, and then one to serve as the review chair, and so I can make that clear here as well. Thanks.

The next assessment on our schedule is SEDAR 106, gag grouper. You all have reviewed the terms of reference for this, I think at our last meeting, in May or in April. As part of -- This will be the first assessment in the new SEDAR framework, or SEDAR paradigm, and so there is no data workshop associated with this assessment, but we do have a topical working group that will be looking at reproductive dynamics.

Wally has already graciously agreed to serve as one of the members in this topical working group on reproductive dynamics, and so we're looking for two more members to serve on that gag grouper topical working group, and then this assessment will go through, you know, this assessment development team, or the assessment technical team, process that was just explained as part of the SEDAR process changes.

DR. REICHERT: I have a question, and so -- We can pick this up later, but so this is a technical working group. Do we know if there's going to be a specific gag grouper -- I forgot the terminology, but team, technical team, or is that going to be the standing technical team that's going be involved in that assessment?

DR. CURTIS: It's anticipated that would be the standing technical team, or the assessment technical team, that would then serve during that review, and so the assessment technical team membership will be different than the topical working group, specifically for reproductive dynamics.

DR. REICHERT: Exactly, and that's why I was asking that question. Thanks.

DR. CURTIS: The next assessment, and you'll see terms of reference for these next two when we get around to that later during this meeting, and we have king mackerel, but this will be an update type of assessment, and so there's no needed SSC participation specific to the king mackerel. Of course, the assessment technical team will still serve in their capacity for reviewing or for assisting in assessment development.

Spanish mackerel, we anticipate having a data webinar. As you'll see in the terms of reference, there's the desire to include data from further north of Cape Hatteras, and potentially building an index for those more northern regions, and inclusion of other data streams, and so that's why I felt that a data webinar would be an appropriate forum for this type of assessment, and so we will need three participants from the SSC in the South Atlantic to participate in this data webinar, is the most likely format will be what we're suggesting. Those are all the SEDAR panels for now. We've got other upcoming assessments that are listed below, but we don't need to populate those at this time.

DR. REICHERT: How about black grouper MSE?

DR. CURTIS: Black grouper MSE is TBD. That's about all we know right now. Okay. Any other questions on the SEDAR panel membership or upcoming assessments? Okay. Moving on to the extant SSC workgroups, and so things shaded in gray have been completed. Things in white are active, and then yellow are the groups that we need to fill during this meeting.

You see the membership rosters of people that are currently on the various SSC workgroups. One area that we could discuss, either now or later, is we do have a current MSY proxy/reference points workgroup that we formed a couple of years ago. That never really got off the ground, as we were

waiting for additional information coming in from the center, or from the council, and, as part of the MSY's proxy agenda topic, which we'll brief you on later this meeting, there was the request to form a joint MSY proxy workgroup that's joint with the Gulf, and we're looking for three members to serve on that.

Whether we want to dissolve then the old workgroup, that was South Atlantic specific, or not is something that we could discuss, as well as, the two members that we had there, if you are interested to join the joint workgroup or not. We'll leave that up to you, if you want to throw your hat in the ring for that as well, since you volunteered for the last one.

We'll get into some more details during that agenda topic on MSY proxies later, before you guys need to volunteer for that, and then the assessment technical team, right, and so this was the team that we discussed during the SEDAR process changes that would be responsible for being the standing technical team with stock assessment experience to review -- Or not review, but to guide assessment development with the analysts, as well as potential other stakeholder experts in particular fisheries, and so I've listed five there. I suppose that we can add more than that, if necessary, or depending on how the SSC feels about the roster size of that, and we could expand that, or leave it at five, but I think at least five members would be necessary.

The January 2026 South Atlantic Red Snapper Research Program was initially above that, but that has gotten postponed to January of 2026, and so this was prior to the SEDAR 90 red snapper assessment, right, and this is the independent estimate that Will Patterson is leading. We've already got members for that. Marcel has agreed to be the chair, and Luiz will be the SSC reviewer.

We do have another independent review project, that greater amberjack project, and that will require two SSC members to review, and that's scheduled for March 24th through the 27th of next year, and this would be a joint review panel with a couple of Gulf SSC members, and a few others, including CIE experts, I believe. Any questions on current workgroups?

DR. REICHERT: Luiz, go ahead.

DR. BARBIERI: Thank you, Mr. Chairman, and thank you for that overview, Judd. Just to clarify, and I don't have a question, but just to clarify that, for the greater amberjack project review panel, I'm already appointed by the Gulf Council to be the chair for that review, and so that should open up, you know, additional slots for us to participate as additional SSC members.

DR. REICHERT: Thanks, Luiz. I was actually going to ask that, but thanks. Alexei, I saw your hand up.

DR. SHAROV: A question on the MSY proxy workgroup, and is there like a renewed, or current, at least a terms of reference, or what is the sort of the task? Is it just to review the existing approaches, or is it actually an attempt to develop something, you know, further on, and I'm asking just to decide, you know, like if I'm interested, and should I join or not, and what the expectation is.

DR. CURTIS: I'm glad you asked, and so we're going to talk about the draft workplan for that during the MSY proxies agenda topic, and that can answer quite a few of those questions I think you had, and so you can decide if you want to throw your hat in the ring for that later, when we

revisit this group, but I'll go through that workplan in more detail that outlines the specific objectives for that joint MSY proxies workgroup and their charge, and the timing as well.

DR. REICHERT: Thanks, Judd. Any other questions, or comments? All right.

DR. CURTIS: Great, and so start thinking about if you're interested in joining any of these, and we'll revisit this towards the end of our meeting and populate these workgroups and SEDAR panels. Thanks.

DR. REICHERT: Thank you. We have an opportunity for public comment. Any public comments online? Any hands up? Fred, go ahead. Fred, if you're talking, we can't hear you. Fred, we still can't hear you. There you are. Go ahead, Fred.

DR. SERCHUK: No, and I don't -- I must've had a hand from earlier this morning. Sorry about that, Chair.

DR. REICHERT: No worries, Fred. No public comment? All right. Let's move to -- As I said earlier, we moved Agenda Item 6 to tomorrow morning, and so we'll move on to the golden tilefish review, Attachments 7a, 7b, and 7c. I noticed that 7a is actually the presentation, and 7b is the report, and the assignments are Jim, Genny, Steve, Jason, and Fred Serchuk.

We have asked that the committee review the adjusted assessment, using the provided information. We reviewed the golden tilefish in I believe it was our October meeting, and Judd provided an excerpt of our report, of that report, as background information.

I want to remind the committee this is not meant to re-review the entire assessment, and so please focus in particular on the changes made due to the correction of the landings, and, also, because the analyst isn't here, some of our questions may not be able to be answered. However, I think, for the record, it's important that we at least note those questions, if we have any, and, of course, the main question to the committee is can we provide adjusted fishing level recommendations with the provided information, and, again, Chip volunteered to go through the assessment slides. Again, Chip, thank you for your willingness to do that. Judd, anything to add before we turn it over to Chip? Then, Chip, go ahead.

SEDAR 89 (REVISED): GOLDEN TILEFISH

DR. COLLIER: Thank you, and, like Marcel said, I am pinch hitting for this, and so, if there's questions from the group, we might have to answer it as a group, because others might have read the assessment in a different way than I did, and so we'll get started here.

Here's the outline for the presentation today. It's going to go through some of the background of why we're actually coming forward with the correction, some of the data changes that were made in the assessment, and some that were not, the assessment model, some of the results, the uncertainty from the MCBE, and then the projections. The projections also include what you recommended from your P* at the October 2024 meeting.

Hopping into the background, as Marcel said, you all reviewed this in October of 2024 and recommended this for use in management. As we were working through putting together the landings recommended from this, and then comparing it to what was coming out of the stock assessment, we noticed that there was a discrepancy between the commercial landings and the original version of the assessment, and then what was being used in monitoring.

There was about a 100,000-pound difference between the two, and so that was a little concerning, and we wanted to make sure that we were using apples and apples when we were looking at the results of the assessment, and then monitoring the fishery, to make sure it would close in time, or to make sure that we weren't inducing overfishing, because we were 100,000 pounds less.

The estimates of landings were provided back to the Southeast Fisheries Science Center on September 4th, and then they conducted the assessment with the corrected data. They did make one other change in the assessment model. They changed the initial F, and we'll get into that in a little bit more detail.

Going into the data, you can see the commercial data goes back to around 1970. Those are those first two lines, where the H represents handline, and the L represents longline. The RA represents the recreational catch. Data there started in 1978. Then we can go down to the indices. There was a commercial longline index that was developed from about in the mid 1990s up to 2005, and then, in red there, there was a MARMAP index that was using short bottom longline. That's represented in red, and you can see it wasn't continuous to that time series, but it did match up with the commercial longline data.

The length information is only provided from the recreational fishery. However, there is age composition data that was collected from the commercial handline, the commercial longline, and then also the short bottom longline collected through MARMAP.

Getting into the landings and how they've changed, over to the left is just a description on the commercial and recreational and handline landings. You can see this is largely a longline fishery. Most of it is prosecuted off of Florida, and then, over to the right, you can see how the estimates of catch changed. The line in blue is representing the original SEDAR 89 estimates of commercial catch, and then we have the revised estimates of catch in green, and then orange is a comparison to the ACL.

You can see, from 2017 onward, there was a discrepancy between what was used in the assessment and what was re-estimated, and, in 2018, that's an important point, because that's when the new information was going into the assessment, and so it was a pretty different landings stream that was going in there.

DR. REICHERT: Steve, go ahead.

DR. TURNER: What was the source of the problem? Obviously, it came from ACCSP, but is there an explanation for this difference?

DR. COLLIER: So, when ACCSP went in to figure out what was going on, the person that had originally worked on this file had left, and, unfortunately they could not recreate the data stream,

and so there is no definitive smoking gun on what changed. Sorry that I don't have a better answer than that.

DR. TURNER: Thank you.

DR. REICHERT: Thanks, Steve. Chip, go ahead.

DR. COLLIER: The assessment model, this is using the typical Beaufort Assessment Model, and one of the things that was investigated for this was a potential change in the initial F value. The previous assessment had used 0.01, as a lightly exploited resource. However, it was thought maybe this need to be investigated a little bit more, and so here is the results of looking into the F_{init} value, and, basically, you can see that there is some instability to estimate F_{init}, and so that was just estimated at putting it at one, and you'll see the outcomes of that.

If you look into this a little bit more, you can see a lot of the instability begins to occur when F_{init} is greater than one, like 1.2. Those black circles, that are on the left side of the plot, that means all the parameters that were going into the assessment that could be estimated were not reaching the bounds, and then, if you have points in this plot that are beyond that, that means some of the parameters were reaching bounds, and so it wasn't fitting as well. The assessment scientists felt like it was important to note that, that it's consistent throughout some of these likelihood profiles, to make sure it distinguishes where bounds are being hit.

Going into the results, as most of the stock assessments do, they match up landings very well, and so you can see, on the left, that's the commercial handline, and it's usually bouncing around between maybe 25,000 and 100,000 pounds, and then on the right is the commercial longline data, and that was over 500,000 pounds, but has been decreasing in the last approximately five to ten years.

The recreational data is pretty spiky, as you would expect with a rarely-encountered species, and so this is just -- You'll see this in the recreational data quite often, and those were in numbers of fish and not pounds of fish. One thing to note on this graph is the data is going through 2022. The assessment wasn't updated with all the new information. It was just a correction of the commercial landings, with all the other data streams staying the same.

Fit to the indices, it fit fairly well to the longline index and the early time series, but lack of a fit in 2005, and then, overall, there was a lack of fit to the MARMAP index. Here's the weighted selectivity, and you can see the selectivity didn't change much, with the exception of some slight differences here at the oldest ages.

Going into the results on spawning stock biomass, on the left, you can see the spawning stock biomass, and most important point here is you can see that it's right at the maximum sustainable yield value, and it is above the minimum stock size threshold, and so it's not overfished, and then you can see the differences between the corrected and the original version. There’s very minimal changes here. Not much change in the spawning stock biomass. You do see a little bit of change over on the left side of this plot, where it's comparing the previous assessment with the corrected assessment, and this is likely due to that F_{init} value, but, after the first few years, it is very similar.

Once again, going into the likelihood profiling for two different parameters, and, looking at the virgin recruitment here, you can see the different F_{init}, or, sorry, the different R0, and, once again, at these black points, you're seeing where it is not hitting bounds for all the parameters, and then we also have an estimated value for the steepness profiling, and I'll let you look at those a little bit more. Probably the most important one is the black line, which is the total scaled likelihood.

All right. Going into the spawner versus recruits, on the X-axis here, we have spawning stock in trillions of eggs, and then, on the left plot, we have the log of recruitments, divided by spawners, and you can see there's a line drawn, and then -- I don't know, and I guess we can get a line drawn through that, and so that's what that's showing, and a similar pattern over on the spawner-recruit relationship. There's a line drawn, and there's some dots around the line.

I mean, it's how all of ours look, but that's -- I mean, the thing that really sticks out to me, as you look at some of these low levels, is spawning stock biomass is at one of the lowest levels, but you also get some of the highest recruitment, and so it's pretty noisy data, but that's expected in fisheries data.

Going into the fishing mortality, and this is where you see the biggest difference between the previous model and the current model, if you look at just the last five years. The dashed orange line here is the original, and you can see the fishing mortality was above two, above 0.2, and then, in the last few years, in the blue line, which is the corrected value, you can see it's much lower, around 1.5, and you can really see, over on the right side of the graph, a big drop around 2020, and the fishing mortality rate by age. That big change is doing -- Is mainly due to a change in selectivity that was put into the stock assessment in the previous version of this.

DR. REICHERT: Can I ask a quick question about that, because it also kind of looks like the age structure is -- The age structure looks like a reversal. I found that pattern really strange. Strange, and does it make sense?

DR. COLLIER: So can you ask it again?

DR. REICHERT: Well, if you look at the different ages, after 2020 and before 2020, it looks like almost like a reversal of that, of the age composition. Does that make sense?

DR. COLLIER: Yes, and I think I see what you're talking about, but I think what happened was there was a lot of lumping of these older age classes in that top line, and they just get spread out below, but Amy, or Genny, is shaking her head no.

DR. NESSLAGE: I'm honored to be called Amy. I wish you were here. I think -- Isn't it the dome-shaped selectivity assumption that came in with the October assessment meeting? I could be wrong. Isn't that when the time block starts for that?

DR. REICHERT: That's something we discussed previously, right? Please remind me.

DR. NESSLAGE: I was on vacation and didn't attend that meeting, and so I have no idea, but that's just my best guess. If someone knows better, please correct me.

DR. COLLIER: Yes, and there was a lot of discussion on -- Because he had changed selectivity blocks. Previously, there was a block around I think 2010, that was recommended by some of the commercial fishermen as a change in the fishing pattern, but this one he -- Matt had reached out to the fishermen, and they had indicated that there was a change, and I apologize that I can't remember what the change was, but, yes, there was -- He did reach out to the commercial industry to figure out if this was an appropriate time block, and they kind of agreed with it.

DR. REICHERT: Thanks.

DR. COLLIER: Going into the stock status and the condition models, on the bottom, we have the spawning stock biomass, on the left plot, plotted along with the fishing mortality rate, and, in the 2022 value, you can see that it's not overfished, and overfishing is not occurring, based on the FMSY and on the MSST value, and that is the dashed lines that are provided there, and, over to the right is just relative values, and so dividing the actual F value by the FMSY, and the SSB by the MSST, and you can see how the plots are pretty much identical, and leading with the 2022 value not being overfished and overfishing not occurring.

How has this changed over time? Looking at the conclusions of all the different stock assessments that have been done, you can see that some of the older stock assessments, such as the SEDAR 25 update, you can see indicated that the population was very low around the 2000s, and then had increased to slightly above the MSST, in around the 2012 time period, but, overall, the shapes are fairly comparable, where you see a decline in the 1980s, a slight increase in the 2000, up to 2010, and then dropping again around 2020.

Going over to the FMSY plot, you can see most of them are in really good agreement on this one, with the exception of that SEDAR 25 update, and the big change between SEDAR 89 and the SEDAR 90 update is SEDAR 89 was right around that overfishing value, and the SEDAR 89 update is below that overfishing value.

Going into the uncertainty, here are the pieces of information that went into the uncertainty, looking at the bootstrap data, basically using a multinomial for the age sample and length samples, a lognormal error for the indices, and then a natural mortality estimate was used for bootstrapping as well. The Monte Carlo came from the maximum age, the minimum age, some of the growth parameters, the fecundity, the number of batches, the peak spawning, the recruitment sigma, maturity at age, and length at age.

Overall, they retained just around 75 percent of the model fits, indicating that it was making sense in at least 75 percent of the models, and then, looking at the outcomes of these MCBEs, and this is converted. This is changed from the previous plot that had F on the Y-axis, and this is changed, where the spawning stock biomass is on the Y-axis, and F is on the X-axis, but, overall, you can see most of them are indicating the stock is not overfished, and overfishing is not occurring.

Then, if you compare the overfished status -- I was reading in one of the plots -- Yes. If you're looking at the not overfished, but the SSB MSY, the current SSB compared to SSB MSY, it is right around -- 50 percent of the MCBE runs are saying it's approximately at the spawning stock, or at maximum sustainable yield.

Going into the stock status and the certainty, time certainty, around those, you can see, on the top left, or the top right, we have SSB MST, and SEDAR 89 is saying that the stock has remained above the MSST throughout the time series, although, in the most recent time, there is increasing percentage of the stock potentially being below the MSST.

MSY, or maximum sustainable yield, SSB, it's right around 50 percent, but it's looking like there is a greater amount of the -- Maybe not a greater amount, but a higher difference above MSY, SSB MSY, and then, going down to the F plots, FMSY, you can see that the point value is below the FMSY, but there is some uncertainty associated with that.

Here are the values for SSB, the quantities we basically ask for when we're developing some of the information for the amendments going forward. Probably the most important parts here, at least for the fishery, are the maximum sustainable yield, and then the F relative to FMSY, and the spawning stock biomass relative to the minimum stock size threshold, and so the MSY value is 523,000. That's slightly greater than what was in the previous assessment, and the assessment before that as well.

Then, comparing the SSB in 2022 to the MSST, the stock is not overfished. The value is 1.13, indicating that it is, once again, not overfished, and then the SSB, or the F of 2020 to 2022 over F MSY, the geometric mean of that is 0.72, indicating that overfishing is not occurring. In summary, and I think we went through all of these. Not overfished, and below the target.

Going into projections, looking at the projections with the fishery modifications occurring in 2026, looking basically at these landings plots, you can see that it's going to be increasing, and let’s see. Here are the values for OFL, and then, if we use the P* that was recommended from the previous review of the stock assessment, you can see that there's still a slight increase in the overall landings that would occur in 2026, and here are the values that would be associated with that P*, and the ABC associated with it, and so, with that, I will gladly let you all speak about it, because I don't know if I can answer the questions.

DR. REICHERT: Thanks, Chip. Any clarifying questions? Luiz.

DR. BARBIERI: I don't mean to go over everything in detail, right, but, if we are -- This is an agenda item, right, for us to review a few, and so my first question is about slide 12, about the recreational landings. There's that huge spike in 1981, and I remember, way back when, Genny, when you conducted that assessment, we had a long discussion about the 1981 value.

I don't remember what the outcome of that discussion was, whether we decided to remove the data or not, but the fact that you were not here in October made me think about, right, that question, because it could be causing some impact in the model that, you know, we're not discussing at this point, and so this is one question, and I have a few others.

DR. REICHERT: Well, so I'm hoping that someone can jolt my memory, because, again, we want to avoid re-reviewing the previous assessment. This is not a change from the previous assessment, and so I remember we talked about that, and the conclusion was that that was considered to be a true point. It was investigated, and it was considered to be a true point, and, based on the discussions, it was kept in the assessment, but, please, if there is a -- If some of you have a better memory relative to that discussion. Chip.

DR. COLLIER: Well, I certainly do not have a memory of that discussion. I'm sure it was had, but I can't remember, but, going into the data itself right now, looking at the fishing mortality that's coming out associated with that 1981 value, you can see that it's not that much different, as far as the apical F, than previous years.

Yes, there is a slight increase, but then it goes down shortly afterward, and then followed by a pretty low estimate down here, and so, in my mind, it's likely having minimal impact on the overall stock assessment, and, looking at other stock assessments that have had a single spike in the early time period, it really has minimal impact, usually, and so it might be impacting the initial value that could be coming out of this, but I think, in the conclusions that are being presented at the end of the assessment, I think it's having very minimal impact.

DR. REICHERT: Steve, to that point?

DR. BARBIERI: I just want to say thank you. Yes, and that satisfies my curiosity there.

DR. REICHERT: Thanks, Luiz. Steve, to that point?

DR. TURNER: You see a very similar pattern in the commercial landings. It's as if there's a bunch of built-up biomass that's easily exploited, and you can see this in Atlantic tilefish as well.

DR. REICHERT: Thanks. Luiz, please.

DR. BARBIERI: To that point, and that makes perfect sense, Steve. The thing is I know that, within the Science Center, there has been quite a bit of discussion. 1981 is the first year of MRFSS, right, and, several assessments throughout the center, we've really looked at that initial point very carefully, because they consistently show that very high spike.

Now, remember, at that time, NOAA Fisheries was not contracting with the states to conduct this dockside survey. They did it themselves, at a reduced capacity, and so it's just because -- I asked because those discussions have been had within the center, in terms of their initial first year of MRIP, and because I remember that Genny, when she presented, whenever that was, and that was a good point of discussion, and so I was just curious whether that discussion had come up.

DR. REICHERT: Thanks, Luiz. You said you had a couple of other questions?

DR. BARBIERI: Yes, and slide 16. I mean, looking at this profile, the likelihood profile of steepness, I'm surprised to see that this assessment had a direct estimate of MSY considered acceptable, because there's at least less than two likelihood units over more than 50 percent of the black line on the right graph, and so it's -- I mean, in your comment, Chip, about slide 17, right, about actually there's not a good fit there, predicted fit, between stock and recruitment reinforces that point, and I know that we're going to have a working group, and the discussion is going to continue.

You know, running diagnostics, right, for all of these stock assessments, we have to have some criteria for what we're going to accept, considering it's estimable or not, right, and remaining consistent. I'm just thinking, gosh, we decided not to use an SPR proxy, and consider this a direct

estimate of MSY, in an assessment that seems to be highly uncertain, for perhaps the most difficult framework to use estimate within the model, is surprising to me.

DR. REICHERT: Thanks, Luiz. Again, I don't think that pattern has changed much relative to the original assessment, and so I know where you're coming from, but it's -- Again, we had that discussion, in terms of whether or not that was something that the SSC was comfortable with at the time. I completely agree, and we make -- You know, after we have our discussions about SPR proxies, we may get some better guidance in terms of how to approach that.

Given our previous review, yes, that's the conversation we had during our previous assessment, but I get where you're coming from, but, again, as I said earlier, I want to avoid re-reviewing the entire assessment at this point, because we've done that. Does that make sense, Luiz?

DR. BARBIERI: It does. No, and that makes sense, but we do have, right, to make a recommendation, in terms of stock status determination, right, and recommend yield streams of OFL and ABC, correct, and so, what was recommended previously, do we have stock status determination and yield streams of OFL and ABC?

DR. REICHERT: Yes, we did. We reviewed the assessment, considered it BSIA, and came up with fishing level recommendation based on that assessment, and then this correction --

DR. BARBIERI: This change in data does not require us to make new recommendations of --

DR. REICHERT: Yes, it does.

DR. BARBIERI: Of SDC and yield streams?

DR. REICHERT: Yes, it does. They are -- The council is asking us to come up with fishing level recommendations based on this corrected assessment.

DR. BARBIERI: And stock status determination?

DR. REICHERT: Yes. Judd.

DR. CURTIS: If you look at the report from last year, in October, right, the stock-recruit relationship was definitely one of the most concerning, or highly uncertain, parameters of the assessment, right, and so the SSC did comment on that. We saw the -- Up now you see the previous stock-recruit relationship curve from the October 2024 assessment tables, and so this was discussed, you know, last fall quite a bit, and it was cited as one of the most uncertain parameters of the assessment, but it does not look like it was -- That a proxy was considered, and they went forward with using a direct estimate of MSY in this revised assessment as well.

DR. BARBIERI: Thank you, Judd.

DR. REICHERT: Thanks, Luiz. Fred Serchuk had his hand up. Fred, go ahead.

DR. SERCHUK: Of course, I have not been involved with this assessment, but I always -- I'm always a little bit cherry when I see -- If you take those on the right side -- If you take those two

lines away, because they're expected, and they're using a steepness thing, would you draw a line with all those points? Would you draw those lines? I think, quite frankly, I would not draw a line.

If someone told me those were the data points, and you had to draw a line on spawning stock and recruitment, I think it would go the other way, quite frankly. Do you understand what I'm saying? Take those lines off the graphs, the fitted lines and the curved lines, and if you were just to fit a line through those points, okay, they might go the other way, quite frankly. It might go from high to low, or they might be in the middle.

I think what we're seeing here is we're seeing a fit that's determined by the Beverton-Holt model, which the points -- I don't think these points really reflect that. That's just my opinion, from an outsider looking at this fresh. Take those dotted lines, and take the curved line away, and I think you could draw a better line through all those points that would reflect the array of yearly points better than those two lines there.

Again, I know we're talking about -- You know, that's not going to make a difference here at all, but I'm just a little bit taken aback by using a curve that most of the points are higher or below it, and, you know, trying to fit something less than 0.4 doesn't make any sense, because we have very few points below 0.4 on the spawning stock. Okay. I've said my piece. Sorry. Thank you.

DR. REICHERT: Thanks, Fred. Fred, this relationship that we are seeing today is not much different from what we saw in the original one, correct, and so I -- Again, I don't necessarily disagree, but I want to go back to what I earlier said. I want to avoid re-reviewing the assessment.

Again, I would need to look back at all the conversations we've had, which I haven't, to see if this -- If we discussed this at our original review, but, ultimately, we accepted that assessment, and so that's my conundrum here. Again, I don't necessarily disagree with you, but, you know --

DR. SERCHUK: I'm not trying to be a troublemaker. Believe me. I accept it, okay, but it just seems from a -- You know, just from an outsider's point of view, why did you draw the lines that way? Well, one is you used a Beverton-Holt model, and, obviously, the expected is based on the model, but, to me, the points could be fitted a number of different ways and still have as good of a fit, or better, than what those curved lines are showing. I've said my piece. I understand what you're saying, and we'll move on. Thank you, Chair.

DR. REICHERT: Thanks, Fred. I appreciate -- Again, I appreciate your comments, and I -- Again, I don't necessarily disagree with that, but, anyway, I have Alexei, and then Jim. Alexei, go ahead.

DR. SHAROV: Respectfully, I disagree with Fred's comment here, and maybe not a hundred percent, but yes. The principle assumption that was made here, and we've agreed to it, is that we expect that the stock-recruitment relationship for this stock, as for most of the other finfish stocks, are mostly being described by, in general, by a Beverton-Holt stock-recruitment relationship. Therefore, we feed that model to this data.

This limited dataset certainly does not cover the full range of the stock status, you know, or stages. Some of them we have not observed when the stock was very high, and we have not observed, unfortunately -- When the stock was very low, had we had 1,000 data points that covered the full

range for the stock size, maybe Fred would have been much more satisfied with the way the curve is lined up with the observed data.

We're just dealing with the limited data, but, yes, if we say that these data points are representative, and this stock recruitment relationship is not necessarily -- That it should be taking the shape of the Beverton-Holt, then, yes, we could go into that discussion, but, otherwise, I think we've already been through this, and so it's not different from where we were last year, and, yes, we should just live with it at this moment.

DR. SERCHUK: Okay, and I'm not trying to -- I'm trying not to -- I understand, Alexei, and I accept the assessment as it is. I was just offering an alternative view outside of the assessment, and, if I created a problem, I apologize. Thank you.

DR. REICHERT: No, and it's not that he created a problem. It's just we are at a conundrum that we have reviewed this previously, and, obviously, when we take a look at this with fresh eyes, maybe things come up that we either don't remember, or haven't thought of previously, but, again, I want to avoid to re-review the entire assessment, but, Fred, we appreciate your comments, as we do Alexei's. I have Jim next up.

DR. GARTLAND: I actually think this discussion was really good, only because of the fact that I think the reason this MSY proxy group is coming together is because we've been pretty inconsistent, and, when we go with direct estimates of MSY, and when we use a proxy, because we're not sure how the Beverton-Holt curve is fitting, or whether our steepness estimates are any good, or things like that, and so I think the whole discussion we just had over the past few minutes just reinforces the need for the group that we're going to put together later.

The point -- One piece I just wanted to point out is, you know, basically what I read as the charge for this meeting, you know, the objective here is to look at the changes that were made to the assessment and whether we think, you know, those were handled appropriately, and so we reduced commercial catch, because we thought those were wrong, and we changed F initial a little bit, and, if you look at how the new curves are relating to the old curves, they're not that much different, and when they are different, they're doing what you would expect. You bring catch down, and F is coming down, and so it seems like pretty straightforward.

DR. REICHERT: Thank you. Any other -- Thanks, Jim. Any other clarifying questions, and, before we go to the action items, again, Chip, thanks. If there are some other questions that you may have an answer to, we'll ask you.

Let's go to public comment, before we go to the action items. Any public comments in the room? Any hands up online? Seeing none, no public comments. Thank you. Judd, maybe you can walk us through the action items, and then we'll answer those questions when we get there. It may be good to pull up that document, Judd. Can you do that? Okay. Judd will pull that up. Maybe you can look at your overview.

DR. CURTIS: All right, and so, in front of you, you have the overview and the action items for this agenda item, and so I tried to streamline these to reflect just the revised assessment and the changes that occurred. Of course, you're still welcome to comment on the various uncertainties that affect the reliability of these estimates. I've already included, you know, some of the

discussion around just the choice of a direct estimate of MSY, as opposed to an MSY proxy down there, which was also echoed in the review of the assessment last year as well.

You're welcome to include any of those previous uncertainties as well, if we wanted to bring those forward, if they're still applicable for the revised assessment. I will say some of the -- If you looked at the past assessment, some of the things, like the MCBE profiling versus the base runs, look a lot better in this assessment run, with the revised data in there. There was quite a discrepancy between the MCBE runs and the base model runs in the last -- In the original model, I guess, and so there is some improvement in those areas as well too, but I'll open the floor there, Chair, for comments and filling out the action items.

DR. REICHERT: Thanks, Judd. The first question was is the revised assessment consistent with BSIA guidance and practices? Jim commented to some of that, or mentioned that, also. I open the floor to comments or questions relative to that. Does anyone disagree with the fact that this, that we consider this consistent with BSIA guidance and practices? Jim.

DR. GARTLAND: I think obviously -- Well, I obviously think it is, but I think maybe we should put just a short line in there too about we're appreciative that the mistake was caught.

DR. REICHERT: Thank you. That's a good point. I appreciate that. Thank you, and I have a question that's not necessarily directly related to the golden tilefish. I assume that this was determined to be a one-off, and not like a general -- Similar corrections were not needed for other assessments, and this was just a one-off for golden tilefish, correct? Okay. Thank you. Right now, we assume that this was just a one-off correction for specific to golden tilefish, and not affecting any other assessments. Okay. Steve, go ahead.

DR. TURNER: Could we ask that question of ACCSP, i.e., would they review at least some of the work of this earlier employee, to ensure that that is not consistent with other species, that this problem is not consistent across species?

DR. REICHERT: Chip.

DR. COLLIER: So I can say that I have, in developing some of the products that the council has been using, whether it's a fishery performance report or a fishery overview -- There are consistencies typically between what's coming out of the assessment and then what is used for the ACL monitoring files. I use both of those when I'm trying to put together a landings stream, and then making sure all the data inputs are consistent, and so usually they are very close together, and that's why this one stood out. There was an exceptional difference.

DR. TURNER: Thank you. That will probably be sufficient.

DR. REICHERT: Okay. Thanks. Any other comments or questions relative to the first bullet point? Moving on to the second one, does the assessment provide a reliable, quantitative estimate of current stock status? I would say yes, given the uncertainties that the SSC discussed during its previous review and the current discussions. Any other comments, or questions?

The next bullet point is does the assessment provide reliable prediction for future conditions to support fishing level recommendations? In other words, the projections. Any comments, or questions? Alexei.

DR. SHAROV: Yes, with the same caveats as the previous item, that essentially, assuming the assumptions that were put into the projections are correct, or appropriate, then the projections are reliable, but we cannot, you know, guarantee that. When there's any projection, you have to rely on the set of assumptions here, and so you make a pause when you hear the words "are they reliable", and, yes, they're reliable within the constraints of what we say that we know.

DR. REICHERT: Thank you, and I think, also, that speaks to the fact that the terminal year was 2022, and we are now in 2025, and so, you know, the assessment team always mentions that projections are uncertain, and are getting more uncertain the further you go into the future, and so that's a caveat that we, obviously, always have when we are talking about projections. We had a similar comment in our previous review, and so Judd is copying that. The next bullet point -- Steve, go ahead.

DR. TURNER: I think we might need to add "also given that the terminal year in the data was 2022".

DR. REICHERT: Chip, I don't think there's -- Chip, go ahead.

DR. COLLIER: Yes, and the selectivity block changed in 2020. I think that's a contributing factor as well.

DR. REICHERT: Yes, and I agree with that, and I recommend adding that as a bullet point. I actually made a note. Genny, you had your hand up?

DR. NESSLAGE: I think I should wait for the uncertainties. I'll wait another second, unless you're done.

DR. REICHERT: Anyone have anything else to this point? So then let's move to the uncertainties. Genny.

DR. NESSLAGE: I think I'm -- I'm curious to hear more about when we think maybe some of -- When the new survey index might -- When the SADL survey might be integrated into this assessment, and refresh my memory on when that might be, because I'm -- Not having been at the October meeting when you guys reviewed this, and now looking at it more closely, I'm becoming increasingly nervous about this assessment, given we now have a dome-shaped selectivity in the last -- So we know nothing about the older fish, and we have no survey. We haven't had a survey, even a CPUE index with ages, for several decades now. It's really -- We're on dangerous territory, and so I'm excited to hear what Chip has to say.

DR. REICHERT: Chip.

DR. COLLIER: Well, you asked when the next assessment for the species, for tilefishes, would be, and, right now, it's on the SEDAR schedule for 2029, and that's -- Assuming that is optimistic, getting the stock assessment. 2029.

DR. REICHERT: But we'll have the SADL survey. I think we'll actually have quite a few years of that new survey available at that time. Of course, as an SSC, we can recommend a different schedule. I mean, that's our purview. Whether that's ultimately realistic to include in the schedule is up to others, but, if the committee feels strongly, we can certainly recommend, perhaps because of the uncertainties, an earlier assessment. Steve, I saw your hand up.

DR. TURNER: Genny asked when does the SADL survey come online, and, in other words, when do we have five years, and I think it's 2025, correct?

DR. BUBLEY: Yes, and so, based on starting at 2021, because we made some pretty big changes in 2020, and, in 2021, moving forward, this would be year-five of that. The 2025 survey just got completed a week ago.

DR. REICHERT: So that means in 2020 -- Sorry, and what was it? 2029? That adds another four years, but what's the pleasure of the group? If we want to add that to our recommendation, we certainly can. Does anyone feel strongly about that? Jim.

DR. GARTLAND: Instead of locking ourselves into saying we want to do it earlier, is it worth just keeping an eye on SADL, and, if we see something alarming, for example age structure changes a lot, or the index collapses over a two-year period, then we ring the alarm bells?

DR. REICHERT: I think that's a good point, and I think that's something that we actually recommended during our previous review, in terms of monitoring in the interim, and I think it would be good to reiterate that, looking at the SADL data and another -- If something happens with landings, or we get comments from the water that something is going on with the stock, then it may be worthwhile revisiting that.

DR. TURNER: Including not being able to meet their quota.

DR. REICHERT: The ACL, yes.

DR. TURNER: The commercial ACL.

DR. REICHERT: Yes, and it would be good to reiterate that from our previous recommendations. Thank you. I'm not sure, Judd, that first bullet point of the change of init value, if we need --

DR. CURTIS: Well, given that's the one parameter that did change from the assessment last time, that would be good to get some SSC feedback on for the council.

DR. REICHERT: From what I've seen, it changed. The major change were in the initial years of the stock assessment, and it didn't seem to have a major effect later on, but I would like to hear from other members. I think it was an appropriate change.

DR. CURTIS: Just to follow-up, Marcel, that was one of the uncertainties identified by the SSC last year, that initial F parameter having high uncertainty, and so the analysts looked further into that and provided a different, you know, pathway forward in this revised assessment.

DR. REICHERT: So, again, I think it was an appropriate change, that may not have a major effect in the -- Except for the beginning of the time series, that affected the beginning of the time series. Genny.

DR. NESSLAGE: Yes, and I agree that normally the beginning of the time series -- It doesn't appear, in this case, to cause a huge change in spawning stock biomass, but remember that they're estimating FMSY here now, and so, just as in general, I wouldn't say the beginning of the time series doesn't matter, because, if you're estimating MSY, it's going to fit in, but, in this case, the two lines, the original and the corrected spawning stock biomass, in those first few years are pretty close, and so it doesn't give me a huge heartburn. Thanks.

DR. REICHERT: Yes, and thanks for that clarification. That's good to capture. Anything else? I would like to add the comment that Jim made, in terms of the changes. If you look at the differences between this assessment and the previous one, or the corrected assessment and the previous one, that -- As expected, the results were -- The results were as expected, and I think that would just be good to capture here.

It may be obvious, but I think it would be good to capture somewhere, that, if you lower the landings, then you -- That resulted in some expected changes in the outcome of the assessment. In other words, there were no surprises when the correction was made. Anyone agree or disagree, and, Jim, I think you had some language that you used, that you may be able to provide, if you can remember. Anyone else? Steve.

DR. TURNER: It's sort of a generic comment that this stock makes me think about. A lot of the Southeast Science Center assessment biologists dislike using fishery-dependent indices of abundance, for good reasons, but perhaps, for monitoring stocks that have not been assessed in a good while, quick fishery-dependent indices of abundance might be another way to do that, to look for changes. Anyway, just a concept, an idea, and not necessarily for including, but just for, you know, monitoring for something we're not assessing as frequently as we would like.

DR. REICHERT: Judd tried to capture that in that last bullet point, but we are talking about golden tilefish in particular here, but you're talking about more for stocks in general, correct, unless I misunderstood you.

DR. TURNER: Well, I'm particularly thinking about golden tilefish, but I also think this might be useful for other stocks that aren't assessed very frequently, or haven't been assessed for a while.

DR. REICHERT: Okay. Thanks, and Judd is trying to capture that. Genny.

DR. NESSLAGE: Yes, and, to that point, I know -- I forget exactly when they switched from and dropped, or at least truncated, the CPUE index, but it was largely due to changes in the fishery, major changes in the fishery, that resulted in it not being representative of trends in abundance, or at least that was the interpretation of the SEDAR panel, and those of us involved in that, but I guess it's definitely worthwhile, as time goes on here, and the regs kind of settle down, perhaps, re-exploring a new time series.

It wouldn't be a continued one from the 1980s, but picking up with a new time series of fishery-dependent CPUE as a potential. I guess taking a look at it again, to see if there's been enough

consistency to develop a new index, as opposed to -- I don't think we can extend back to the 1980s the same index, but that doesn't mean a new one couldn't be developed moving forward, but I'm really looking forward to the SADL index. I'm super excited about that.

DR. TURNER: Yes, and I always liked fishery-dependent indices. I used them for -- I used them for decades, but I can understand concerns about them, but, at least for monitoring short-term changes, they could be useful when staff availability is reduced, and other times.

DR. REICHERT: Thanks, Steve. Anyone else? Before we go to OFL and ABC catch level recommendations, I have a -- I talked a little bit about that. Jeff, go ahead.

DR. BUCKEL: Thanks, Marcel. In addition to the abundance that, you know, we're above, where we're talking about the indices, the point about the dome-shaped selectivity, and so the other thing to monitor is a size in both SADL -- You know, to be not just -- We know they're going to get that data, but we need to -- You know, at some point, I mean, given the time between assessments, to look at that, maybe in a couple of years to see, if there are large fish being caught in SADL, and not in the fishery, you know, that supports that dome-shaped selectivity.

DR. REICHERT: Thanks, Jeff. Go ahead. Sorry.

DR. BUCKEL: We had made that recommendation in last October, but I just wanted to put that in here.

DR. REICHERT: Thanks, and Judd added age to that also, and it's just not size, but all and any information we can get from that, from SADL, would be good to take a look at, and so thanks for that reminder, and I think it would be good to -- It's good to reiterate that in this review today.

DR. BUCKEL One other point, if I may.

DR. REICHERT: Sorry, and say that again.

DR. BUCKEL: One other point, if I could, Marcel.

DR. REICHERT: Absolutely. Go ahead.

DR. BUCKEL: So, given the time, right, and we've already got a couple of years, and we're already halfway through, or two-thirds of the way through, the third, I think comparing what the projected landings -- What those look like compared to what the actual, and again, in a couple of years, look at that comparison, to make sure that we're not -- That what is in the projection is increasing and that, right, there's a lot of uncertainty, and a portion of these MCBE runs are showing overfished and overfishing, and so it's -- We just have to be -- I think it's -- Given the concerns about the assessment, just careful monitoring of the things, in addition to the landings -- The actual landings versus what's in the projections. Thank you.

DR. REICHERT: Good point. Thanks, and good point, Jeff, and Judd is trying to capture that. Excellent. Anything else? So, before we go to the OFL and ABC catch level recommendations, and I talked a little bit earlier with some of you about this, and so I'm not entirely sure how -- What

the best way to approach this is, but I personally found it a little cumbersome to read through this report and figure out exactly what the changes were.

Now, ultimately, this corrected report is the report, and so that's always a conundrum, if you then add like an addendum, which just changes, and that may later create confusion, but, for a review, yes, there was a little bit of text that captured the changes, but then it -- To me, and maybe I'm the only one, I found it hard to read between the lines to figure out exactly where the changes were, and so I thought maybe a separate brief discussion paragraph to highlight that may be good, but I'm not sure if I have a solution, or a recommendation, and I just was wondering if other members felt the same way reading through the report. Kai.

DR. LORENZEN: Yes, absolutely, and I was hoping for a track-changes edit of the old document, actually. I think, you know, since this is a correction to a report, you almost should be able to produce that, so that's very obvious what has been corrected, and it would make it easier.

DR. REICHERT: Do we feel if that -- You know, if we get an addendum, or a correction, if that would be helpful in the future? I hope that this is, obviously, the last one we ever have to look at, but, anyway, I was just wondering if other members felt the same way, in terms of reviewing the assessment, but, okay, and we'll leave it at that. I just wanted to make sure that I mentioned that, that I felt it was a little cumbersome to go through just trying to figure out what exactly the changes were, other than some of the graphs, where it was obvious what the changes were, but, in the text, it was not always that obvious, but, okay. Thank you.

So let's provide OFL and ABC catch level recommendations. The P* hasn't changed, and so we already applied the ABC control rule. Any questions or concerns with that? I don't think anything has changed. Chip, go ahead.

DR. COLLIER: Well, it's just for discussion, right, and the previous assessment was right at overfishing. This new assessment is not right at overfishing, and so I didn't know if the stock status was different, or, Judd, do you remember?

DR. CURTIS: Yes, and the stock risk rating stays as high, and then, looking at the new stock determination table, it's -- The relative stock biomass level still falls in that moderate category, and so those two from our ABC control matrix still puts the P* at 30 percent, and so it did go into a more optimistic output, but it still didn't cross the threshold into a high relative stock biomass level.

DR. REICHERT: Thanks. I think that would be good to capture in the report, so we have that on the record, that there were some changes, but it didn't result in a change in the P* value, and I think, while Judd is writing this down -- I mean, again, this was not -- In a sense, not that much different, but it's kind of what you expect if you manage your stock around MSY, that you will, you know, hover around that value. P* is 30 percent, and that's above that. Okay. Good.

For the report, maybe we can delete that P* at 30 percent, and we can wordsmith that later, and then our task is to fill out Table 2. It's our usual table, catch level recommendations. The blue values, are those the new values, Judd, and so Judd filled those in already for us.

DR. CURTIS: Yes. Correct and so, from 2023 to 2025, you have the interim years in your projections, and then 2026 and 2027 are your true first projected years, and so those are the new

values reflected from the revised assessment, which you'll compare that to the table from last year, and are about 50,000 pounds higher in both the OFL and the ABC recommendations, you know, due to the difference in the commercial landings streams recently, which lowers that F current.

DR. REICHERT: Thank you, Judd, and I want to remind the committee that, past 2027, unless we provide the council with a revised ABC recommendation, that value will stay in place until we are at a point where we are revising the ABC recommendation, and so that 2027 ABC recommendation will be the one for the -- Until we have a new assessment. Any questions?

DR. CURTIS: Sorry, Chair, and let me -- Before we approve these, let me double-check these numbers, because I see, in the OFL recommendations in 2026 and 2027, it's declining, but the ABCs are increasing, and so let me just double-check those numbers.

DR. REICHERT: Okay. Are they in the table, in the report table, that we can quickly look at? Is that page 31 in the report, or in the presentation? Sorry that I didn't catch that, Judd, when I was taking a look at this.

DR. CURTIS: Okay. Those numbers are correct. Confirmed.

DR. REICHERT: Okay. Excellent. Okay. Steve, you look puzzled.

DR. TURNER: Yes, and it's probably my ignorance. The OFL and the ABC are the same through 2025, and then they differ in 2026 and 2027, and is that correct? Is that the way it should be?

DR. BARBIERI: If it's agreeable, I was just going to ask, and have we discussed yet, or was that discussed in October, about the time period that we're using to provide, you know, yield streams of OFL and ABC?

DR. REICHERT: Sorry, and say that again.

DR. BARBIERI: For OFL and ABC catch level recommendations, are we providing three years, or five years, or ten years? What's the length of the time period that we're using?

DR. REICHERT: To provide projections? It's five years, as based on a previous recommendation from the SSC, based on the increased uncertainty in the projections. I hope that that answers your question, and so we always provide five years of recommendations, and so, in this case, it's actually only two years, 2026 and 2027. Does that make sense, and answer your question, or did I confuse you even more?

DR. BARBIERI: So, for OFL and ABC, you're making two-year projections, right? Recommendations for the next two years, and so the huge streams that we are providing for just two years, correct?

DR. REICHERT: Chip.

DR. COLLIER: You are correct. The way that the catch level projection workgroup developed their recommendation was five years from the terminal year of the assessment, and so that's what this is reflecting, five years from the 2022 value.

DR. BARBIERI: But to that point -- Yes, and I like the way that this turned out, Chip, because, to me, in my view, this is a very highly uncertain assessment, right? There's no question about it, and, of course, the projections are even less certain than the retrospective, you know, products of the assessment, in terms of condition of the stocks and stock dynamics, because -- So having two years in front of us I think, you know, is a good idea to keep that projection period short, and then we kind of push the refresh button again, if we can, right, to look into this stock again, and perhaps take some of the recommendations that are being included in the report and asking for a refresh of this assessment in a way that we have a better -- A bit more confidence in it.

DR. REICHERT: Thanks, Luiz. Judd.

DR. CURTIS: During the discussions, I just looked through the tables from the stock assessment report on those yield streams from 2023 to 2024, and the ABC and OFL being the same, and they're the same reported in the tables as well too, and so that's something that we'll need to follow-up with the assessment analyst, to see if that is accurate or not.

DR. REICHERT: Chip.

DR. COLLIER: Yes, and the reason that those are the same is they're trying to replicate what level of landings would have occurred in that time period, and, that way, if the OFL would have to reduce in the future years, 2026 and 2027, you want to have the most accurate estimate in those previous time periods, right, because, if you're having a higher level of landings, or a different level of landings from there, that's going to influence what your OFL value could be, because the population is going to be different, right? The remaining population would be different. That's not making sense to the group, but -- So it's supposed to reflect landings that are occurring in the fishery.

DR. REICHERT: They are landings, and they are not projections, and that's why they're the same. Okay. Steve.

DR. TURNER: But then they're not in OFL.

DR. COLLIER: Right, and so the OFL is in blue.

DR. TURNER: But they're listed under OFL.

DR. COLLIER: Right, and we should highlight that that's different.

DR. TURNER: You know, put a footnote on both of them of "landings".

DR. REICHERT: I would remove the 2023 through 2025, and -- Yes, and then just provide the OFL.

DR. REICHERT: Luiz.

DR. BARBIERI: That was the nature of my question, right? Of course, we cannot provide OFL and ABC that's retrospective in time, because we already had landings, right, that came from those

years, and so, you know, this makes it clear to me, Steve, that, yes, it's a two-year projection period, right, and we might want to revisit, at some point, you know, that criteria and the discussion of putting five years after the terminal year of the assessment, because, of course, are not going to necessarily generate yield streams of OFL and ABC in that , if they are retrospective in nature.

DR. REICHERT: Yes, and I agree, because, you know, given the conversation here, others who may read the report may also get the wrong impression, in terms of what those numbers actually mean. They're landings, and they're not OFL or ABC recommendations. Okay. Thank you.

DR. CURTIS: Yes, and that sounds good. I can make those modifications, moving forward too, and that is just historically how we've been doing it, and we've been keeping the interim years in those tables, but, if the committee feels like that's confusing, we can just provide the actual projections for OFL and ABC instead.

DR. REICHERT: Thanks, Judd. I think that's a good idea. I think that's a good discussion. Thank you. All right. Anything else to add? Thank you for the discussion. Thank you for your thoughts. I appreciate that. Let's take a ten-minute break, and then we'll move on to the next agenda item, and so we'll be back at 3:15.

(Whereupon, a recess was taken.)

DR. REICHERT: All right, welcome back. Before we move to Agenda Item 8, followed by Agenda Item 5, I think Julie wanted to show, real quick, what she mentioned earlier about the SEDAR, and it's the sedarweb.org website.

DR. NEER: Just real quick, and I don't know how often you guys play on the SEDAR website, and you're probably not on it as often as I am, and so this is the homepage for SEDAR. You can always find everything. Just quick, along the left side, you have most recent documents, and it shows like the top five or six things we've just posted, and upcoming events are also there, but, from this web homepage, you can get to all kinds of things and one of the things right here is that assessment schedule.

If you click on that, that shows you our lovely Tetris grid of scheduling, and it shows you everything that's being done across the stock assessment enterprise that SEDAR is working on, and so I wanted to just highlight those purplish, rose-colored boxes. Those are the things that are being done by the center, but are not coming through the SEDAR process.

You can see what's being worked on, that's not following any of those procedures, is more along that top plan of the grid, of the flowchart that we were talking about earlier, and you can see we have recommendations out to 2029 for various species. Green means things are underway, orange means they're scheduled, and we're going to be working with the center to plan the exact schedules for those, in terms of when they start, when they finish, what day it's going to be available. Blue is when we're going to -- Where we're going to go, what was recommended to move forward, and then the purple is, as I said, the extra SEDAR ones.

You'll see these big -- Some of these columns are grayed out, entire whole columns, and they're grayed out because of loss of personnel during the RIFs. That one in the South Atlantic that's grayed out, we had personnel leave, and they had put an announcement out, and they even were

hiring, in the process of hiring, that individual, but they were denied being able to fill that position. Then, the shark and the Caribbean ones, those are individuals who left due to the RIF stuff earlier this year.

We are losing staff, but, if you ever want to see, kind of big picture, where we're going, this is the grid to look at, and, Judd, could you just go back one to the homepage? Then, also on this first right side -- Can you scroll up towards the top? There's a click right there that says "upcoming events". If you click on that, you can always see everything we have going on, in terms of all the webinars and stuff. There's how to register for any of those webinars, right there on "register for webinar". If you click, it takes you directly there, so you can always see what's coming up as well.

Then click back to the homepage, and now scroll down a little bit, and then, these little buttons here, if you know the SEDAR number of the project we're working on, you can click on it, click on any of those, and it takes you to the page directly, but we've tried to make it easy to navigate, if you know the number, but the big thing I wanted to bring up for now was just that grid that we were talking about, so you can get an idea of -- Sometimes it seems like we're not doing anything. Well, that's because, as I said, the SEDAR program functions across a whole lot of people, and not just any individual council, and so there you go. Thanks.

You'll see there's a little like translation box that says "MRIP changes", and that's something that's being done in the Gulf, more than in the South Atlantic, because the Gulf has assessments that were recently wrapping up, in the last couple of months to before the when the new changes go back out, and they have set aside time for those assessments to be sort of rerun with the new FES numbers.

The South Atlantic projects are not wrapping up totally. They'll be wrapping up after those new numbers are essentially released, and so the thought is that they're going to be updated for red snapper and whatever that big -- Red snapper is really the only one right now. They will be updated before that report is finalized, and so that little section is not currently listed under South Atlantic, but the Gulf timing of their assessments is a little different.

There is a process put in place, and I guess I talked about this earlier, to try and update as many assessments as possible when those new numbers come out, and that's going to be something that will probably come to you guys, once we get those new numbers. They have three options, Options 1, 2, and 3 they're calling them. It's very exciting.

Depending on what level of changes in those MRIP estimates came out, how much they have to do to try and update those previous assessments to incorporate the new information, and we'll -- Stay tuned for that, with regard to depending on, of course, the more involved the update to get the new numbers MRIP in, obviously, the longer it takes, but the goal is to not have to actually wait until the next -- Until he species is back on the full SEDAR schedule to make some of those changes, but we will -- You know, we're still waiting to see how big those changes are for any given stock, and that will change. Is that what you wanted, Chip? Perfect.

Before I leave, does anyone have any questions, but this is just where you can always kind of get the big picture of what we're doing and how to access all things SEDAR, and you can always email Emily or myself.

DR. REICHERT: Thanks, Julie. I appreciate that. I thought about that, the implications of changes of the FES, but we'll talk a little bit more about that in our next agenda item. Thanks, Julie. I appreciate that. The next agenda item is MRIP-FES Revised Survey Results and Calibration Methods. As I mentioned, we don't have a presenter, but there was a recorded presentation that we'll go through.

Attachment 8 was the presentation, and the assignments are Luiz, Chris, Jared, and Alexei, and so, once again, I ask those people in particular for notes on this agenda item, but that doesn't mean that other people cannot provide feedback either. Judd, perhaps you can introduce that presentation.

DR. CURTIS: Thanks, Marcel, and so as Marcel, our chair, stated, this was a recorded presentation that was provided to the Mid-Atlantic SSC in September, and so we're taking advantage of the fact that they have that recorded, since we do not have our federal partners with us, due to the shutdown, during this meeting, but the materials were near identical in the presentation provided to the Mid-Atlantic as the plan for the presentation for the South Atlantic this week, and so we'll have a recorded presentation. Obviously, the presenter is not with us currently, but we can take any questions from the SSC and relay them to the NOAA Office of Science and Technology, hopefully when they're back in office soon.

DR. REICHERT: For those online, we are trying to solve some technical issues.

DR. CURTIS: Sorry, and stay tuned. We're having some audio difficulties with the recording. All right, Chair. We're having some difficulties with the sound, and so my suggestion would be we will push this till tomorrow. We can troubleshoot in the evening, and then we can cover terms of reference this afternoon instead.

DR. REICHERT: Okay. Sounds good, and so let's move to what was originally Agenda Item 5, correct? No, yes? Okay. Sorry, and I have completely messed up my agenda. Sorry. Now I have some technical issues here. All right. Judd, why don't you lead us off? The attachments are 6a through 6f, and, Judd, maybe you can take us through the terms of reference.

TERMS OF REFERENCE FOR THE 2026-2027 ASSESSMENTS

DR. CURTIS: Okay. Thank you, Chair. So, initially, we had planned just for review of the king mackerel and Spanish mackerel terms of reference. With some time opening up in this meeting that we anticipated, I added some terms of reference for red grouper and snowy grouper, and those were added as recent materials, as Attachments d and e.

As part of the process in generating the terms of reference, staff will put together documents based either on statement of work from Spanish, or for the assessment, any information from the research and monitoring plan, recommendations from the review of the last assessment, or from the review during the SSC meetings, and cobble all those together in generating the terms of reference.

You see, in Attachment 6c, that's the background and statement of work for Spanish mackerel that was helped to generate the terms of reference, and, in 6f, this is supplementary assessment

information for red grouper and snowy grouper that was used to draft the terms of reference, and so, based on that information, I put together the terms of reference for these species.

The SSC should review these, make any recommended edits, or comments, and these will then go through a period of negotiation with the center, once they're back, before being provided to the council for final approval, and so, if there are no questions, we'll go ahead and kick off with king mackerel.

DR. REICHERT: Since it's a little different, I recommend maybe doing public comment after we are -- After we went through all the terms of reference, rather than do that now, and it's probably more appropriate to do that, and so thanks, Judd. Let's go through king mackerel.

DR. CURTIS: All right, and so most of you all have seen kind of the draft language of the terms of reference before, and so I've taken most of the base language that we've used for a lot of these previous terms of reference, and then included any of the novel information based on the scope of work, or research monitoring plan needs, as well as comments from the council or the APs in generating these terms of reference.

For South Atlantic king mackerel, so this assessment will actually be done by a Gulf analyst, using Stock Synthesis, and that's a continuation of what was done for the previous SEDAR 38 update model, and so that is something that will look a little bit different. There will be another Stock Synthesis model, as opposed to the Beaufort Assessment Model. I think most of you all have seen output and base models of Stock Synthesis products before, and so it shouldn't be too new for you all.

I'll go through this one a little bit slower, and then most language is redundant for the subsequent assessments, and I'll just highlight the novel points in each of the different terms of reference, and so the first term of reference has to do with updating the base model for South Atlantic king mackerel.

We're anticipating a terminal year of the 2025-2026 fishing year, and so, for the mackerels, the fishing year is how it's managed, from March to February of the next year. That's the fishing year, and that's how the data is typically provided for these mackerel assessments. As always, the data providers may include preliminary or partial data for more recent years, and that's up to the discretion of that lead analyst, based on the quantity and quality of data.

Number 2, updating the model to the current Stock Synthesis version and model configurations using best practices, and providing a model run using the SEDAR 38 configuration, including recent years of data, as following NMFS procedures 01-101-11, to provide those continuity models for comparison.

Number 3 has to do with any new and updated information on various data input parameters. We see here that providing commercial and recreational combined landings and discards, in pounds and numbers. One area of interest from the previous assessment was looking at new ways to estimate natural mortality, and this is common to all our assessments, but this is particular to king mackerel, and some others as well.

Consider direct estimation methods, such as telemetry or conventional tagging, and considering estimation of natural mortality within the stock assessment, and then, in c, addressing as many of the recommendations of the catch level projections workgroup, which is linked here.

Term of Reference Number 4 is some of the new input data, or deviations from a previous assessment model, including providing sensitivity analyses to compare with the old SEDAR 38 update, and then a couple of new, or novel, bullets for this term of reference was to explore these alternative age references, or age-specific time series for SEAMAP and NEAMAP fishery-independent survey data, looking at model sensitivities to the age data and exploring alternative parametrizations, exploring the cause of the high max gradient for the model, and, as feasible, exploring the possibility of including a sensitivity run with fishery data.

Term of Reference Number 5 has to do with updating the model parameter estimates and their variances. This is pretty standard language that we have across all the different terms of reference, and so this gets to some of the concerns and discussion the SSC has been having with looking at the uncertainties in the stock-recruit relationship, and when you should estimate MSY directly, or using an MSY proxy, and so these are written into the TORs for these next assessments that we have.

DR. REICHERT: Do you want to answer questions while we are going through this, or you want to do that at the end, Judd?

DR. CURTIS: I'll take questions now, if people have those.

DR. REICHERT: I had a quick question about the MSY proxy. I know we're going to discuss that at length in our working group and so on. This is if the assessment team is not recommending using an MSY. I can foresee a situation where the SSC may conclude that a direct estimate is not appropriate, and so is the intent for the analytical team to come up with an appropriate proxy no matter what, or what's the --

I was just wondering what will happen if, you know, for instance, the assessment team considers -- Concludes that a direct estimate can be made, while the SSC concludes that maybe the uncertainty is too large to use that for management recommendations. What will happen next, or is that a consideration that the assessment team is asked to do during the process?

DR. CURTIS: Yes, and so I think this will be a task of, you know, that assessment technical team, is to relay some of the information coming out of that joint MSY proxies and SSC workgroup, and other guiding principles, to help determine whether they recommend using direct estimates of MSY or those associated proxies.

These are the guidelines to the Science Center and the analysts, and so, you know, I guess it is ultimately their determination if the MSY represents the best scientific information available, and the SSC can recommend that a certain proxy, MSY proxy or SPR proxy, is used for setting the status determination criteria.

DR. REICHERT: Luiz, I saw your hand up.

DR. BARBIERI: Yes, and thank you, Mr. Chairman. Well, I mean, one potential alternative to this, right, would be to fall back on the default proxy, if one is already identified and approved by the council within the fisheries management plan for that stock, right, and so usually those parameters are predefined in the fisheries management plan, and, if that's the case, the analytical team would have, you know, the opportunity to update and recommend -- Say that we disagree with this previous value that is in the FMP, and we would like to propose a different one. Then we can discuss here, as a process of reviewing the assessment, whether we agree or we recommend a different proxy value.

DR. REICHERT: Carolyn.

DR. BELCHER: So, just to follow-up, that's exactly what I was going to come up to the table and talk about, is that it is written in -- This is kind of where we got a little bit with the recommendation of the 40 percent, that it's at least having the conversations to talk about whether or not the proxy will need to be changed going forward, rather than it come out of the science, and the council kind of gets in this quandary where we've got it published in an FMP that we will use a proxy that's, you know, 30 percent MSY.

I think it's that idea that the conversations that, especially coming out of this workgroup, is going to be the discussions of managers, and science, and talking about how we have this, because the open-endedness of just saying the appropriate MSY proxy makes the council's concern, because of the slip-slide of, well, it's 40 this year, and what stops it from being 50, or 55, in the next year, and so I think it's just having the open dialogues, and recognizing that that's really what it's going to take for those changes to occur in the FMP.

DR. REICHERT: Thank you, and that's exactly why I was asking that question to begin with, and so, yes, Judd added some language there, that I can have a hard time reading.

DR. CURTIS: So are you suggesting then editing this, and so, instead of determining an appropriate MSY proxy, it would be, you know, using the default MSY proxy value specified by the fishery management plan at the starting point, and then any deviations from that MSY value, or, excuse me, that SPR value is what needs to be documented to change?

DR. REICHERT: Or, you know, based on the outcome of the working group, because what may be in a current FMP may not be what the working group may recommend, but that may be too vague. Chip is coming. Chip.

DR COLLIER: This is king mackerel, right, or Spanish? Okay. Well, I haven't looked at the CMP FMP recently, but I know, for snapper grouper, it does list FMSY or appropriate proxy, and so the intent is to have an estimated FMSY. I have to go back and reread the coastal migratory pelagics, to see how the language is written in that, to see if FMSY is the default, and then there's a proxy if that's not estimated.

DR. REICHERT: Okay. Thanks.

DR. CURTIS: So then, back to the TORs, and is the committee -- Are we comfortable with that, or do we feel -- Maybe feel we should recommend a potential change in the language there? If a direct estimate of MSY is not recommended, provide justification for the use of MSY proxy, and

my question was earlier was that means that, if the assessment team doesn't seem -- Is not recommending an MSY, and then we can, obviously, always wait for our review, and then, if we decide it's not -- A direct estimate is not appropriate, given the uncertainty, then just take it from there, and that -- But that means that it doesn't -- That we do not need to change the language as it currently is. Luiz, go ahead.

DR. BARBIERI: Thank you, Mr. Chairman. Well, this could be the perfect example of a decision that the Science Center will have to make, that might be wise for them to consult with the SSC and integrate us into that decision-making process, if the idea is to expedite the assessment process, right, because, if they do everything using a proxy that they chose, and that's not in alignment with the SSC, we might get to the situation that Kai described earlier, and we send it back and recommend a different value, and so, to me, this would be a good opportunity for them to ask for input.

I don't know if I want to be prescriptive on this, or leave it up to them, but I would recommend that, if they are trying to move fast and expedite these assessments, that this is a way to get our input ahead of time.

DR. REICHERT: That's language that we can add to our report, that doesn't necessarily make it into the language of the terms of reference, and I think that's a good way to go about it, that we can recommend it, and remind me, and this is not an assessment that goes through the new system, or is it?

DR. CURTIS: Yes.

DR. REICHERT: It is, and so we can actually recommend a -- Well, we need to make the decision now. Anyway --

DR. CURTIS: All these terms of reference that you'll be reviewing today are going to be going through the new SEDAR process that will have the assessment technical team, and there's actually a TOR specifically addressing that technical workgroup down in Number 7, and one idea, that I just thought of, is that could be an area where maybe you want to elaborate on that bullet point, what the charge of that technical team may be, including vetting potential SPR proxies and anything else.

DR. REICHERT: I think that's -- Thanks. I think that's probably -- I like that recommendation. I saw Alexei's hand up. Alexei, go ahead.

DR. SHAROV: Thank you. I thought it was pretty clear here, and satisfactory, but, if you want to make it more conditional, I mean, you could strengthen the text by saying something, and, I mean, I don't have the exact text, but you may say something like unless the MSY-based reference points were clearly demonstrated to -- Well, or the estimate of the BMSY and FMSY were -- It was demonstrated they were reliably estimated, provide a range of the alternative reference points, such as the percent SPR, et cetera.

The difference is that you are, at this point, already saying that, if you will produce the MSY-based reference point that is likely to pass the review, then good. If not, if there are some doubts, like what we've seen earlier, the sensitivity plot for R0 and steepness, where the minimum was not

clearly defined, and so, in that case, you know, be prepared to -- Or develop and present alternatives, plural that is, a few options, and those could be supported by whatever the team chooses to justify.

DR. REICHERT: We can develop that language, and I agree with that. The only thing that I can think of is that, you know, what's a reliable estimate, because that's where we -- That's how we are getting -- That's how we have gotten where we are right now, because in some instances, the -- I don't have the examples off the top of my head, but we discussed that during the yellowtail snapper and mutton snapper review, and the same -- Almost a similar profile, in one instance, was sufficient, in terms of reliability, a reliable estimate, and, in other instances, that was not considered.

Sometimes those profiles didn't change much, but we came to a different decision, or reviewers came to a different decision, and I think that's why we decided -- Why we recommended, okay, let's discuss this, and come up with perhaps some criteria, and so, again, to go back to what is reliably estimated, and I think that's one of the things that the working group is going to discuss, unless I completely misunderstand the task.

DR. SHAROV: Well, that's right, but we don't have a formal definition of what's reliable, and it really changes depending on the aspect you're talking about, but I think it's generally understood, certainly by the people who will be doing the assessment, and if, in their opinion, if they feel that they have a strong case, they will have a justification for that, and so, honestly, to me, this seems to be sufficient.

The only thing that I said was that, if you want to make it, you know, even more -- That's a stronger statement that they have a well-defended estimate of the FMSY, and BMSY, or prepare the alternatives. That's the only difference.

DR. REICHERT: Thanks, Alexei, and we can -- Maybe you can help in drafting that language, that we can then review, either later or otherwise on Thursday. I have Luiz, and then Genny.

DR. BARBIERI: Thank you, Mr. Chairman. If I understand correctly what Alexei is recommending, I like it, because it saves time, right, and I think -- I don't remember which assessment, when it was, but we've done this before, where we asked for runs that would incorporate, right, different reference points there, just so we could actually make the determination here, the review, and not have to send things back to them, and so that would come already prepared within the assessment. It's easy enough for them to do without causing any delay, and so I like it.

DR. REICHERT: Yes, and, again, let's make sure that we add that language to the terms of reference. Genny.

DR. NESSLAGE: Yes, and those with good memories will recall I've always had major heartburn with this assessment, and the issues of model convergence, and the jitter analysis being not ideal in its results, and so I'm really cautious about -- I think we should be really cautious about how we word this, because, if we don't even have a model that has good model convergence criteria, I think we want to be very careful about what we try to estimate from this model, and then use that for reference points.

Whatever the technical group, or whatever we're calling the working group -- I think that should definitely -- I think the model convergence issue needs to be settled before we even get to the point of determining what's estimable, or maybe that's wrapped up in it, that they're trying to estimate too much with too little, and so just -- I think those issues may be intertwined.

DR. REICHERT: Okay. Judd suggested perhaps under 0.7, to maybe be a little more specific in terms of what issues this technical working group likely may be asked to provide feedback on, or should we just leave it general, because the -- Fred, and then I'll -- Because, if I understand correctly, isn't it up to the assessment team to contact the technical working group, in case something comes up, and so, if we don't list anything that we think may come up -- Anyway, it's kind of the chicken and the egg. If you don't have the information, you don't know what the issues are. Fred.

DR. SCHARF: So, just a -- Can we change that to technical team, to match the SEDAR terminology, so it's not confused with the topical working group? Okay.

DR. REICHERT: Thank you, Fred. Excellent point. We'll change that for the other ones too, and so back to -- Should we -- We added some language to clarify a 5a. Is that sufficient for the committee, and, again, we can take a look at that once we review this. Anyone? Okay. I assume that's a yes from the committee, and we'll wordsmith that 5a a little bit later, Judd, with input from the committee. Luiz.

DR. BARBIERI: Thank you, Mr. Chairman. Chris here reminded me -- Because you have that mixing zone, right, for king mackerel in south Florida, how is this tied into the whole conversation about, you know, stock structure, and how that's going to be defined, in terms of integrating with the Gulf? In the past, we tried to integrate it there, because of that moving -- The migratory group, right, they called it, in the area that could belong to either one of those jurisdictional areas.

DR. REICHERT: Thanks for reminding us, Luiz. I had forgotten about that. Judd, do you know how that's going to be addressed, or approached, in this assessment, or anyone else that may be able to tell us?

DR. CURTIS: I'll open it up for others to comment, but the one thing I would say is that this must be just a continuation of the previous assessment model, right, in an update. There's no stock ID workshop scheduled for this assessment, to get into the details of that mixing zone, as far as my knowledge, and that could be something though that you do request the analyst to explore a little bit, and, you know, as part of that negotiation process, if the center is amenable to that, then they can look at that.

DR. COLLIER: So, in the follow-up on that, Luiz, you should -- Or the Gulf should be getting a stock assessment on Gulf king mackerel just prior to this, and so whatever landings they don't claim is what we get, I would assume, and so maybe we can use the process of subtraction to get us there.

DR. NEER: In SEDAR 38, that was when we disarticulated these two assessments, and so that was the benchmark that separated them, which is why we can actually conduct these assessments separately now. There is no mixing zone that we have to -- The numbers are not changing,

essentially. We came up with a process of how to split landings depending on month, timing, location of landings in Monroe County, and that is still followed. It's more than just Monroe County, first, for king mackerel, but so those protocols of how to split the king mackerel for that migratory group are already defined, and we don't -- We haven't received any additional information, since that original study from Will's stuff, to cause us to change how we divvy up those landings, and so we'll be following the same process that was approved in 38.

DR. BARBIERI: That helps clarify everything, Julie. Thank you.

DR. REICHERT: Thank you, Julie. Jeff, you had your hand up? Go ahead, Jeff.

DR. BUCKEL: Thanks, Marcel. Yes, and it could be something that could be examined this time with a sensitivity analysis. That was done for cobia in SEDAR 58. You know, it has the same situation, where, for part of the year, there's some Atlantic fish in the Gulf jurisdictional area, and so, you know, some -- There are landings of Atlantic stock fish that don't get counted in the Atlantic stock assessment, because they get counted in the Gulf stock assessment.

There was a sensitivity run done where there was additional landings that, you know -- I don't remember if they used several values, or just picked one, a guesstimate of how much cobia landings were erroneously applied to the Gulf, and then that sensitivity was done, and it wasn't -- It didn't change things that drastically, and so that could be considered here, if folks -- I don't remember the details on how -- You know, the potential for how many Atlantic fish would be erroneously applied to the Gulf landings. Thanks.

DR. REICHERT: Thanks for that reminder, Jeff. I think that's a good point. I'm not sure if we -- If that's sufficient, if we should add it to the terms of reference, or just as a recommendation in our report. Anyone? Jeff, do you have any thoughts on that?

DR. BUCKEL: You know, there's the sensitivity analysis listed under 4a. I don't have any thoughts. I mean, if other folks don't think it's worthwhile to do, then, you know, we don't have to add it.

DR. REICHERT: Yes, and I think maybe it's too prescriptive in the terms of reference, but maybe, in our report, we can make that recommendation, as one potential sensitivity run, if needed, if that -- If that issue is the same.

DR. BUCKEL: That sounds good. Thanks.

DR. CURTIS: I would say specify that specific sensitivity run in this section here, as needed, so these are written as to be kind of generic, right, but, if there's particular sensitivities that people can recall, from previous assessments or something that they would like to see, this is definitely the place to put them into the new terms of reference.

DR. REICHERT: So you recommend putting them in here and not in our report? Julie.

DR. NEER: I'm not entirely sure what specific sensitivity you're asking for. An unknown landing, a change in the landing streams, where we don't know who may have been classified for the wrong stock? I'm putting on my Katie hat, and can you please be specific with regard to exactly what the

sensitivity you're looking at for, because just saying a sensitivity on landing streams with the mixing zone is not terribly helpful.

DR. REICHERT: Jeff, do you have an answer to that question, as the one who reminded us of the assessment?

DR. BUCKEL: Yes, and we had a rough idea of how many months, right, the Atlantic -- We knew, from tagging data, that Atlantic fish moved into the Gulf area, Gulf stock boundary, and so I think it was like 20 percent, you know, and we added maybe an additional 20 percent, and I don't remember the exact numbers, but it was based -- It was just a guesstimate, right, based on the time of year that we knew Atlantic stock fish were south of the Atlantic-Gulf boundary.

I don't know enough detail about the king mackerel mixing, and the time of the year, to provide that number. That would be a question for the folks that worked on that mixing zone for king mackerel, and, you know, how long that occurs, and just to get, you know, a rough idea of saying, okay, if we -- If we assign 10, or 20 percent, or maybe they would say, oh, I think it's 30 percent, and, you know, just to get an idea of how that would -- The potential bias on the assessment.

DR. NEER: I would say SEDAR 99, which is the Gulf king mackerel assessment, is underway right now. I'll go back and look at how we divvied up landings from 38, because we've done 38 as the benchmark, and we've also done an update to 38 in the Gulf as well, and so I believe the methodology was already stated of how we divvy up, but there might also be, in there, a what if we're wrong by some percentage, and so I can take a look tonight and see if there's some more guidance on what -- If they did a sensitivity, or if they feel they're pretty comfortable. I'm trying to just help, you know, help the analysts, because they're not here.

DR. REICHERT: No, and I think that would be really helpful, and maybe we can table that until you have a little bit more information, because I do agree that it would be good to get some specific language, if we request a specific sensitivity run. Another alternative is just to let that play out in the assessment. Of course, the SSC will have an opportunity to provide feedback on a later date, and if the technical -- What is it called?

DR. NEER: Technical team.

DR. REICHERT: If the technical team is called, and that may be something that they can discuss at that point also.

DR. NEER: I'm pretty sure Katie will probably -- Because they weren't able to attend, I'm sure Katie and Latrice will probably take a look at your comments in your report, and can maybe circle back, if need be, if we can.

DR. REICHERT: Yes, and that's why I mentioned the alternative to add that in our report, and then they can take a look at that, rather than being prescriptive in terms of reference. Chip.

DR. COLLIER: I know Jeff brought up the idea of the mixing zone, but is there a desire to look at the current FES values, and then the revised values that are going to be coming out of the new recreational estimates that should be available in 2026? I mean, we're building more and more into these models. We want something that's pretty streamlined, but there is a big recreational

component for this fishery, and so just trying to make sure we're clear on everything that we're asking for, or you all are asking for.

DR. REICHERT: Okay.

DR. NEER: Judd, was there supposed to be a TWG for this, or just a technical team? If it's just an update, then the goal of the center would be to just use what was used before, and now there's going to be a new data stream, certainly, and so it's fine to ask them, I guess, to -- I would think that, most likely, they will look at the previous stream, versus the new stream, and run a sensitivity on that on their own, most likely, but you could certainly request a sensitivity looking at the new FES, versus the FES that was used in the last assessment, and that seems perfectly reasonable, and probably something that they would do. Like that could be a directive, if you wanted to put it in the terms of reference, as opposed to your report.

DR. REICHERT: I'm a little confused, because I think the first question was, since this is an update, are we -- Should we ask to use the updated MRIP-FES data or not, and, if that's the case, then, of course, you can do a comparison with the previous one, but that -- You know, that becomes you already know what direction it's going to take, so that -- But I think the more fundamental question is, since this is an update, should we add to the terms of -- Unless I misunderstood, do we add to the terms of reference to include the FES, the MRIP-FES, adjusted numbers? I have C.J. and Steve.

DR. SCHLICK: Thank you. I definitely would recommend doing this as a terms of reference, because, in the second terms of reference, it says you're using current Stock Synthesis version with best practices. One of the major changes from 2020 to now is the way we estimate fishing mortality within Stock Synthesis. It went from a hybrid method to a fleet-specific super stock, and so that change alone should warrant a sensitivity analysis. Paired with the recreational changes, it could have major implications just by following best practices.

DR. NEER: I think their intent would be to use the new numbers and not to use the -- Not to use the -- That would be in a -- That's the new updated data that's being put out by NMFS as the most appropriate data for use in assessments, and so they're going to use the new numbers.

DR. REICHERT: Okay, and so this is an update. From what I hear from C.J., it's that there may be some significant changes in the model configuration, plus now we have changes in MRIP-FES, and so is this still an update? Well, I mean, I'm just asking that, because this, this is this sliding scale, in terms of we're changing this, and we're changing that, and we're changing that, and, at some point, it's -- Anyway. Steve, and then I'll go back to C.J. Steve, go ahead.

DR. TURNER: This is being done under the new model, right? This is not being done under the SEDAR approach, and so it's a lot looser than the strict update, right? Isn't this being passed to the assessment group, and so --

DR. REICHERT: It is looser, but maybe you remember that slide with the -- Like the top one, and I feel that this falls under that one, and the lower one, and all I'm asking the committee, listening to the changes, is whether we are still okay with that top one, or do we feel that, well, we are changing this, and we're changing that, and are -- Do we, as a committee, feel that maybe it's now

in that second part? I'm not there yet, but I'm -- I just want to bring that question up. C.J., go ahead.

DR. SCHLICK: I think, for current best practices recommendations for both Stock Synthesis and MRIP are going to be moving forward with the new method, and moving forward with MRIP. However, just having the capability of running the model, and comparing it, so that, when we see a different change, we know exactly where it's coming from. Within Stock Synthesis, you still have the capability of running the old F method, but it just takes switching one number and rerunning it, and so listing out that sensitivity analysis wouldn't add a tremendous amount of work, if you do it ahead of time.

DR. REICHERT: I agree. It's not the amount of work to do that sensitivity run. It is where it's -- It's your approach, in terms of how much are you -- How much are you changing and still remain in that top row, and that's what I'm asking the committee. If we're comfortable with that, knowing that there's some changes, perhaps significant changes, going on in the model configuration and some data inputs, then I'm comfortable with that. I just want to bring that to the committee. Luiz, you had your hand up.

DR. BARBIERI: Yes. Thank you, Mr. Chairman, and to -- Just to add, I agree with C.J., the point that C.J. made, right, because this is a question that might come up eventually during the review, even by us here, how this outcome of this assessment compares to the last, right, and so that's something that we might have that question, and it's good to have those results in there.

However, if I understand correctly what Chip and Judd -- The point that they were making, is that the changes in FES are going to change the magnitude of recreation and commercial landings, right, and so the actual allocation between fleets is going to change as well, right?

I mean, because the two are complementary, right, and so it is difficult to see, right, how this mixing zone scenario is going to turn out until we have that better understanding of what comes out of that assessment. I can see it running as a sensitivity, and not a necessarily considered a plausible scenario, right, but, like C.J. said, as a sensitivity, just so we can see what if we use that assumption from the previous one.

DR. REICHERT: No, and I completely agree, and I think, in terms of the sensitivity runs, I think those may be two that we want to specifically mention in our terms of reference, and we should do that. I still go back to my other question, and, unless anyone disagrees, I would feel comfortable to keep it in, you know, and here we talk about terminology, but to leave it in that first category, which, you know, it's all assessments, but as an update. C.J., go ahead.

DR. SCHLICK: I think part of my comfort in leaving it in an update here are these are changes that were made outside of this group, and they're being made across the board, and so MRIP is nationwide, and SS3 changes to how they run the model is done by the developer, and not by us, and so these are changes that are happening in every stock assessment that uses this configuration, and so I think saying, okay, we don't have a choice in this, and we can still keep it as an update, with just the sensitivity runs, is kind of where my mind stays with it. If it's a choice we make, then maybe the line is a little blurrier on whether or not it stays in an update or goes to.

DR. REICHERT: Thank you for that, but, in addition, I think it's not necessarily where those decisions are made. It's also what is the impact on the overall assessment. If there are considerable changes, and we've had that in the past, then, again, are you still talking about an update, or maybe this requires some more feedback, but I'm with you, in terms of where we put this, or where we leave it. Okay.

The two -- What I've heard is the two recommendations for the sensitivity runs are the comparison with the old and new model configuration and the what I call old and new MRIP-FES numbers. Correct? Okay, and then we'll wait with Jeff's recommendation until we have a little bit more information. Okay, and, of course, these same questions will come back to the other TORs also, and so we can basically copy-and-paste some of that. Fred.

DR. SCHARF: So, Judd, I'm just looking at 5a up there, and can you clarify -- You say explore the use of recent average recruitment instead of model-derived recruitment, and do you mean in the projections, or -- Because even recent average recruitment is derived from the model, right, and so do you mean like in the projections, and like, instead of using historical recruitment, we're using recent average recruitment, or I'm not -- I'm just trying to follow what was meant by that statement exactly.

DR. REICHERT: Luiz, go ahead, to that point.

DR. BARBIERI: I'll wait for Judd to respond.

DR. CURTIS: Not necessarily strictly for the projections, and it would be for the historical average in the biomass estimates as well, but, yes, and I see your point, and so I can wordsmith that, so it's not --

DR. REICHERT: Well, but -- Sorry, Luiz, and I'll get to you. Didn't we discuss, in some stock assessments, because of the uncertainty in the recruitment, to use an average recruitment? Isn't that where 5a, or am I completely confusing stuff? Isn't that where 5a is coming from, and not necessarily the projections? Remember, we had that -- I forgot which recent stock assessment we were discussing this for.

DR. CURTIS: I think really what this is trying to get at is using just an average recruitment time series, instead of, you know, a Beverton-Holt stock-recruit curve relationship, to get model-derived recruitment, and then, commensurate, you know, just establishing what an appropriate MSY proxy could potentially be, and what that time series of average recruitment might look like.

DR. REICHERT: Luiz, go ahead.

DR. BARBIERI: Well, and this is something else that the Science Center has been considering, right, in terms of how they conduct their assessments, especially in terms of projections, right, which has to do on, you know, current levels of stock abundance. If stock abundance is really low, right, and recruitment is estimated to be low, if you use those low recruitments in actually estimating your reference points, you're going to set a very low bar.

Now, if the stock has a rebuilding plan, and you're talking about a thirty or forty-year rebuilding period, are you almost forced to use the stock-recruit relationship, right, to see, you know, how

high would you actually rebuild that stock into the future, right, and so this has to do with the changes, how they are trying to address the potential regime shifts that some stocks may be undergoing, and so you may need to have short-term projections that are based on the current -- You know, for, the next couple or three years, are based on the current productivity of the stock for the short-term, because the stock cannot produce anymore, but you set your rebuilding target for the long-term, right, based on what the potential productivity of the stock should be over the long term. Katie would explain this a lot better than I'm explaining.

DR. REICHERT: Well, no, and thank you for that. Judd, go ahead.

DR. CURTIS: We've talked a little bit about this too, in these differing recruitment stanzas, and what's most appropriate for the most recent environmental conditions, right, and is it a recent ten-year time series, or is it twenty years, or is it five years, and, whether you declare it as a regime shift or not, if there is a change in the shift, and that's going to shift those benchmarks, potentially, depending on what recruitment stanza you're looking at.

DR. REICHERT: But that's -- I'm still confused whether or not this refers to the projections, which I think, in part, Luiz, you are referring to, or this is the model, because that goes to, I think, what Judd just mentioned, in terms of, if you have a regime shift, that stock-recruit curve may no longer -- You have a different stock-recruit curve, and I think this 5a may address that part, rather than the projections.

DR. CURTIS: Yes, and, I mean, it's all related as well too, right? The setting of that benchmark is going to affect both what the status looks like historically, and then what it's also going to look like in the future, depending on where you set that threshold of your benchmarks, and so I think it's applicable to both historical stock biomass estimates, and what those thresholds and benchmarks are, and what the projections are, and where those projections may lie with respect to those benchmarks.

DR. REICHERT: Luiz, and then Steve.

DR. BARBIERI: So if you -- I mean, if you have, and we don't know what the outcome here is going to be, in terms of stock status determination, but, if you actually have to develop a rebuilding plan, right, that's usually multi-decadal, and you have to identify what your rebuilding target is, right, to then identify your rebuilding timeline for that trajectory, right? That's when it's going to make a difference on whether you're based on what the most recent -- If the stock is in a bad shape, and not producing a whole lot of recruits, that's going to make a difference.

Now, here, in terms of MSY proxies, right, if you actually did not accept the stock-recruitment relationship as being estimable, well, then, obviously, it's not estimable, and you cannot use that to develop recruitment estimates to go into the future, right, because it wasn't estimable.

Now, if you don't have data-based, survey-based, or whatever data collection method you use to come up with a recruitment, a time series of recruitment, well, then you have to derive them from the model anyway, but you don't have to use that stock-recruitment relationship value to actually develop your rebuilding targets and the timelines for rebuilding.

DR. REICHERT: Thanks, Luiz. Steve.

DR. TURNER: I think maybe some of the difficulty we're having is just verbiage. I suggest we think about adding, at the beginning of a, “to estimate stock status and management benchmarks”, “explore”. You know, I think that's what we're talking about here, and we're confused that that information is also used in the projections, but, here, we're talking about the benchmarks and the status indicators.

DR. CURTIS: So are you suggesting bringing this estimates of stock status and management benchmarks text from the main body of 5 down into a, or copying?

DR. REICHERT: Chip came to the table. Chip.

DR. COLLIER: So this is getting at the idea that was used in SEDAR 73, which was average recruitment, and so, no matter how big the population was, the same level of recruitment was coming out of it. It's not always the best assumption, but that's what was used for the SEDAR 73 update, and so, if there's no stock-recruit relationship, what do you want to use, and so that's what we're trying to get at for this.

DR. REICHERT: That's what I mentioned earlier. This is talking about the model. This is not talking about the projections. It has implications for the projections, obviously, but thanks for that clarification.

DR. BARBIERI: To that point?

DR. REICHERT: Luiz, go ahead.

DR. BARBIERI: I mean, in that case, what they do is, really, you're going to have to make some assumptions around -- You know, add some rec devs, and some CV, or some level of uncertainty that you insert into the average, right, just to allow it to vary somewhat, but that will be explicit in the way they configure the model, and you document in the report, so people know that you’re using an average and an assumed level of uncertainty, and just to not say that it's deterministic and invariable, like you said.

DR. REICHERT: Yes, and thanks. Chip.

DR. COLLIER: I would leave it to guidance of you all with experience with SS, much more than we have in the South Atlantic here, because BAM has some aspects that are a lot more flexible in it, and I don't know if SS will allow you to do this type of procedure, and so, if it's a no-go, then change this, and make it what is appropriate.

DR. REICHERT: Luiz, go ahead.

DR. BARBIERI: Well, I can tell you, for the Gulf, this has been done several times, for different stocks, right, that were in that situation, where you can see very poor recruitment over time, very low stock abundance, low landings. Greater amberjack over there is one example, and this whole discussion of regime shifts, you know, came up because of that, but, because we needed to develop a rebuilding trajectory for that stock, and have a rebuilding target, you know, we had to make decisions about what we would do for short-term catch advice for the next few years, when the

stock is actually in low levels of abundance, versus our rebuilding target over the long-term, and so that was used then.

DR. REICHERT: Thank you, and so the language is currently here, and we can take another look, if that's what the committee currently agrees on, and, again, especially those contributing to the discussion, please provide some notes, and, if not as a change to the terms of reference, but maybe kind of highlight the discussion, so we can justify why we were making the -- Or document why we were suggesting the changes to the terms of reference. Okay, and, again, a lot of this is similar in the upcoming terms of reference. Steve, go ahead.

DR. TURNER: On 7, I think we might be being a little prescriptive by saying they have to include outside technical experts, and so "and other experts, as needed".

DR. REICHERT: Thanks, Steve.

DR. GARTLAND: Just briefly, on 4a, in the spirit of saving assessment time, you can take NEAMAP out of there, I think. We've only ever caught six, and so it will just save the assessment person from reaching out.

DR. REICHERT: Just cross NEAMAP out. Okay. C.J.

DR. SCHLICK: Under 6, for this discussion on recruitment into projections, I think you can add language in that you want to see projections under low-recruitment scenarios and average-recruitment scenarios, to give you kind of that balance between both, but that, in Stock Synthesis, you set your recruitment scenario, run it, and then you can set another one, and run it again, and so you can do it in Stock Synthesis. You just do it stepwise, and so I think, if we put that stepwise language in there, it will help.

DR. REICHERT: Thank you.

DR. CURTIS: Sorry. In which number were you?

DR. SCHLICK: In Number 6. It says to provide additional population projections, and I would put "under low-recruitment and average-recruitment scenarios".

DR. REICHERT: Genny. Go ahead.

DR. NESSLAGE: So, just for context, we had a whole working group that had some recommendations on that, and, for projections, we typically now don't recommend doing that, simply not -- Because we can't see that the line stays that low, and it's not going to recover. The idea is that there is some hope of recovery, and that, if we're going to have a rebuilding plan, we actually think it might be able to rebuild, and so I think we've moved away from that, but correct me if I'm wrong, folks.

DR. REICHERT: No, and I was thinking back at that conversation we had, and I think that was the recommendation from that working group.

DR. CURTIS: In some of the previous assessments, with those low recent recruitments, we've seen scenarios with all of the above, right? We've seen low, recent low, and recent average recruitment scenarios for both an OFL or an ABC, under various rebuilding projections. Yes, we do have the catch level workgroup report as the guiding document for how the SSC preferred to treat the projections going forward, and we do have that referenced in these terms of reference as a guideline to follow too, and so we could stay there, if you don't feel comfortable including that in there.

DR. REICHERT: Genny, to that point?

DR. NESSLAGE: It just avoids the hours and hours of circular arguments we've had in the past, and so, if they're not there, it's harder to argue.

DR. REICHERT: So what's the pleasure of the group? Leave that in there, or -- This is where we refer to that report.

DR. CURTIS: Maybe this 3c would be more appropriate than down in Term of Reference 8?

DR. REICHERT: Yes, and I thought about that too, because that report is talking about -- Mostly about projections. There is also other recommendations definitely in there, but I think it's more -- It's most relevant for projections, correct? Genny.

DR. NESSLAGE: Yes. Definitely, and then that would give the analysts, who aren't intimately familiar with our hours and hours of circular discussions, some context for why we made that recommendation, because normally you would do exactly what C.J. had recommended, and so yes.

DR. REICHERT: I would also argue, if the analyst include that maybe other scenarios would be good to investigate, and that can always be done. Are you comfortable with that, C.J.? Thank you. You were the one who suggested that additional language, and so I just want to make sure. Okay. Anyone else? Anyone online with hands up? Okay. Does that give you enough for king mackerel, Judd?

DR. CURTIS: Yes. Thank you, and I'm fighting with the formatting demons.

DR. REICHERT: Don't you love the --

DR. CURTIS: They think they're so smart. Okay. I think that covers everything we need for king mackerel. I'll clean this up, and recirculate it, so you can have a quick review, and then we can bring this back up, if necessary, for final comments towards the end of the meeting. Let’s see. It's 4:30 now, Chair, and I think we can cover Spanish as well before --

DR. REICHERT: Yes, and I think a lot of the discussions are similar, and so, in terms of the language, we can probably steal some of that from king mackerel. Now, this is -- While Judd is pulling that document up, this assessment is done by the Beaufort assessment team?

DR. CURTIS: Yes. Correct, and so the next SEDAR for Atlantic Spanish mackerel will be done by the Beaufort assessment team in the BAM model configuration, and so, if you had a chance to

look through the scope of work document that was put together as supplementary information, there was some discussion on increasing the scope of this assessment to include more northern data streams in the Mid-Atlantic regions. We've heard this echoed from numerous AP members, that inclusion of that data up north would be a critical component to the next Spanish mackerel stock assessment, and so some of the changes made here in these terms of reference reflect that addition.

General language for the first couple terms of reference, the last assessment was SEDAR 78 for Atlantic Spanish mackerel. Some of the new and updated information on life history, natural mortality, et cetera, one of the concerns coming out of the SSC's review of the last assessment, and maybe even the panel's review as well too, was some of these wave-specific estimates in the MRIP numbers that were extremely high, or extremely low, throughout the time series, and we've also seen some of those in various -- In the more recent MRIP years as well too, and so I know that the Office of Science and Technology is working on these methodologies on reducing these PSEs below 50 percent, and so just making sure that those new methodologies are getting incorporated into updated information on these rec data catch streams.

Again, natural mortality was identified as a high level of uncertainty in the last SEDAR 78 assessment. I think it had just been updated, and it was still using, you know, Hoenig 1983, which has been identified now as probably not representing BSIA anymore, and so further investigating different natural mortality estimators, just Hamel and Cope, et cetera, and any other research.

Again, we can move -- I'll move this down below to talk about more of the projections. Some of the new specific changes are input data and deviations from the previous assessment model, and so looking at sensitivity analyses, comparing this between new values in this assessment and values from SEDAR 78. Here, we see the incorporation of fishery-dependent and independent data streams north of Cape Hatteras, and investigating use of fishery-independent data and develop an index for this region.

4c is evaluating different methods to estimate commercial discards, considering the observer program and commercial discard logbook information, along with coverage of the programs, and then 4d is using data from the Northeast Fishery Science Center observer program to expand the bycatch observations in the gillnet fishery, and I'll pause there, and these are some of the new requested input data and deviations, if there's any comment on the existing list you see here, or if there's any additions that the SSC would like to recommend.

DR. REICHERT: Judd, and that may be in the scope of work, and we had a Spanish mackerel working group that had very specific recommendations. If they're in the scope of work, then we don't need to add them here, but we have a recommendation to address the recommendations of the possible catch level projection workgroup, and I thought I saw it somewhere, but it would be good to add, to perhaps address the recommendations of that working group also, unless the committee feels that that's too prescriptive.

DR. CURTIS: I can bring them up, but they basically boil down to looking at natural mortality.

DR. REICHERT: So they’re in there.

DR. CURTIS: The MRIP estimates, and the stock-recruit relationship, and using a proxy, and so all those are considerations coming out of that workgroup, or the language is in here, in some form or fashion, in different sections.

DR. REICHERT: Okay. Then we don't need it. Thanks.

DR. CURTIS: Fred Serchuk has his hand up.

DR. REICHERT: Fred, go ahead.

DR. SERCHUK: Thank you, Chair. I have a very small point, because I see you referenced the Northeast Fishery Science Center. The very small point is a grammar point. The actual name is Northeast "Fisheries", and not "Fishery", and I think the same thing is true for the Southeast Fisheries Science Center. Sorry about that, but I just want to make sure that we give the proper names to the organization. Thank you.

DR. REICHERT: Thanks, Fred. We'll make the changes.

DR. CURTIS: Okay. Thank you, Fred. Any other comments, or additions, for novel data, or deviations from the previous assessment model?

DR. REICHERT: We don't need to do that now, but we can later take a look at the language in king mackerel, and add the appropriate ones in here, and then we can go over that on Thursday, just to streamline the discussion a little bit.

DR. CURTIS: Term of Reference Number 5 has to do with the right model parameter estimates, and their variances, and so we'll take the recommended changes from the king mackerel terms of reference and apply them here, because this is all the same language. Moving along to --

DR. REICHERT: Genny.

DR. NESSLAGE: There it is again, the recent average recruitment. We spent -- Our working group spent months on this.

DR. REICHERT: Can you -- Sorry, and can you clarify what point --

DR. NESSLAGE: 5a is for the use of recent average recruitment. I assume they're talking -- They're talking about MSY proxies, and so I assume they're talking about stock status and management benchmarks from above, and so, again, this needs to -- Replace this and --

DR. REICHERT: Yes, and so what we were saying is we're looking at the language that we use for king mackerel. No?

DR. NESSLAGE: I'm sorry. Are you saying you're just going to use the language for king mackerel there?

DR. REICHERT: Yes. If there's the same issue, then we can use the language from king mackerel, and there's some other areas too where we discussed, and we basically can have the exact same

discussion here, so we can cut-and-paste the language from king mackerel to these terms of reference, if they're appropriate. Do you know what I'm saying?

DR. NESSLAGE: I understand, and I just -- He was going past it, and so I just want to make sure it was -- So you're going to go through and do that later, is what you're saying?

DR. REICHERT: Yes.

DR. NESSLAGE: Okay. I'm sorry.

DR. REICHERT: Judd and I are going to do that later, and then, on Thursday, we can, as a committee, take a look at the changes, when we review the report, because this is kind of part of our report. That's okay, Judd?

DR. CURTIS: Yes, and that sounds good. Okay. Moving to 7, so this is getting at some of the assessment components that we are specifying would be needed in order to include the data requested above. In order to incorporate members from the Northeast Fisheries Science Center and the Mid-Atlantic state representatives, industry, et cetera, to discuss the inclusion of data streams north of Cape Hatteras, it was suggested to convene a virtual data workshop that we can include all those members there, as well as your typical Southeast data providers in this virtual data workshop.

DR. REICHERT: I've got a quick question there, and so this is a virtual data workshop. Currently, in the data workshops, there's SSC appointed panel members present. Is that same here? Think about that, because we may need -- When we talk about our working groups, we may need volunteers to participate in that working group.

DR. CURTIS: Yes. Exactly right, and so, if you look at your rosters of the SEDAR panel appointments, there's three slots for the data workshop participants from the SSC. Then 8 and 9, I'll edit this language to reflect what we decided in the king mackerel terms of reference, and, Mr. Chair, if there's anything else.

DR. REICHERT: I'm looking around, and any additional discussion points, things we have not discussed previously, that we should add to these terms of reference or to our report? Looking around the room, and seeing none, we have another twenty minutes. Do you want to go through another terms of reference maybe, or no? Fred, go ahead.

DR. SCHARF: So just a quick idea. Are we thinking, again, this is in that top tier of the new SEDAR process, and so a pseudo update, or is this one going to be a full SEDAR, going through the full SEDAR process?

DR. CURTIS: This would be going through more of the full SEDAR process, more akin to what you knew as a benchmark, or a research track assessment, where we have a data workshop phase. It will be a virtual data workshop, to incorporate members from further geographic scope than just in the Southeast, but this would have a data workshop, and then it would also have presumably a review workshop as well on the backend, and not a CIE review workshop, but --

DR. REICHERT: Julie.

DR. CURTIS: Sorry, and just -- Not a full review workshop with CIE reviewers, but the SSC would be the review body.

DR. SCHARF: Is this where -- Should we make any mention of a check-in, an SSC check-in, or did we decide that it wasn't ideal to put that in the TORs anywhere, in terms of like whether that -- You know, because, ideally you're going to have a -- It's going through a SEDAR process, and there's going to be a technical team, and then there would be some SSC check-in for model development, and so should we have a specific statement somewhere in here that that would occur, or is it just going to happen?

DR. REICHERT: Chip, to that point.

DR. COLLIER: Never assume it's just going to happen, and so, if you want it, ask for it.

DR. REICHERT: Yes, and that's -- I fully agree. My question was whether that was going to be a recommendation in our report, or part of the TORs, and what I understand is it would be good to add that to the TORs. I'm not sure under what point that would be most appropriate. Maybe under 7 or under 8.

DR. CURTIS: It could be its own as well. We could have an additional term of reference specifying the type of, you know, check-in with the SSC, or frequency, or however the SSC would like to specify.

DR. REICHERT: Julie.

DR. NEER: I was going to say you could do it under a bullet under 8, and so the big thing is you're having the technical team. It can be its own, or it could be a bullet under 8 that says, you know -- We're calling it pre-decisional briefing by the SSC. That's the official terminology. Pre-decisional briefing was in one of the Science Center slides. A pre-decisional briefing to the SSC before the finalization of the assessment should be scheduled, or something like that.

Again, this will be like you guys are making these recommendations, and the council will make recommendations, and then they're going to have to negotiate with the Science Center about that, and, if the Science Center says, we're striking 8a --

DR. REICHERT: Is that the language, a pre-decisional briefing?

DR. NEER: A pre-decisional briefing should be scheduled to review model development. Yes, and that works.

DR. REICHERT: Okay.

DR. NEER: But, I mean, it can either be its own, or put it under 8, because it's related to the technical team kind of approach.

DR. REICHERT: I would make it its own, just because I know that messes up your numbering.

DR. CURTIS: Well, you're going to fix the format.

DR. REICHERT: Okay. Fred, go ahead.

DR. SCHARF: Just as part of the SEDAR process, I think we just need to make sure we have some clarity that, if the SSC asks for this, that we're granted this, as opposed to the center saying, well, they asked for it, but we don't think they need it.

DR. NEER: Well, that's all part of the negotiation with the Science Center that happens between the co-operators and the Science Center. Ideally, once we get this process underway, these terms of reference would have already been run through and discussed with the Science Center before they even came to you, but we're a little running on the treadmill and catching up on a couple of these things, unfortunately, but usually we try and run the terms of reference through the agency before it comes to you and the council, to make sure at least we're generally on the page, the same page, and then usually the agency folks also are in the rooms who can make comments. I'm doing my best to channel Katie, or in this case Erik, I guess, because this is a Beaufort one.

DR. REICHERT: Steve, I saw your hand up.

DR. TURNER: Yes, and so, if we're including a Bullet 9 on the check-in, we need to put that back up in king mackerel as well, because there is a check-in in the process prior to the SSC review in that first group that's essentially an update. There is a check-in there, and so we need it, or you can change your flow chart.

DR. REICHERT: Jim.

DR. GARTLAND: Just to go back to this morning, I would agree with that, because I think what we talked about was putting the check-ins in the, and let's call management tracks, whatever they are, for now, and then reassessing, after some period of time, whether or not they're necessary. I think we decided -- I think, this morning, we decided that, out of the gate, we would like them for everything, and then we can scale back after a couple of years on that top row of ones, just until the process gets its feet under it, basically.

DR. REICHERT: Thanks. Anything else? C.J.

DR. SCHLICK: Mine is more of a kind of bigger picture question on the assessment technical team being involved in all of these, and it being a standing team. Is that looking like a major workload, given two right here, and two more still to be reviewed, all within a twelve to eighteen-month period, and so is five people on one technical team reviewing all of them?

DR. REICHERT: I agree, and I had the exact same question. I made a note on that, and I was going to wait until after the terms of reference, because, if I understand Julie correctly, we would have the option to recommend a species-specific technical team, but it looks like, right now, we have two standing assessment technical teams, but, yes, I had that same question, and that goes back to a concern that I've voiced before, and that's the SSC workload.

I was talking with Julie a little earlier. I still have a hard time exactly kind of wrapping my head around what the ultimate workload will be. From what I've looked at, it doesn't think, under the

new system, it increases the SSC workload dramatically, but how it's divvied up amongst SSC members may be different, especially if that assessment technical team, if there's a standing team, and it's the same people all the time, then that will considerably increase that workload, and so maybe Julie can address that.

DR. NEER: If you look at the workload, let's say for 2026, it's going to be gag grouper, and so there be one technical team, one assessment that this group would be tasked with the technical team. For 2027, it could potentially be three, or four, but you likely won't get all four probably in 2027. That's pretty pie in the sky. Currently, there's four things, but it could be up to four, if you had a technical team involvement in all of this.

DR. REICHERT: But I still think that question is relevant, unless that technical team is so large that there is a subgroup that, you know, is involved in a particular stock assessment. C.J., I your hand up.

DR. SCHLICK: Well, and I was wondering about this, because like king mackerel isn't on this, because it's an update, and it doesn't go through the SEDAR process.

DR. NEER: It's just under the Gulf right there.

DR. SCHLICK: Okay. I was just misunderstanding it. Sorry.

DR. REICHERT: Again, that means, for 2027, it's one, two, three, four, five.

DR. NEER: There would be no technical team for vermilion. That is an extra SEDAR process, and so there would be no technical team for that one, for sure.

DR. REICHERT: But you understand the --

DR. NEER: No, and I understand. There's potentially four, if all four of those assessments run. They don't all run at the same time. Right now, they look like they're all in the same time, because, if you look at 2027, we only have two blocks of six months each for 2027, whereas, for the current assessments, we have four blocks broken out into quarters, and so they would not all be running at the same time.

They would be staggered, and likely one of those, if not two of those, are probably going to be bumped to 2028, but, yes, there could be as many as perhaps three assessments going in various different stages, but I would doubt that the technical team -- The technical team could basically be on call the whole year.

My question -- My suggestion would be, if the SSC is concerned about the technical team of five people being too small to handle all the assessments, then you make a recommendation to the council that you need a bigger team, or a subset of team, or a specific for each assessment. How the technical teams are populated, how large they are, how they function, is the purview of the cooperator, and so discuss amongst yourselves, and make the recommendation.

As I said, my understanding currently is that South Atlantic was hoping to do a standing team, to help with consistency over time, but that might also be more than anyone -- Maybe no one will raise their hand when Judd asked for volunteer, and we'll have to revisit that.

DR. REICHERT: Luiz.

DR. BARBIERI: No, I wasn't volunteering, Chip.

DR. REICHERT: Too late. Your name is already on the -- Go ahead, Luiz.

DR. BARBIERI: Thank you, Mr. Chairman. I thought that, if we were skipping a few agenda items, that we might have some extra time, on Thursday morning perhaps, you know, towards the end of the meeting, and we might want to come back and revisit this, right, and develop a more -- A better structure, a more organized sort of paragraph, that we can discuss amongst ourselves, and, you know, present to the council, or add to our report for the council's review, with our input. I mean, it's not prescriptive, and it's not anything of that sort, but at least they get our input on how we feel about this, related to all the points that you brought up.

DR. REICHERT: Just to make clear, and, with this, you mean the technical team and workload related issues?

DR. BARBIERI: Right. Exactly. The technical working group for these assessments and how we're going to be parsing that amongst ourselves. Are we going to have a standing one, or a species specific associated with a specific SEDAR number, et cetera, et cetera.

DR. REICHERT: I completely agree, and, as a matter of a fact, I made that note, because we are coming back to discuss the working groups, and I think that would be a good point for us to include that in our discussion, and so, if I forget, please remind me to come back to that, because I think that's an important point, because we don't want to overload members. Anyway, and efficiency is important, also for us. Anyway, anyone else relative to -- Judd, go ahead.

DR. CURTIS: Yes, and I think that would be a great use of the time, right? If, for one reason or another, the committee was not able to get these updates on the SEDAR process changes, right, and, ideally, these types of conversations would have been had, and then the feedback would have gotten passed on to the council, and they just haven't yet, and so, with a little bit of extra time, I think that would be well worthwhile, and then that information will get passed on to the council for the December meeting, before this assessment technical team is formalized, and how what that structure and composition might look like.

DR. REICHERT: Thanks. Yes, and then Judd, Wally, and I will take a look at the agenda, and then, tomorrow morning, we'll update the plan to the committee. All right. Anyone else? Anyone online? We haven't done public comment. I just want to make sure that we are not forgetting that. Anyone in the room? Anyone online that has a hand up for public comment? Seeing none, there is no public comment.

It is five minutes to five, and I recommend we recess until 8:30 tomorrow morning. Please provide whatever notes you have, in particular relative to recommendations that you brought up, and

provide them to Judd, and copy me. Judd and I will talk a little bit more about the report. We'll come back to that on Thursday.

I briefly want to mention the work session. Obviously, it's five o'clock, and so we're not going to do that today, but, if we have some time tomorrow, what I would like to do is go into a work session, so we can collectively work on the report. I will ask you to stay in the room, in case we have to reconvene during the work session.

Obviously, we cannot make any decisions, or any further discussions, and it's purely for all of us to work on the report, and that helps us to complete the report on Thursday morning, so we can send it out to you all for final review, but then, if we have to, if an issue comes up during, because you can confer or compare notes amongst yourselves, and, if an issue comes up, we can come back on the record and discuss that, if needed, and so that's why I'm asking you to stay in the room for that work session, and I'm asking the members online also to please stay online, while you are working on your notes, and provide them to Judd, and so just as a heads-up.

We haven't done this in a while. Luiz may remember that, in the past, we've done that. We, as the current SSC, haven't done that, and so we're just going to see if that works, how it works, provided we have time to do so, and so I just wanted to give you a brief update on that. With that, let's recess until tomorrow at 8:30. Thank you so much.

(Whereupon, the meeting recessed on October 21, 2025.)

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OCTOBER 22, 2025

WEDNESDAY MORNING SESSION

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The Scientific and Statistical Committee of the South Atlantic Fishery Management Council reconvened at the Town & Country Inn in Charleston, South Carolina on October 22, 2025, and was called to order by Dr. Marcel Reichert.

DR. REICHERT: Good morning, everyone. Welcome back to the South Atlantic Fishery Management Council's SSC meeting. Thanks for those who provided notes to Judd yesterday. We really appreciate that. Before we start, let me take you through the plan of the day. Again, I apologize for moving the agenda items around. I think we solved the audio issues with the MRIP-FES presentation, and, since that's set up, we'll start with that today. We'll then complete the terms of reference that we started yesterday.

We follow that by Agenda Item 10, the MSY proxy working group, and then Agenda Item 13, the snapper grouper MSE. That's because we likely will have some time today to complete that, and the speakers are set up for this afternoon. After lunch, we'll have Agenda Item 12, the wreckfish MSE, first, and that's because of the availability of the speaker.

That's followed by Agenda Item 11, the black sea bass genetics presentation. That's kind of the plan for today, and, if necessary, we'll make adjustments, but I think we have time to complete that, as I just mentioned and so we'll do the MRIP-FES, and I'll ask Judd to introduce that real quick. Thanks, Judd. The attachment is 8, and assignments are Luiz, Chris, Jared, and Alexei. Thanks.

DR. CURTIS: Fred Serchuk, I see your hand is up. Did you want to respond before we get started?

DR. REICHERT: Fred, if you're talking, we cannot hear you.

MRIP-FES REVISED SURVEY RESULTS AND CALIBRATION METHODS

DR. CURTIS: You're self-muted on your end, Fred. Okay. We'll get back to you. All right, and so good morning. This morning, I think we've got the audio technical issues sorted out for the recorded presentation, as Marcel mentioned. This presentation was given by Dr. Katherine Papacostas, from the NOAA Office of Science and Technology, to the Mid-Atlantic SSC in September, and so, with the government shutdown, we were fortunate enough to be able to pull this presentation, in lieu of a live presentation, from OST for the South Atlantic meeting this week.

Obviously, this person is not in the audience, or present to present, and so, if there's any questions, or comments, we'll document those, and then, if there's questions specific to OST, directed to OST, we can pass those along, once they're back in their office.

DR. PAPACOSTAS: Thank you all for having me today. My name is Katherine Papacostas. I work in the NOAA Fisheries Office of Science and Technology, Fisheries Statistics Division. I'm one of two leads within branches in our division that works on recreational statistics, and specifically working on the Marine Recreational Information Program.

My colleague, John Foster, came, I think, at this exact meeting last year to speak to you about some of this, and updates that we had at that time, and he was at another meeting this week, and so you're stuck with me, but I'll do my best, and, any kind of things I can't answer, I'll certainly make sure I can get back to you with responses, but so there's going to be three kind of main things that I'm going to cover with you all today.

The bulk of the presentation will be an update on our Fishing Effort Survey, which has been -- There's been a follow-up study that we conducted throughout all of 2024. We have final results, and I'm going to share some preliminary results with you today, just very overview snapshot results. I will note that they're preliminary, because we have a peer review, and that's a desk CIE review, that's underway, but I wanted to kind of just give some high-level highlights for your awareness.

The bulk of the time will be spent on FES. Then I'm going to switch gears and talk a little bit about our kind of broader national recreational data collection partnership re-envisioning initiative, that's also been kind of underway for about a year, or a year-and-a-half, the status of that, and what our next steps are, particularly with our current and new operating environment, and then just some other miscellaneous program updates that we thought could be of interest to this group.

Starting with the Fishing Effort Survey, I believe everyone is aware that we conducted a large-scale study in 2024 to test a revised survey design that was aimed at improving the accuracy and timeliness of the Fishing Effort Survey estimates, and those estimates are used to produce both shore and private boat effort estimates, and then those are combined with our catch rate data to produce total catch estimates, and so that's kind of how they're used.

We had released a study report, a smaller-scale study report, in 2023 that identified question order as a potential source of reporting error in the current FES design, and so we conducted this large-scale study to kind of verify those results, and compare those results, and kind of. do it at a larger scale, and so that was done throughout the year.

The impetus was that previous pilot study, which was part of our continuous improvement process -- I mean, since MRIP started in 2008, there's been this commitment to, you know, continuing to reevaluate how we're doing things, and identify better ways to do things, and so research into potential sources of error is kind of ongoing, but there was also, as I'm -- As you all know, there were concerns from the fishing community, and some partners, that our shore and private boat estimates might be too high, and so we wanted to take that seriously in this study.

The initial study was kind of part of that, and so there was a, you know, multifaceted rationale behind doing this large-scale study, and so what specifically was tested in 2024? We had an experimental design that overlapped with FES from January to December. It was conducted from Maine to Mississippi, and also in Hawaii, meant to overlap with the current FES, and that's where the current FES is conducted, and there were several key differences between the experimental design and the current FES design.

One was increasing the frequency of the administration of the survey, and so the experimental survey was conducted monthly, instead of every two months, which is how the current FES is conducted. We also revised the question order, and so the current FES has a twelve-month -- A question that asks about twelve months of fishing activity and a question that asks about the two-month fishing activity, but the two-month question is first, and the twelve-month question is second in the current FES, and so we're looking at changing that question order, and I do -- My next slide does show side-by-side comparisons of the questionnaires, just to kind of give you a better idea of the differences in the questionnaire.

In the experimental questionnaire, there was also a split reference period, because we wanted to collect data for monthly -- On a monthly basis, we had to split the two-month question into two questions, and so that's a difference in the experimental design, and then the survey is administered monthly, with two months of questions in each administration, and so we do have two independent estimates for each reference month, and so we've used all of that available data to try to produce composite estimates. The intent of that was to just use all available data that's coming in and try to improve precision and stability of the estimates for the experimental design.

These are the -- It's actually kind of small. Sorry about that, and so these are the questionnaire comparisons, and so, you know, we ask, in the current FES, how many days did this person go fishing from shore, and then from private boat, and then the first question is, you know, the number of days fishing in the two-month reference period, and then the twelve-month question. In the revised design, and the experimental questionnaire, we ask about the twelve-month question first, and then break down the two months into subsequent questions.

This administration, you know, the two monthly questions are number of days fishing in January and number of days fishing in February, and then, the next month, that will say number of days fishing in February and number of days fishing in March, so we have -- Just to give an example of the being able to do the composite estimation, we have two independent samples for February, and so that's just to clarify, you know, what we mean by the split reference period.

These are just really high-level snapshot results across the entire study in all estimation domains, Maine, Mississippi, and Hawaii. It shows the distribution of effort ratios, and so for the experimental design and compared to the current FES.

A ratio lower than one essentially means the experimental estimates are lower than the current FES design, and so the plot here just splits by private mode and shore, and you can see, on average, the estimates are generally lower. The effect is a bit more pronounced for private boat than for shore mode, and so the private boat estimates are coming down a bit more than the shore estimates.

That said, we did see a seasonal effect, and so differences were more pronounced between the experimental FES and the current FES during periods of lower fishing activity. You can kind of see this this curve here, where, in July and August, the estimates are pretty similar between the experimental design and the current FES, but then, in December, November and December, for instance, I mean you get as low as a drop of about 50 percent for private boat mode, based on the graph here, and so there is a range, and differences.

What we think is going on there is so the seasonal -- Originally, when we were doing the 2023, when we released the 2023 report, our hypothesis was that people were overreporting, for two reasons. One was telescoping, and so reporting trips that occurred outside of the reference period that we're asking about, and then, secondly, in cognitive interviewing that was done, you know, developing the FES, and subsequently in preparation for this study, you know, we -- Anglers want to be identified as anglers.

There's kind of this drive to report, maybe even if they haven't fished during the period you're asking about, and so that would make sense with this pattern. People are more likely to have gone fishing in July and August, for example, and so there's less of a reason for them to overreport, versus in November and December, if they haven't fished, but they're a fisherman otherwise, and they just haven't gone out when you're asking them -- When you're asking them to report, then maybe there's more of that, you know, those cognitive items going on. That's kind of our hypothesis that supports, that our original results from the 2023 pilot supports, and then we kind of see it in this larger scale full-year study, this seasonal pattern.

These also are just to give you just an overview snapshot. This isn't broken down by wave, but these are the state-level overall results, and you can see there is variability, but, by state -- The Mid-Atlantic states I've highlighted here. Generally, the results are relatively similar to the overall results, where, generally, the state-level results are on average lower than the current FES, and it's more pronounced in the private boat fishing mode.

That's just kind of show some high level results, and so, as far as some of our key findings and conclusions, the experimental estimates were, on average, lower than the current FES, although

differences were more pronounced in private boat mode, and also more pronounced in low-activity waves.

We do believe that the primary driver of differences was that revised question order. Putting that twelve-month question first creates this bounding effect that we believe is mitigating overreporting and allows respondents -- Allow respondents to identify as anglers without biasing the reference months that we're really interested in.

The study also, and it's not really shown in the results that I shared, but kind of looking at the composite estimation, versus what we do with the current FES, it does improve the precision a bit, and the stability of the survey estimates, and so any kind of atypical sample is smoothed in a way, due to the compositing, and so that was that was a value added.

We do feel that, given that this design is removing a source, a likely source, of measurement error, that it's kind of getting us to some more accurate effort estimates than we currently have, and so those are kind of overall key findings. Again, this is being currently peer reviewed, as we speak. It's a desk review that's ongoing, that kicked off last week, and so we should have those, the results, of that peer review soon.

As far as our plans for 2026, we plan to implement the revised design starting January 1st, you know, pending final outcomes of the peer review, but, as I mentioned, we do feel that the revised design, based on the results, is going to lead to more accurate reporting. There was relatively consistent results between the 2023 report, and also this 2024 study, showing lower estimates, on average, with some differences by state and fishing mode.

One other item was, in the lead-up to this study, we did some cognitive interviewing with anglers, using the revised questionnaire, just to kind of assess how they interpreted the questionnaire, if it made sense to them, and it was a small sample size, but the anglers that that we did interview did report finding the revised survey to be clearer, and more intuitive, and kind of feeling a little more confident answering those one-month questions, instead of the combined two-month questions, and so all of those are kind of -- There's a multifaceted -- You know, multiple reasons why we think this is going to be lead to better estimates, and so that's kind of the rationale behind our plans.

There are differences in the estimates from the experimental design, the revised design and the current FES, and so we are working on developing a calibration model, getting that peer reviewed, and then we'll need to implement that method to rescale the time series.

The model, there's going to be an open peer review workshop scheduled for later this month, and that is open to partners and the public. It will be a peer review workshop, and so relatively technical, but there is going to be a partner Q&A, and so SSC, council staff, state partners, commission partners, and any of those kind of groups can ask questions and clarifications. Then we're also going to have a public comment period, where, you know, anyone can kind of comment on the work, to provide their feedback.

I will note that -- So just a little bit about the calibration model. The model that we've been working on builds on what was used for the 2018 and changes -- So it's kind of building on the previously peer-reviewed model, with some improvements and incorporating, you know, the new data that we have.

Then I want to stress too that the calibration results -- I mean, I think it's probably clear to this particular audience, and, I mean, the calibration is a model, and so it's -- The results are going to be, you know, maybe a little bit more smoothing occurring in the estimates, versus the 2024 results that I just showed, and so just to kind of be aware of that, but, at the workshop, the calibration workshop, we are going to kind of show some calibrated results that are as representative as we can get of kind of broadly what's going on with the calibration.

One other thing, as far as our plans moving forward, we are -- We've talked, and the reason for wanting to implement FES monthly, instead of bimonthly, was ultimately to shift to monthly estimate production. Based on our current resourcing at the moment, on January 1, 2026, we are going to continue to maintain that bimonthly publication schedule.

We are in the process of analyzing what resource requirements we would need to support that shift to monthly estimate production, and so it's not that we're never going to shift to monthly estimates. It's just it's not going to happen as quickly as January 1, but shifting to this revised design does give us flexibility to produce monthly estimates in the future, as soon as we have resources and have coordinated appropriately with states to increase APAIS sampling, the intercept survey sampling, you know, to be able to produce, you know, reasonably precise estimates at a monthly -- On a monthly schedule, instead of bi-monthly schedule.

This just kind of lays out our timeline for the rest of the year. We've completed the study report for the 2024 experimental design for the revised FES. That is being peer reviewed, as I mentioned, and that peer review is underway. It will be -- We expect all three -- There's three reviewers, and we expect the last review to come in by mid-October, and no later than October 15, is what we're told, and then the calibration model review workshop is going to be held the 23rd and 24th.

It's going to be entirely virtual, again with partner and public comment components, and Dr. Paul Rago has really graciously accepted serving as chair, and so we're really thankful for that, and so he will be chairing that workshop, and the -- Oops. Let me go back.

We're also in the midst of developing a written transition plan, kind of walking through the steps and transitioning to the revised design. There are some components in there, and so we have this interagency team that consists of representatives from the Atlantic, Gulf, Hawaii, and so NOAA, the Regional Office, Science Center, state commissions, and council representation.

That group is currently working on a draft of the transition plan, and so that will include kind of an overview of what we've done, and where we're going, the kind of more detailed timelines. It's going to discuss a bit more some assessment and management impacts in that report, and so we plan to finalize that at the end of this month with that team, and then, as soon as it's cleared within our agency, we'll release it publicly, and then we -- As I mentioned, we'll be implementing the revised design January 1, pending, you know, peer review and completion of the reviews.

Then we still are on track to produce a calibrated time series in spring of 2026. There are some unknowns, as far as the timeline, and so, you know, with the calibration review, we don't know if there will be some recommendations for some additional analyses that might need to be done, but, as of now, we still are on track to release calibrated estimates in the spring. If, for some reason,

unforeseen reason, that changes, we would let everyone know as soon as we know, but that's our target that we're working hard to meet right now.

Shifting gears to the partnership re-envisioning, I think you all are also aware, but I'll refresh your memory, and it was -- It started about last year, and our previous NOAA Assistant Administrator, NOAA Fisheries Assistant administrator, kind of directed our office to initiate this process to re-envision the partnership, and the recognition -- It was in recognition that, you know, while the current system has its strengths, in terms of, you know, statistical rigor, the using consistent methods over time, and producing data for a whole suite of species, there are some limitations.

We thought that, you know, the best way to kind of address that, with resources that we have, is through increased transparency, and also improving collaboration, and seeing where we can collaborate better with our state and regional partners.

The progress to-date, and so, last year we did quite a bit of information gathering, and so we had some initial briefings with over 150 partners. We conducted internal interviews across NOAA data users across the agency. We had public and partner listening sessions nationwide, and so we've kind of compiled all of this information and have produced a framework report that synthesizes that input.

We drafted that report last spring, sent it out to all of the partners, the states, commissions, councils, requesting feedback. We also asked them to rank some of the priorities that are in the report, and so our final report has, you know, nationally ranked and regionally ranked kind of high-level priorities, and we got a lot of feedback on all of it, both during the listening sessions and kind of the national tour to all the partners, and then we received over 200 comments from partners after they reviewed the report.

As far as some of the high-level priorities nationally and for the Mid-Atlantic region, there was a lot of similarity in some of the highest priorities, and so, you know, things like improving the estimates, improving biological data, determining ways to integrate, you know, non-probability data into management, centralized and accessible warehousing, and then also developing adaptive management frameworks. Those were the national priorities.

Then, for the Mid-Atlantic, three of those are the same, and then there was two other ones that were related to improving trust and credibility engagement with partners and efficient communities, and, also, our state partners in the Mid-Atlantic really highlighted the need for survey sampler recruitment and retention, to kind of keep that catch data coming in, and sampling as much as we can, and so I think those are some of the differences.

You know, on the Atlantic coast, we do have already -- We're kind of ahead of the game with warehousing, because ACCSP has a -- You know, is kind of leading nationally in having a really comprehensive warehouse, versus some of the other regions, and, also, there's a lot -- Some of the regions just don't have any biological data collection, and so I think we're kind of ahead in the Mid-Atlantic there, and so that's probably why those didn't make it to the top-five priorities, but so these are just kind of high-level priorities.

Our next step for the re-envisioning --

DR. CURTIS: My apologies to our online virtual members with the audio technical difficulties. We did just post a link to the presentation with audio in the chat box, so you can review this in your own time. The presentation slides are posted in the briefing book, as Attachment 8. Again, I apologize for the audio difficulties.

DR. PAPACOSTAS: Our initial vision, that we previously communicated was to have, you know, regional workgroups, have shared leadership across the partnership, a series of in-person workshops that we were going to have this year, through the second-half of this year, and then kind of transition to this updated partnership model.

There's been a lot of operational changes, and changes in our conditions, and our ability to travel, and moving funding to partners, that has occurred in the past six months or so, and so we pivoted focus and targeted -- To trying to make targeted national and regional improvements, guided by the framework report, and so our upcoming plans are to announce and publish the report.

Then, as soon as the report is finalized, and cleared by NOAA, we'll be begin to get to work on kind of fleshing out some clearer and more discrete action plans to address some of these priorities, but some things are already underway. You know, the FES improvements are related to Priority Number 1.

Another item I'll talk about is kind of related to the trust building and engagement of partners, that I'll talk about subsequently here, and so I've got two more slides, and then I'll open it up for questions, and so, just for other program updates, one thing that is coming down the pipeline is we are expecting a report from the National Academies, who has been doing a review of our recreational fishing survey and data standards.

We established those back in 2020, the goal of which was to generate guidelines on core aspects of recreational data collection and promote, you know, data quality and consistency and comparability across surveys at different levels nationally, and so they've been conducting a review. Actually, two of the reviewers are on this SSC, and we really appreciate their time on this.

They've been evaluating the effectiveness of the standards for key data uses, alignment with best practices at the federal level, and so we're anticipating a report from them sometime this fall. We've asked them, just in conversation -- You know, that we're really interested in guidance on things like modeling approaches, on non-probability data, which is also related to some of the re-envisioning priorities, and so we're really looking forward to their recommendations.

They've held a series of meetings monthly since April. Several of them were open, asked a lot of data users and partners to present with their -- Based on their experience working with the standards, and their perceptions, and so there's been a lot of a lot of feedback to the committee that hopefully is useful to them as they formulate their recommendations.

Then, finally, last year we worked really closely with -- This was one of the lowest-hanging fruit that we could think of that we could do with current resources, is really revamp our procedures for reviewing catch estimates, and so we worked with both ACCSP and all of the Atlantic states to try to launch this more robust procedure for reviewing catch estimates.

It's basically we have a review period with the -- Where the states can review the estimates. and kind of standardized procedures for doing that. The goal was to leverage more local expertise of those state partners to identify inconsistencies in the data that, you know, us at headquarters, trying to churn out hundreds of estimates for hundreds of species, you know, across multiple regions -- Wanting to kind of tap that local expertise from the states. I mean, we do have internal reviews that always occurred, but this kind of layering of state review is a new component.

The partners have responded positively. They kind of have generally noted a greater sense of ownership in the data review, and so that's been a positive collaboration, and, again, relevant to Priority 4 from the re-envisioning of improving engagement with partners.

We do have a tool that we're also working on related to estimate review, and that is in development. The goal, the long-term goal, is to have that tool kind of link to our public query tool, so that you can look at an estimate, and then look at what the review process was for that estimate, and so just kind of really increase transparency, and then help data users, if they see something that maybe doesn't make sense to them, so they can follow, you know, where that came from, and what review was done, and who flagged it, and that sort of thing.

That vision is a little bit of a ways off, but we are working on the system, and we'll have kind of the test environment set up this year, and then we're going to have partners begin using it sometime next year, and so that's kind of where that is so, and I know that was a lot, and I talked for a long time, but thanks for your attention and I'll take any questions you have.

DR. REICHERT: All right. Thank you, and, again, apologies for the audio issues online. Any comments, or questions? Do we know if that report -- Because of the federal shutdown, if that report was available before the feds shut down, or if they're still working on it, and does anyone know? Luiz?

DR. BARBIERI: Do you mean the peer review, the calibration peer review, or the data standards?

DR. REICHERT: The data standards. She was talking about the report would be available around now, but I don't -- Obviously, the peer review report is not available, because they're still waiting for one of the reviewers.

DR. BARBIERI: The peer review report for the data standards is due to the National Academies this Friday.

DR. REICHERT: Okay.

DR. BARBIERI: So it's going to be released sometime next month, I believe.

DR. REICHERT: Well, I mean, depending on the -- I assume depending on the federal shutdown, correct?

DR. BARBIERI: No, and not in this case.

DR. REICHERT: Okay.

DR. BARBIERI: The National Academies is not a federal agency.

DR. REICHERT: Okay. Thanks for that clarification, Luiz. I appreciate that. Genny.

DR. NESSLAGE: But the partnership report, did that come out yet?

DR. REICHERT: Thanks. Luiz.

DR. BARBERI: Sorry, and what? The partnership --

DR. NESSLAGE: She was talking about a report on interactions with all the different MRIP partners, and that looked like that was due to be released in September, and I didn't know if that made it, and it's not out yet? You're shaking your head.

DR. BARBIERI: No, because they had to cancel, and so they had organized some meetings, and then all the stuff with the delays in the continuing resolution, right, the approval of the budget, and they decided to cancel the workshops, and, you know, they're going to resume their conversations whenever that is, when they are ready to, but --

DR. REICHERT: Thank you, and that clarifies -- Yes, and that was the report that I was referring to. Thanks for that clarification, Genny. Any other comments, or questions? Alexei, and then Jim.

DR. SHAROV: Obviously you heard that the FES calibration, recalibration, methodology has been reviewed at the end of September. Everybody had an opportunity to listen to it online. I missed that opportunity, but I wonder if anybody present here did call in. I had an intention, but, from what I've heard, you know, the review went in positive terms, and so, obviously, we'll see what the reviewers will say.

With respect to the -- You know, obviously, we all were interested in the overall results, and so, while there are some conclusions that are based on the overall -- Sort of the analysis of all the different regions, and the data available for those, the noted differences, particularly within the season with the larger differences at the edges of the year with the lower fishing, presumably lower fishing, activity, my gut guess is that this is going to be really area/state dependent, because it's all related to seasonality and availability of, you know, appropriate weather conditions, et cetera.

For the South Atlantic, we might expect not having those, you know, waves which would have a much lower activity compared to the temperate waters, and so that might have a certain effect on the expectation of what the FES correction will result in.

UNIDENTIFIED: No. Not really.

DR. SHAROV: Okay. What else? I wanted to say something about I think we still have to remember that -- Well, we saw the comparison, the ratios of the estimates, and the conclusions are based on the assumption that the new one is truer, but the fact is that we don't have independent estimation of the effort.

For that reason, you know, we have to keep in mind that the new ones, even though we assume that they're better, based on the number of reasonings, but only true verification with independent methods could indicate which one of them is less biased, and maybe both of them are, and so that's my comment. Thank you.

DR. REICHERT: Thanks, Alexei. Jim.

DR. GARTLAND: I know we probably don't have answers to this right now, given that we don't have people around to answer the questions, but the two that I have, that maybe would be for the future, are will we get a chance to review -- Will we get a chance to review the calibration, and the modeling approach, and things like -- You know, I know that CIE or whoever is doing it, but, given how important recreational fishing is in the South Atlantic, do we get a chance to take a look, because, again, the first thing I thought of, when I saw those plots, was there's a three-way interaction of mode, state, and wave, or month, or whatever you want to call it, and so I think, if we could review it ourselves, I think that would be worthwhile. Then the second question I had is, given calibrations, and all the problems that they always have, is there an estimate from this group of how soon we can get away from using calibrations?

DR. REICHERT: Thank you, Jim. If the committee would like to see, you know, or review the calibrations, or the model, I think we can make that request, and then the council can decide. I mean, ultimately, we're serving at the pleasure of the council, but I think it would be good for this committee, because this will be a source of discussion in a lot of the upcoming assessments, and so I would support that recommendation. I'm looking around the room, if we -- If anyone disagrees with that recommendation, or the request for us to see that. Jim, go ahead.

DR. GARTLAND: So I don't disagree with myself, but the one thing I did want to say is, even if we -- If we can't make it -- If we review it, and we see issues, and we still -- And we can't make any changes to it, at least we know how it was done, so that, when we're dealing with the data in the future, we can kind of keep that in the back of our minds, so that we know where weaknesses could be, if there are any.

DR. REICHERT: No, and I agree. I made a note that, you know -- I know details will be forthcoming, but I would be interested to see how that -- Because, as you said, there's multiple interactions, and I would be interested to see how the model is configured, and how that's -- How that's being approached. I have Alexei, to that point.

DR. SHAROV: Just quickly, on the question as to when we're going to get away from the calibration, I think it's going to wane down, you know, through time. That is, starting with next year, theoretically, if everything works as planned. 2026 will be the first year, possibly, with the monthly survey estimates of the effort, and so that would be the first year with the estimate that is not calibrated, but is measured based on the improved survey. I mean, then it's going to be -- The ratio will be changing, as far as we go in time, and probably, for the species that are short-lived, the effects will be seen, you know, within a short period of time, and for others a bit longer, but thank you.

DR. REICHERT: Thanks, Alexei. I have Luiz, and then Fred. Luiz, go ahead.

DR. BARBIERI: To Jim's point, and Alexei's, I mean, in reality, we'll never be able to move away from the calibrations, right, because, as we conduct assessments, we have to back-calibrate, right, to the beginning of the time series, and whatever timescale, and so, Jim, I mean, this is something that I think is going to be around for a while, but, as Alexei said, as far as the new, you know, going forward, right, as soon as the survey has enough time there to develop the estimates, those are not going to be really calibrated.

I sent Judd -- There's a website that was put together that has all the presentations, the agenda, and some meeting notes from the calibration workshop, Alexei, and so Judd can send that to the committee.

Now, also, in terms of the calibration model review, you know, because these are like professional survey sampling statisticians that are conducting the calibration model, it's super complex, and, if you go through, Jim, the presentation that's posted on that website, you know, they really describe the rationale and methods in all the equations, and how they structure the calibration to be done, and it's not like a simple ratio-based calibration, right, but, in that website, you can see the presentations that were, you know, given, and some meeting notes there as well.

DR. REICHERT: Thank you, Luiz. Yes, and I -- The presentation on the specifics, I don't necessarily see that as an SSC review. I see that more as information for the SSC, for this SSC, and an opportunity to potentially ask some questions, because, as I said, this will be a point of discussion, definitely, in upcoming assessment reviews by this SSC. Fred, go ahead.

DR. SERCHUK: I don't have a comment, Chair. I don't have a comment. I didn't have the internet for the first hour, but I'm back now, and so I just want to let you know that I had to get the internet restored to my unit, but I'm back, and so, I'm here. Thank you.

DR. REICHERT: Thanks for letting us know, Fred. Good to have you back. C.J., and then Fred. C.J., go ahead.

DR. SCHLICK: I just wanted to kind of put in that request. One of the critiques I heard during the MRIP recalibration peer review was that the entire calibration of historic data is off of the one 2024 year, and the peer reviewers commented that is this a snapshot that could be biased in some way, and I don't know that they've come out saying they intend to do any more years of subsequent study to better the calibration. That's one of the questions I have for them.

DR. REICHERT: Thank you, and we'll add that to our report. Obviously, we don't have an answer, but it would be good to at least know that. Fred, go ahead, and then I have Alexei.

DR. SCHARF: One comment was just on the questionnaire design. I remembered them focused on the question ordering, but, in this case, they also increased the frequency, and so it struck me that the results are a little confounded. In other words, I'm not sure how they determine whether the question ordering, or the increased frequency going to monthly, affected the potential bias in the telescoping error that they were worried about.

The other comment was just a broad comment to echo what Alexei had said before, is that, when this first came up, the telescoping error, it was clear that they were sort of assuming the bias was in one direction, right from the get-go, and they never really acknowledged the fact that the

telescoping error could have actually been in the opposite direction and so, I don't know -- Again, this study shows the effort reduction in a certain direction, and then they're just assuming, again, that, well, this is more accurate, but we don't have an independent estimate of effort, and so just a comment about that.

DR. REICHERT: Thanks, Fred. I have Alexei, and then Jim.

DR. SHAROV: Yes, and just a reflection to C.J.'s note. I think, I mean, we cannot easily flip through the presentation, but I think one slide in the presentation was actually saying that the calibration is not based on just 2024 data. I think that caught my attention, and maybe I misread it, but, you know, whenever we'll have a chance to replay it on our own, we could double-check.

DR. REICHERT: C.J., to that point?

DR. SCHLICK: I think it's actually based on the smaller, earlier study, and then the full one year, but it's -- The large scale, they only have one year, and then they have the smaller studies on top of it. I just remember that being one of the main concerns of the peer reviewer during the workshop.

DR. REICHERT: Thanks, C.J. Jim.

DR. GARTLAND: So, I understand, I guess, needing to use the calibrations back in time, because we want a longer time series for our assessments, but I think one of the things that we should emphasize, and I don't know if it's being considered or not, but not just the calibration coefficients, but the uncertainty associated with them, if that can be propagated into the past estimates. It's not done often, but I think it would give us a truer picture of how uncertain our recreational fishing effort was prior to any changes.

DR. REICHERT: Thanks, Jim. Chip. Chip Collier came to the table. Go ahead, Chip.

DR. COLLIER: Yes, and this might be a question for the social scientist and economists, I guess, is, in this telescoping error, it was also associated with a change in the survey design, which it went from a telephone survey, or from a -- Yes, a telephone survey to a written survey, and I believe that there are mental differences when you're taking a survey, either verbal or written, and your mind reacts differently. I'm wondering, and could that be causing any of this telescoping issue, at least maybe make it worse than it was before? I don't know, and is that something that should be investigated as well?

DR. SWEENEY-TOOKES: I've been restraining myself, because we can't talk to the presenter. I am placing a lot of hope and faith in the cognitive interviews that they did to try to square all of these things, but, yes, Chip, you raise an excellent point. The way that people respond to surveys changes their responses, period.

Every single one of the things that were changed can change the way that people respond to surveys, and so there were a lot of shifts made, and so I really wanted to know a lot more about what those cognitive interviews covered, how they were conducted, and why we're placing a lot of faith in their ability to smooth out any issues.

DR. REICHERT: Alexei. Thanks.

DR. SHAROV: Thank you. That just highlights the point that Jim has made earlier, that, when he proposed that we review the report, once it's available, and Luiz warned us that it is a sophisticated statistical analysis that is, you know, accessible, possible, only, you know, to be completed by professional statisticians, but I don't think that we're looking here at the competition in that area, but there are some aspects, like this one for example, that definitely could be, you know, noted by SSC members, and each of us has a particular interest, or a particular skill, that might be useful in identifying either the sources of uncertainty or, on the opposite, identifying some things that we would believe that really have improved the overall estimate, in whatever direction.

I guess the review could be helpful, and certainly we're not saying that that review would be a competitive review to the CIE, but it is more for our own purposes, to identify as to how it applies to our specific conditions.

DR. REICHERT: I don't want to put words in your mouth, but, if I look at the request, so you think perhaps that the last sentence there -- That it's not just about the calibration, but maybe about, you know, methodology in general, just to have an opportunity to ask some questions that may help us to clarify some issues?

DR. SHAROV: The methodology is most likely is the same, but the components of the elements, and that is the outcomes, are likely to be, or could be, different, and subject to particular uncertainties that might be less important in the Mid-Atlantic or Northeast.

DR. REICHERT: Okay. Thank you, but my question is still for you. The original language was specific to the calibration methodology. What I'm hearing around the table is that perhaps we would like to get a more broad presentation that covers the adjustment in a broader sense. Luiz.

DR. BARBIERI: Yes, and those are good points, Alexei. I mean, what I was trying to say is that, you know, the survey errors, right, and there's a statistical component of the survey errors, sampling errors, that can be captured by the statistical design and estimation model, and that can be calibrated more easily, right, because it's quantitative in nature, and you can actually quantify, through the statistical procedures that you use, what's happening there, but there's the non-sampling error components of this that are much more difficult, right?

The response, how people respond, and the cognitive testing, and, now, they conducted, you know, professional cognitive testing during the last, I don't know, three years or so, right, and that's how they learned how actually structuring the questionnaire differently was generating different responses.

That is not going to be captured. You're right, Alexei, that that's not going to be captured within the calibration. Calibration is a statistical exercise to really correct, you know, between the two surveys from, you know, the quantified part of it. The non-sampling error is something different, that, you know, I don't know how we can evaluate that, unless they produce some report that touches into that.

Finally, I wanted to just comment one thing about -- You know, Catherine said about going from the two-month wave to the monthly wave, right, and, I mean, I think this is great. It's a great thing for them to move towards, but I worry about sample size and precision, right, because, unless they get a major increase in funding, right, the number of samples they're going to have to collect to keep the same level of precision that they were obtaining for the two-month wave is going to have to be much, much higher, right, and, considering everything that we're looking -- That we're seeing now in terms of the budget, it is concerning, right?

If the two-month estimates for some species already have very high PSEs, if they switch to monthly, unless they basically double the sample size, I don't know how they're going to be able to even maintain, much less reduce, the level of uncertainty in their estimates.

DR. REICHERT: Thanks, Luiz, and that's an excellent point, and I think she actually mentioned that caveat several times, and, again, that goes back to, you know, the importance of this, because of the importance of the recreational fishery in our region, and in the Gulf of Mexico, which is different than in some of the other regions, and so, yes, I completely agree. Anything else? I think we made some good -- Chris, go ahead.

DR. DUMAS: Thanks. I would just like to commend the MRIP program for making these studies, and I think it's good to attempt to adjust for bias due to the question order, and allow the respondents to identify as anglers, which might reduce telescoping effects, and, also, to attempt to move from the two-month to the one-month estimates to support timeliness of the data stream and help support management, and I think those are all great things to attempt.

I have a couple of questions. One was what are the estimates of the increase in precision, if any, or changes in the precision estimates? I assume they'll come out in the report, but I would really like to see those.

Also, I'm curious, and it appeared, from the slide, that the estimate of the Florida shore mode trips remained about the same, and that was really curious to me, because I remember, when moving to the, quote, unquote, new MRIP numbers, that was a number that a lot of folks thought was really large, I think, if I remember correctly. There was a large change from MRFSS to the new MRIP and the Florida shore mode. I'm curious why -- Are there any methodological reasons that the study authors might think of that could explain why those estimates of Florida shore mode stayed about the same in this newest study?

Just a point I would like to make going into the future, looking into the future, to attempt to incentivize better, more truthful reporting, that the study authors just investigate incentive mechanism design methods, and how those might be used in survey design in the future.

My last point I would like to make is I'm not sure if college students currently have the opportunity to serve as surveyors, in like summer internships, or summer internship programs, but I think that could be really attractive to college students, to get some experience, through summer or semester internships, to serve as surveyors, and that might support some of the larger sample size requirements that Luiz was referring to earlier, in order to move from the two-month to the one-month survey. Thanks.

DR. REICHERT: Thanks, Chris. Jennifer, go ahead.

DR. SWEENEY-TOOKES: I just wanted to say I think that's such a fabulous idea, Chris, and, as two college professors at universities on the coastline, we have students who need experiences, and so I would love to see us continue to talk about that option.

DR. REICHERT: We will capture that recommendation, or that suggestion, and, if not, please help us draft it later. I think Judd did an excellent job capturing our conversations. I want to briefly go through that, if there's any glaring omissions, something Judd or I may have missed.

Judd, can you scroll up a little bit, so we can kind of go through that? Thanks, and, again, we can do some wordsmithing later, but I just want to make sure that, since the discussion is fresh in our minds, that we captured, that Judd captured, what we discussed, and so maybe you can read through it real quick. Jennifer, go ahead, and then Alexei.

DR. SWEENEY-TOOKES: If we can just leave ourselves a breadcrumb for later, and I'm happy to send language, but, under the other potential biases between phone and written survey techniques, there's also these cognitive interviews are what confirmed that this is a more reliable survey, and so we would really like more information on these, because that seems sort of foundational to everything that we're working with.

DR. REICHERT: Thanks, Jennifer. Alexei.

DR. SHAROV: Mr. Chair, a question for you. I know you've been asking us to make good notes, and then submit them to you. I'm looking at my notes, and I'm looking at this, and my notes are ten-times worse than what we have on the screen, okay, and I could not have produced, you know, half of this, and so that's why I often was reluctant, and is this helpful, that the scribbles that I have, I mean, to what extent -- I mean, they're pretty much, you know, much better covered here, and so my question is do you still want us to send you whatever we have, and you will be looking for crystals of wisdom in there?

DR. REICHERT: Alexei, excellent point. I had a note to remind the committee that we both have Judd's notes and the transcripts, and so you're absolutely right. A duplication of Judd's notes, or a, you know, transcript, or part of a transcript is not very helpful, and so what we're asking is, if you have notes that add, or clarify, what Judd has written, then that's what we're looking at, and so thanks for that. I think duplication of effort is not very helpful, and so that's -- I have Luiz, and then Kelsey.

DR. BARBIERI: No, and I just want to agree with Alexei there, because, yesterday, I was telling C.J. here that I don't think that Judd is actually a human being. Inside, he has to be a cyborg. There's a supercomputer in there, because, yesterday, I was looking at the notes, and I thought, oh my gosh, right, and so it's kind of hard to, you know, feel like we send him something, when the notes he's already making are so well put together.

DR. REICHERT: I also want to remind the committee of our two previous meetings, where so much was going on that we did not have an opportunity to make detailed notes, and that's where a lot of the much more detailed notes of the individual members have been critical for us to draft a report, and that's why, I at this meeting, said that, after each agenda item, we need to take some time to go through that, and that's something that we traditionally haven't done.

When there was a little bit of time, we did, and, in some instances, and, again, I point to the last two meetings, and we didn't even have an opportunity on Thursday to go through the notes, and so I think this is very useful, but I -- Again, I agree that duplication is not very helpful. Kelsey.

DR. ROBERTS: I was just quickly wondering if there was an argument, so that Judd was not fielding a bunch of emails, to transition to more of a Google Doc approach, so that people can be more interactive with the notes as we're going forward.

DR. REICHERT: Yes, and so we tried that, I believe, the last meeting. I will let Judd comment.

DR. CURTIS: Yes, and we've tried shared Google Docs, and we've tried just emailing and me collating everything together, and then sending those out, and so it's still kind of work in progress, depending on what seems to be the most effective and efficient means for doing this. If the committee likes the idea of maintaining that Google document, we can continue on with that as well, or any other ideas too that you've experienced in the past that we could try.

DR. REICHERT: Chris, and what we can do tomorrow, when we're going through the review, we can possibly -- I would like to have a little bit of a discussion of how we can make the reporting more efficient. As I said, it has been anything from us just editing what's already there to basically Judd and myself writing the full report after the SSC meeting, and so it all depends how the meetings have developed, but, Chris, go ahead.

DR. DUMAS: I hesitate to say this, but I'm just going to jump in the water, and so we could take Judd's notes, and all the notes that each of us send to Judd, and the transcript, and put it all in ChatGPT and say “summarize”, and also use perhaps more precise prompts within, and maybe do a mini study on some prompts we could use, to see if we could get something useful out of that. That would summarize salient points, and even provide, for each point -- Note which notes that point support came from, was based on, like Judd’s notes or some other person's notes, and it seems like it could be a good use for that.

DR. REICHERT: Well, let me -- We've actually thought about that, but we'll continue to think about that at this stage, and especially our upcoming chair. I'll leave that up to him.

DR. CURTIS: I think, in a competition, Judd versus ChatGPT, I think Judd would win.

DR. REICHERT: Thank you. Judd, do you have any comments relative to that?

DR. CURTIS: I vote for ChatGPT, and then I don't have to be here.

DR. REICHERT: Thanks, but thanks for that reminder. Actually, that was a good point, that I meant to mention earlier. Okay. Any other last comments? I think we’ve got Jared.

DR. FLOWERS: Yes, and I'm not sure if it's on the lower part of the notes, but I know we've talked, a couple of times, about the idea of just having some kind of verification, you know, and, you know, looking at the biases, and what's a true number out there. I wonder if we should just have a comment about that, you know, for lack of -- Just for the future, you know, however.

DR. REICHERT: Thank you. Chip, you came to the table.

DR. COLLIER: Yes, and I'm wondering if a similar presentation should be given to the Social and Economic panel of the SSC. Maybe they can look at subsets of this, where you're not getting all the information, and they can potentially work for you, and summarize it, and particularly I'm thinking the cognitive studies, and they might be able to summarize a little bit more.

DR. REICHERT: Jennifer.

DR. SWEENEY-TOOKES: Yes, and I've been, again, holding back, because the presenter is not here, and so there's no one to ask, but I would love for the SEP to get into how this sausage was made.

DR. REICHERT: I think we should put that request in our report. Steve, I saw your hand up.

DR. TURNER: Yes, and, towards the top, under peer review, the second bullet, I'm wondering if we want to encourage MRIP to consider a multiyear study.

DR. REICHERT: Any thoughts on that from the other committee members? Luiz, and then Jim.

DR. BARBIERI: I mean, I think it's a good idea, right, and, I mean, what they have been saying is they would like to have two or three years of data, a minimum of three ideally, for this calibration, but it's just the cost is very difficult for them to handle, because they have to do -- Of course, implement both designs simultaneously, and so that is the problem.

DR. TURNER: Yes, and the future costs to harvesters and the fishing public could be substantially higher than the cost to NOAA Fisheries.

DR. REICHERT: Jim, and then Alexei, and that's a good point. Unfortunately, in order to do a study, the dollars need to be available right now, and so that's always the dilemma, but I agree with you.

DR. TURNER: I said "encourage", and not demanding, but I'm encouraging.

DR. REICHERT: Thanks, and that's a good point. I've got Jim, and then Alexei, and then we have to move on to the next agenda item.

DR. GARTLAND: So my recommendation was going to be to put language just like Judd put up there, and so that doesn't -- I guess I can kind of skip on that one, but the next thing is something that could be cheaper, rather than doing a multiyear study, is running a simulation of what is the impact of only using a single year versus multiyear, and then you can start to get at actually the cost-benefit of running additional years, the cost of running additional years versus the cost to the fishery, just like you were saying, and so something like that might be an interesting cheaper, shorter project, just to get some sense of what would the cost of stopping at one year theoretically be.

DR. REICHERT: Thanks, Jim. Alexei, and then we're going to move on.

DR. SHAROV: Well, I think we're 100 percent going to hear about it from the review panel, when we see the review report, because they definitely will be asking similar questions, or providing recommendations, hopefully, and so let's wait for that, but it shouldn't stop us from making a suggestion like this. I love the idea of simulation. I love simulations, but it scares me. I mean, these are not fish. These are not objects that we collect in the, you know, dredge survey or whatever.

This is human behavior that we're not going to model, or at least, you know, I don't think we're equipped, and so, I mean, you know, that could probably be done, but where is the guarantee that it will both properly model the changes in psychological reasoning and responses? It's just totally a dark net for me, but one of the alternatives still to reduce the cost could be a study only in a limited number of states, and so there will be -- Yes, it will be spatially limited, and it will not be addressed the entire coast, but, the scale of a state or two or three, you could probably still, you know, continue the experimental versus the old design, and accumulate data with a reduced cost, and that's also not a brilliant idea, and it probably will be considered as well.

DR. REICHERT: Thanks, Alexei, and, with that, let's move on to our next agenda item, and so thanks for all your contributions. I think we have a good list of comments and suggestions and requests. Judd, go ahead.

DOLPHINFISH MSE OPERATING MODEL UPDATE

DR. CURTIS: Thanks, and so, because we don't have the dolphinfish management strategy evaluation updates, due to the government shutdown, but I did want to bring up slide from a previous presentation they gave, just to show the timeline of what to expect for the SSC coming down the pipeline, potentially, and just give me a minute, and I can go find that.

DR. REICHERT: While Judd is doing that, this is -- Chip, correct me if I'm wrong, and this is a little bit different than some of the other MCEs we've looked at, because, ultimately, aren't we going to use this to provide recommendations to the council, in terms of fishing level recommendations, and so, again, to remind the committee that that is important, because, ultimately, we need to provide the council with that recommendation.

DR. CURTIS: So you see the projected draft timeline and schedule. This was presented to the SSC during the April SSC meeting, and to the council at their September meeting. There's been a few adjustments. The council in December is not going to receive an update, but, backtracking one meeting, to the fall of 2025, and that's our meeting today, and we obviously don't have the presentation available, but there is a spring SSC meeting planned already for this SSC to review the operating model, or at least it was a kind of a fallback, and a provisional meeting, which will undoubtedly now be a necessary meeting, and so we'll add that to the April spring SSC meeting agenda.

By this point, the dolphinfish MSE will have undergone the CIE review process, hopefully, scheduled sometime early next year again. Again, the schedule may be a little bit in flux, due to the government shutdown, but this is still the plan, as we know it now, and then the SSC can review some of the -- Or get some of the CIE review feedback, as well as anything else that may be needed for the implementation of this into management, as Marcel alluded to.

This will, this MSE -- The goal of this MSE is to produce management advice, in the form of catch levels, that will be reviewed by the SSC, and recommended to the council for adoption, and so that's kind of where we're at right now. We will provide additional updates as necessary, once we get back to -- Or once the federal government gets back to work and we can provide an updated schedule of events.

One thing then to consider, that I wanted to ask the SSC, is, if this goes through a CIE review sometime early next year, if the SSC feels that it would be important to have a member or two as part of this review panel, or potentially and/or a chair of the review panel, just to keep the South Atlantic SSC in the loop with what is happening at the CIE review level.

DR. REICHERT: So, to that point, Judd, that's not a -- That's an in-person review, I assume, or is it a webinar or --

DR. CURTIS: We assume it's going to be an in-person review. Details TBD, obviously, still.

DR. REICHERT: So the first question for the committee is if we feel it would be useful for SSC members to be part of that review, and if we can potentially provide a chair for that review. If the answer is yes, then we don't need to assign -- We can come back to that tomorrow, when we are talking about working groups, but I would like some quick feedback from the committee. What's the committee's pleasure, in terms of that idea to involve SSC members?

I think it's probably a good idea, especially because of how the schedule has changed. Anyone opposed to that? I see heads nodding, and so let's discuss that tomorrow, at our working groups, and the consequence is, obviously, that we will be recruiting people for that. Okay. Thanks for that quick overview, Judd. That's very, very helpful. I appreciate that, and so let's take a break, and come back at 10:00, and then we will go through the terms of reference and the remaining agenda items for this morning. Thank you.

(Whereupon, a recess was taken.)

DR. REICHERT: All right. Welcome back. We will continue with completing Agenda Item 6, the terms of reference, and we have red grouper and snowy grouper to go through. Judd, why don't you take it away?

TERMS OF REFERENCE FOR 2026-2027 ASSESSMENTS

DR. CURTIS: All right. Thank you, Mr. Chair. I'm going to start off on Attachment 6f. This was -- Both 6d, e, and f attachments were late additions, knowing that we might have a little bit more time during this meeting to review a few additional terms of reference for red grouper and snowy grouper, and I put this document together as well.

I mentioned the sources of information, when we were drafting the last terms of reference, that go into it, and the research of monitoring plan, and then also any previous reviews, In this case, for red grouper, it was SEDAR 86. The SSC reviewed -- Even though it wasn't a completed

assessment, the SSC provided some comments, and so all these things are integrated into the new draft terms of reference, and then the same situation for snowy grouper as well.

You see the research and monitoring plan priorities for 2025 through 2029, broken up into the short-term research and monitoring needs for stock assessments, and then any ecosystem and bycatch information as well.

DR. REICHERT: Thanks.

DR. CURTIS: Then, for the latest update in snowy grouper, and it's standard assessment reviewed by the SSC in September of 2020, and I just pulled the discussion from the report that listed, you know, the various uncertainties that the SSC had identified during the last SEDAR 36 update review, and then any other research recommendations that were documented by the SSC for future stock assessments, and so this is kind of the basis for what we use to draft the terms of reference for upcoming assessments.

We'll start with South Atlantic red grouper, and so, if you recall from the SEDAR 86 review, or at least the preliminary review of the model, it was determined that this is probably more likely appropriate to develop a two-area model, with different landings trajectories from the North Carolina region and Florida regions, and so a two-area model was recommended as probably the more appropriate defensible approach for the stock assessment.

Because of the change in the model structure, it had to go back onto the SEDAR schedule, and through the SEDAR Steering Committee process, and so this is where we're at now, is this is scheduled, right now, to begin in 2027, but, as Julie mentioned yesterday, some of these things might get delayed slightly, because of the current government shutdown, and other scheduling concerns as well.

I, last night, integrated some of the kind of general edits that you all made for Spanish and king mackerel, as far as the language, but not all. Like the MSY proxy language, I think we still need to wordsmith some of that, but I'll, once we do that, I can bring that over into all these other documents as well, so we have some continuity between these different terms.

So, again, we'll go through these kind of briefly. You've seen them, and most of them are fairly similar terms of reference. I'll highlight some of the new additions that are specific to red grouper. The terminal year for this assessment is estimated to be 2026. If the assessment gets delayed, that might change then, and a terminal year of 2027 maybe more appropriate, if the assessment doesn't get going until 2028.

This will be conducted by the Beaufort assessment team, using the Beaufort Assessment Model, and, any changes made between the old model and the assessment model, they will provide a continuity run. Any new and updated information on the various other parameters here, and these are all, I think, similar language and points that were described in the previous mackerel assessments.

Term of Reference Number 4 is where we document some of the specific changes and input data, or the deviations from the previous assessment model, and so, based on the comments from the previous review, and the research and monitoring plan information, there was -- It was suggested

to incorporate an index of abundance of south Florida red grouper in the next assessment. Evaluate the frequency and magnitude of recruitment coming from other regions, such as the Gulf, or areas to the south, and identifying the factors contributing to recent low recruitment that are observed in red grouper in the South Atlantic.

Updating reproductive biology parameters and evaluate potential latitudinal variation and spawning characteristics, and then evaluating different methods to estimate commercial discards, considering the observer program and commercial discard logbook information, along with coverage of the programs. I'll pause there, to see if there's any feedback for some of these new input data or deviations from the previous model.

DR. REICHERT: Luiz.

DR. BARBIERI: Thank you, Mr. Chairman. Judd, refresh my memory. Is this assessment -- Do you remember if the units for reference points are in eggs or spawning stock biomass?

DR. CURTIS: I don't know off the top of my head, but we'll have somebody get back to you on that. Chip is bringing it up right now. Chip is going to follow-up with you shortly.

DR. REICHERT: Luiz, go ahead.

DR. BARBIERI: Just to that point, Mr. Chairman, just because I think that having the same type of evaluation that we had for South Atlantic red snapper, in terms of looking at, you know, the availability of data on egg production and spawning potential for red grouper, and it might be better to look if there's an alternative, right, in terms of using spawning stock biomass, that might be better suited for the data available.

DR. REICHERT: So not eggs.

DR. CURTIS: The previous estimate used total mature biomass.

DR. BARBIERI: Right, and that makes sense, and that -- So that would be the biomass combined sexes, right, which is recommended. Thank you.

DR. REICHERT: So that means you're not asking additional -- Okay. Thanks. Any other comments? Let's move to the next bullet.

DR. CURTIS: Okay. Terms of Reference Number 5 -- Go ahead, Fred.

DR. REICHERT: Fred, go ahead.

DR. SCHARF: Just go back up to the number to 4a. Do you think -- Is it a -- It reads like south Florida red grouper is like a separate species. Do you mean an index of abundance conducted in south Florida for red grouper? Is it just a survey of red grouper that happens in that region?

DR. REICHERT: Yes, and I think that's what it says.

DR. CURTIS: I think that is what it is. There was no further details on this, and it's almost verbatim that I pulled from the comments, and so, yes, we'll look into that, and get some clarification on that, but I think you're correct, right, and it's just an index of abundance for red grouper in south Florida. I can wordsmith that.

DR. REICHERT: Wally.

DR. BUBLEY: I don't know if this clarifies it, and so, I mean, in the SERFS survey, what we're seeing is -- We see red grouper off of North Carolina, and then there's kind of a gap, and then they show up again in south Florida, and that survey doesn't cover the southern extent, really, of their range, and so I think that's probably trying to figure out a way to account for that.

DR. REICHERT: But that's to Fred's point that, you know, it is incorporating an index of abundance of red grouper in south Florida, right, and it's not SERFS. It's a different survey. Luiz.

DR. BARBIERI: Yes, but, to Fred's point, I'm not aware of another survey there.

DR. COLLIER: The RVC.

DR. BARBIERI: The RVC. I see. Okay. Yes, and that makes sense, Chip.

DR. TURNER: Very quick, just RVC plus that survey we were looking at from the divers, that we were looking at for red snapper, I think.

DR. REICHERT: Yes. REEF, and there may be some additional information in Smile.

DR. TURNER: They were talking about mixing, working together, and it didn't occur for red snapper. They tried it, but red snapper was perhaps one of the sparsest. I thought it might work better for other species.

DR. REICHERT: Wasn't that a discussion we had at the hogfish? That came up at hogfish, I believe.

DR. TURNER: Yes, and that was hogfish.

DR. REICHERT: Yes. Thanks. So on to Number 5.

DR. CURTIS: Okay, Number 5 has to do right with the parameter and estimates of their variances. We had some discussion on this yesterday. This is still the kind old language. I think, once we coalesce around the language we want to use, or the SSC wants to use, for that 5a term of reference, I'll incorporate that here as well for the other mackerel assessments, and for snowy as well.

All right, and Number 6 is the computing of short-term and long-term population projections. I moved the addressing the recommendations of the South Atlantic catch level projections workgroup down to this term of reference from above, as was done with the previous mackerel assessments.

For red grouper, as recommended, right, and it was because of this two-area model that necessitates convening a stock identification workshop, and a data workshop, with the following goals of resolving the regional stock structure differences, considering the spatially-separated fishery-dependent or fishery-independent catches and incorporating the two-area model.

Evaluating the frequency and magnitude of recruitment coming from other regions, such as the Gulf or areas to the south, and identifying factors contributing to recent low recruitment, and then updating any reproductive biology parameters and potential latitudinal variation and spawning characteristics.

Typically, right, when there's maybe one issue that the SSC, or we want to look at more in depth, we could convene just a single topical working group, but, if there's more than that, which there may be, depending on feedback that we get here -- If there's more than two topical working groups, it's suggested just to hold a data workshop then to address all those things.

DR. REICHERT: Judd, can you remind the committee, and do we need SSC members for the stock identification workshop?

DR. CURTIS: We will, but, given that this will start in 2027, or possibly 2028, we can wait until the next meeting.

DR. REICHERT: Thanks.

DR. CURTIS: Or a future meeting to recruit members for that.

DR. REICHERT: Yes, and that would be good for the members to keep that in the back of your mind for, you know -- Fred, go ahead.

DR. SCHARF: Judd, are 7b and c also for up above, 4b and c, the same, if you scroll back up?

DR. CURTIS: Yes, that's correct, and those are the new model inputs, and deviations from the previous model, that need more exploration, and so those have basically just been copied down here as part of charge to either the stock identification or the data workshop.

DR. REICHERT: Does anyone know if we have information to answer that question of stock identification, and, in other words, should we potentially recommend that between now and the beginning of the stock assessment, that information -- That it may be useful to gather that information. I'm not sure if anyone is aware of any studies to that point. Chip.

DR. COLLIER: Lew Coggins said provided a document putting together the rationale on why a two-stock model is needed, and so it included quite a bit of that information already.

DR. REICHERT: Thanks. Fred.

DR. SCHARF: So is there also information to evaluate b, which is the frequency and magnitude of recruitment coming from other regions, or identifying factors contributing to recent low recruitment, and do they have information on that that could be evaluated as part of a data workshop, or is it just --

DR. COLLIER: So Roger Brothers had put together a larval model indicating where some of these species could be coming from, and so we can reach out to him and see exactly what he did for red grouper. I think that was one of the species that was included in there when he was evaluating the spawning special management zone specifically, but we can look at other species, and then, as far as factors contributing to recent low recruitment, I'm trying to remember back to that presentation in 2024, some of the discussion on red grouper.

You know, is it just in the -- Is there a difference in recruitment between the stock that we're seeing in south Florida versus the Carolinas, and I don't know if there's a difference in between the two areas and so I think just investigating some of that I think will be very important.

DR. REICHERT: Thank you, Chip, and you're referring to that low recruitment working group that -- Thanks. I think -- From recollection, I think red grouper was part of that group that they were investigating. Thank you. Anyone else.? Thank you.

DR. CURTIS: Okay, and then, lastly, convening the SAFMC approved assessment technical team, including the various representatives as needed, to review model development guidance, and I've added language there to schedule that pre-decisional briefing, i.e., the SSC check-in to review model development, and then, lastly, develop a stock assessment report to address the TORs and fully document the data, input methods, and results.

DR. REICHERT: Then you will cut and paste that additional language about the discussion in there? Okay. Cool. Again, we can do that later. Thanks, Judd. Chip, go ahead.

DR. COLLIER: So this is breaking from a single-stock model to a multi-stock model. Does the SSC want to be the reviewer of this, or would you want to request a CIE review for -- I mean, this is, obviously, in my mind, a fairly big change, and so just trying to get input on what level of assessment we want, and I'm feeling like this might be getting close to that as, as much as possible.

DR. REICHERT: Chip, a question there. Is your idea, if CIE review is occurring, to do that simultaneously? You're not thinking about two different reviews for the north and the south stock, correct? No. Okay.

DR. COLLIER: No, and it would just be one review.

DR. REICHERT: Okay.

DR. COLLIER: We're assuming this would be given one SEDAR assessment number, and that review would occur for that SEDAR.

DR. REICHERT: Okay. Thanks for that clarification. What's the pleasure of the group in terms of potential CIE review? Jie, and then Luiz.

DR. CAO: I think it's just a question regarding the assessment models that going to be used for the two-stock assessment, and is it still going to be the BAM model? I'm not sure it can handle the two multi-stocks.

DR. COLLIER: So, in past discussions, they had talked about keeping the BAM model for the North Carolina part, but the south, the stock in in Florida, might be different, just because it might actually be a data-limited approach for that portion of it.

Then the question is what is the connectivity between the south and the north, and do you need to do it as one, and I know, if you do it in SS, there are potential spatial components to it, although recruitment is usually a single recruitment event, at least in the past, and so that's not necessarily a two-stock model, but just -- There's a bunch of different ways that could go. I don't think it's been settled on the best way to approach this.

DR. REICHERT: Luiz, and then Chris and Steve.

DR. BARBIERI: Well, as a follow-up to Jie's question too, which I think is something important to think about, but maybe I misunderstood then how this was going to get structured. I thought that this was a two-area model of a single stock. No? So this is going to be basically two stock assessments, and we are already considering -- So it starts then with, right, the stock ID process.

I'm bringing this up, right, just because, seeing what happened in the Gulf with the red snapper assessment, right, when it got to the CIE review -- I mean, it went through the stock ID. The stock ID could not really determine if there were three separate groups within the Gulf that they considered, and remember you were there, Judd, but considered separate really stocks.

They just basically wanted to structure the assessment as a three-area model, right, and that generated -- When the CIE came in, it generated a ton of confusion for them, because, the way that this was called -- Really, instead of a three-area model, it was called like a -- It was a three-area model that was a result of a stock ID workshop that identified that there were three areas that could be broken up, because of the fishery dynamics, because of some of the like life history attributes, the different groups, but they could not be really considered separate populations, and so they still wanted to assess at the stock unit level, but take into account the spatial dynamics, right, in the three-area model.

If this is going to be -- I mean, this could go that way, right, and it could be either two separate assessments, right, that handle this as complete disconnected stocks, or as a single assessment that handles the two areas, right, and I guess this part --

DR. REICHERT: Thanks, Luiz, and so is that something that we perhaps should specifically mention in the terms of reference, determine whether or not the outcome of the stock identification workshop should result in a single stock assessment with spatial components or two stock assessments?

DR. CURTIS: I've added, or modified, the language in that 7a term, and deleted the “incorporate a two-area model”, so it's not as prescriptive, but just determine an appropriate model configuration, and that would then be inclusive of either the model or look at breaking it down into two different stocks.

DR. REICHERT: I like that language.

DR. CURTIS: That will be the charge of the stock identification workshop.

DR. REICHERT: Thanks, Judd. I like that language. I have Chris, and then Steve. Chris, go ahead.

DR. DUMAS: Thank you. I just wanted to follow up on Jie's question about the BAM model. Does the BAM -- Is the BAM model structured to model only one stock, or can it be configured to model multiple stocks, or can it be configured to model one stock with multiple areas?

DR. REICHERT: Genny, to that point.

DR. NESSLAGE: It's not currently set up to model different stocks. You can kind of jury rig it to do fleets as areas, but this I think would be beyond the scope, and you would need to modify BAM to address this issue, if I understand what's going on correctly.

DR. DUMAS: Thanks.

DR. REICHERT: Thanks, Genny. Steve.

DR. TURNER: Therefore, I think that, in Bullet 2, we should say incorporate -- Well, BAM should not be specified here, however, that that bullet is worded, and, you know, I would be very uncomfortable with -- I don't know the biology here, and I don't know the history here, but I would be very uncomfortable with separate stock assessments, with my limited knowledge, you know, assuming that larvae are being transported to North Carolina from the south, and so I would be very hesitant about two stocks, unless the genetics or stock structure information was strong.

DR. REICHERT: Chip, to that point?

DR. COLLIER: Yes, and Julie might have some additional comments, but what Steve brought up just clicked something in my brain, is red grouper is actually in a rebuilding plan, and so we would need the previous model done as well, to see how we are rebuilding that stock.

DR. REICHERT: That's not in the current terms of reference, and so I think that should probably be added, and, Julie, I thought I saw your hand up, or Judd told me you had hand up, and then I'll go to C.J. Julie.

DR. NEER: Good morning, all, and so I just want to clarify a couple of things here, and I think we're just getting a little wrapped around the axle on some stuff. First off, the Gulf red snapper was a three-area model, but there was all being -- Those three areas are added together to produce one estimate, and it's not separate stocks, and so, in this case, the stock ID would be the very first stage of this process.

I don't know that -- I would actually put that up there as Term of Reference 1 or 2, and it's very -- We have to do that before the data workshop is convened, because the data providers need to know how the data needs to be provisioned, and so that happens early in the process, sort of first steps.

It sounds like, from what I'm hearing, that here might be a recommendation, or perhaps the indication that these are two separate stocks, and that's what the -- So that would lead to two separate assessments to complete, provided there was enough information to make that

determination, one, and enough data to actually support separate models, and so those are the kind of things that would be reviewed at the stock ID level initially, and then at the data workshop level as well, to see if they could actually provision the data to do two separate models.

I think those two pieces of the puzzle need to somehow be incorporated in here. As Chip and Jie have already indicated, there was some initial preliminary information that was provided by the center indicating their desire and thought that these could be two separate models, and so all that stuff would need to be reviewed at the stock ID workshop, to help with that determination, and the center did believe that -- They had said initially that they were going to do separate models, as was indicated, and perhaps a BAM model for the northern region, or the northern stock, to be perhaps, and then for the southern area stock, if that proves to be a separate stock.

I like the changes that you guys are recommending with regard to not defining a specific model for those, for what might be two stocks moving forward. As Chip pointed out, this is a rebuilding plan, and so they're still going to need this continuity, using the same model with all the data combined that was done before, and that's needed.

Then, additionally I think it's unfortunate that we don't have any Science Center personnel on to provide some of these conversations, or answers, to the questions with regard to how this might proceed. I don't know if we have time to perhaps come back to this at another later SSC meeting when we can get more feedback from the center.

It sounds like this is going more along the lines of what we used to call a benchmark, with a data workshop and assessment phase, and perhaps even a review phase, with a CIE external peer review. If that's the case, we probably want terms of reference that are broken up by those sections, to make sure we're capturing all of your concerns with regard to the modeling at the assessment phase.

Even though the center is leading the modeling portion of it, you guys can still weigh-in with regard to the things you would like to see in that modeling section, and so I think that's also important to incorporate here. These are mostly dealing with data, these terms of reference that are up here now. Again, it's unfortunate we don't have anyone from the agency here who could perhaps answer some of your questions. This is not starting till quite late in 2026, or early 2027, and so I don't know what your feelings are on continuing these discussions for a bit, but perhaps not making final recommendations until we can get some more feedback from the center with regard to some of the questions you guys are bringing up. Thanks.

DR. REICHERT: Thanks, Julie, and I like that idea, although I think some feedback from the SSC may help with asking the questions to the center, and something I always -- Or I have felt, in terms of determining the model, that should always be determined by the available data, and so maybe we can add that language in there, rather than saying BAM, and I think that goes back to some of the comments others have had, and so anyway, but I'm looking at the group.

We had some good discussion, and maybe we can follow Julie's suggestion to just wait and see if we can get that additional clarification, and then come back to us in a future meeting, because we have some time to do that. Judd.

DR. CURTIS: Thanks, Marcel. I was just going to say I think that's a good pathway forward. We weren't initially even going to see these two terms of reference with red and snowy, because we did have some time on the backend, but we decided to put them forward, because we had a little bit of extra time and so, in future meetings, we can revisit this, and, once we get clarification on the capabilities of the BAM model and any other data that may help the decision in the stock ID workshop.

DR. REICHERT: Thank you. Steve.

DR. TURNER: Very quickly, for 4a, incorporate one or more indices of abundance.

DR. REICHERT: Thank you. I think this was good discussion, and so we will see this in a future meeting, and, again, maybe in a different form, as Julie mentioned. All right. Let's move to snowy.

DR. CURTIS: Okay. Snowy grouper is on a similar timeline. It's anticipated to begin in 2027 and having a terminal year of data for 2026. The last assessment was the SEDAR 36 update from 2020, I believe. Most of the initial, or all the initial, 1, 2, and 3 terms of reference read the same as red grouper, looking at providing updated information on life history.

This was done with a BAM model framework in SEDAR 36, and so running just an updated assessment model of the BAM, the SEDAR 36 BAM model, is written in a Term of Reference 2 . A couple of the requested changes and input data deviations, for snowy grouper specifically, is to incorporate the index of abundance, or an index of abundance, using the South Atlantic Deepwater Longline Survey, and then evaluating the different methods to estimate commercial discards, considering the observer program and discard logbook information.

The model parameter estimates in their variances section, Term of Reference Number 5, reads the same. Again, we'll make the changes there to 5a, and, for this assessment, because the incorporation of the South Atlantic Deepwater Longline survey was the only major new input and consideration, a topical working group would suffice for this assessment, and so that's written as Term of Reference Number 7, is to convene such a topical working group.

We've already had a workgroup that looked specifically at the SADL survey design, and provided feedback to the SADL team on its utility for an index of abundance for certain species, and snowy grouper was one of those.

During that discussion, the SSC recommended having then topical working groups for upcoming assessments that could use the SADL survey in order to conduct an index of abundance for those particular species at their respective SEDARs, through that topical working group format, and so that's why you see that here. Again, you've got the language for convening the assessment technical team as needed, the pre-decisional briefing, i.e., SSC check-in, and then developing a stock assessment report to address the TORs.

DR. REICHERT: Any comments, or questions from the committee? Anyone have any hands up online? All right. As Judd said, we'll incorporate some of that other language, and then this also is something that will not start until next year, or the year after.

DR. CURTIS: Yes, and so, at some point we'll need to recruit members for that topical working group, but that's also something we can do at a later meeting.

DR. REICHERT: Also, if any issues come up on a later date relative to the terms of reference, then we'll have an opportunity to take another look at that, but I don't expect that to be the case. Fred, go ahead.

DR. SCHARF: So, coming back to the SEDAR process and the revisions we talked about yesterday, you know, one of the things that I have in my notes is that the components, right, that would be included are data workshop, webinars, et cetera, would be finalized before the TORs, and so is this -- Is snowy grouper sort of being viewed as a Tier 1, like at the top tier of the SEDAR, where it's basically an internal only, that doesn't include the SEDAR process, or is it being thought of as one that would have a full SEDAR process, because it's not really clear, again, from the TORs, which pathway it's going to go down.

DR. REICHERT: Thanks, Fred. Yes, because there is a topical working group, and so I had a similar question.

DR. CURTIS: Right. If it involves a topical working group, data workshop, or any of those other assessment components, then it goes into that lower -- "Lower tier" is the wrong kind of terminology for it, but the more bottom pathway that was on that slide, and then it won't include participation from SEDAR personnel.

DR. SCHARF: So I guess I'm wondering, and would it benefit us if we had two different sort of templates for TORs, one that's going to go through that top sort of approach and one that's going to go through a full SEDAR, so it's really clear, when we open a set of TORs, which one -- Which path we're going down, so that the template would be a little different? One would include sort of elements of a data workshop, or a review workshop, et cetera, and the other one wouldn't have those.

DR. REICHERT: Yes, and I'm --

DR. SCHARF: With the SSC check-ins, like for a check-in, be incorporated as just a separate line item in the TORs?

DR. REICHERT: I may not be the right person to answer that question, but I think it may be good if you're talking about Tier 1 and the other tiers, but, within the other tiers, it all depends, and that's the flexibility that this new system is giving, that it very much depends on the available data, et cetera, and so, Chip, maybe you can -- That's my hesitation for coming up with like, quote, unquote, templates, because of the increased flexibility in this new system. Chip.

DR. COLLIER: Yes, and, at least me personally, I've struggled with these TORs and how to make something that's engaging for a long list of items that we're requesting, and so I think what we can do on this is just -- Essentially, the version that we bring to you, it would have all the components listed.

We're going to talk about -- Not the top tier that's just within the Science Center, and this would be the full SEDAR involvement, and then it would go through the different components that could

be added, and so, if for a certain stock, you have a stock ID, and it's not needed, it would just say not needed. Then the data workshop, not needed, and it would go through all those processes, to make sure that we can check off, and the discussion is had that you're okay with it, because I think, looking at these, you can get lost in some of the details that you might be missing.

DR. REICHERT: Thank you, Chip. I think that would be really helpful for me, and I think for the committee, also. Even if it's not occurring, have it listed in there, so it's clear to everyone what the intention is of the various components. Thanks. Genny.

DR. NESSLAGE: Could you go back up to Number 3, please? I was just looking back through our old recommendations, and did we discuss the shore mode issue already? Was I zoned out? The last assessment, there were actual shore mode reported landings of snowy in MRIP, and I think that needs to be addressed with this assessment.

DR. CURTIS: Great catch, Genny. That was omitted, and so I can add investigate shore mode catches.

DR. REICHERT: Thanks, Genny. Anyone else? Seeing none, any hands up online? Okay. Alexei.

DR. SHAROV: Maybe this is a minor comment, but it repeated itself in several TORs that we reviewed yesterday and today. It's about the address as many SSC recommendations as possible. I mean, if you really want them to be addressed, maybe it's just better to write address the SSC recommendations, and that language would, you know, be more instructive to actually go through each of them, and then, eventually, only those that had information could be addressed.

Otherwise, I mean, you could get it back, and people would say, well, that was only one that could be addressed, that we didn't even consider, and it’s just about the language, and it seemed to me that it would be simplified.

DR. CURTIS: So, Alexei, are you suggesting incorporating that as a new TOR to address concerns from previous assessment and SSC review, or is that going to be embedded in one of the existing TORs?

DR. SHAROV: I was simply suggesting to remove “as many as possible”, and just simply saying address the SSC recommendations, right, and you might disagree with it, and that's totally fine.

DR. CURTIS: The one concern I would have with that is we need to enumerate all those concerns, which, in some cases from the SSC reports and assessment reviews, can be quite lengthy, and so the goal is to synthesize some of those ideas that are reoccurring between different review panels, and then, in the draft language here, to reflect that, as opposed to providing an exhaustive list of all the concerns that were identified.

DR. REICHERT: Can we change the language to “address SSC recommendations where possible”? I mean, I agree with that, but I'm very hesitant to go back and list every single comment, or recommendation, by both the SSC and other reviewers.

DR. CURTIS: We're talking about two different things right now, and so are we talking about the recommendations coming from the last assessment review, and the subsequent SSC's review, and the comments from the report? Those have been synthesized and drafted within the text of these terms of reference. The report for the catch level projections workgroup, and the recommendations therein, are identified at that link, but are not enumerated in this document.

DR. REICHERT: Sorry. I think I made the same mistake before, by confusing the SSC recommendations with the SSC working group recommendations. Okay. Thanks. Luiz.

DR. BARBIERI: Well, I think that, you know, Alexei brings up a good point, right, because it's important for us to evaluate whether those recommendations were addressed or not. They don't have to actually -- If they're not possible, they don't have to do it, and incorporate that into the assessment, but it just can provide some -- A bullet point explaining that we couldn't address this, because X, Y, and Z.

To avoid having to have a super long, right, terms of reference, with all that list, I mean, we could actually put that SSC report as a working paper, right, that gets referenced by the assessment team to look into it and make sure that they provide either a yay or nay, right, so at least we will know explicitly which ones they addressed.

DR. REICHERT: I think that's an excellent idea, and I don't think we have traditionally done that, but I think that's a great idea, but then still, and I think, yesterday, we talked about that, because they were specific -- The SSC review comments, or recommendations, were not specifically mentioned, but they were mentioned as specific -- Like recruitment, or some other uncertainties, and so my question to the committee is would it be good to make that a little more generic, especially if we add the report to say address, where possible recommendations, from the previous SSC review, or something like that, or previous reviews, whether it's SSC or CIE? Anyone? Not necessary? Something like that? Okay. Thanks for suggesting some language.

DR. CURTIS: Similarly, we could link those documents that I've heard was a suggestion as part of the working -- That can be submitted as a working paper to the next SEDAR, and then that can be linked within these terms of reference, so that those are carried forward from the previous assessment.

DR. REICHERT: Yes, and I think that's good. Like we did with the workgroup report. Thank you. Thanks, everyone. I appreciate it. Again, helpful discussions, and then we can take another look on Thursday, if needed. I appreciate it. I actually need to take a quick break. Let's take a quick break, but I forgot whether we had an opportunity for public comment, but I just want to have that opportunity here. Anyone in the room want to make public comment, or anyone online?

DR. CURTIS: No hands raised.

DR. REICHERT: Okay. Thank you. So no public comment. Thank you. Let's take a brief ten-minute break, and we'll come back at 10:55, or 11:00? Judd already made a decision. Thanks.

(Whereupon, a recess was taken.)

DR. REICHERT: Welcome back. Since we were moving agenda items around, we just decided to continue that. We will -- Since we have about an hour, we decided to do the snapper grouper management strategy evaluation, and give us that hour until lunch. If we have time, we can come back to the proxy working group. If not, we can punt that to tomorrow. It's a relatively short agenda item, and so the attachment is Attachment 13. The assignments were Jeff, Amy, Alexei, and Jason, and Chip was starting to provide the overview, or the presentation.

DR. COLLIER: I'll do the presentation.

DR. REICHERT: Chip will do the presentation. Thank you. Chip, go ahead. We are trying to solve some technical issues, and so bear with us for a minute. Folks online, just as an FYI, we're trying to pull up the presentation, and so bear with us.

DR. BARBIERI: Marcel.

DR. REICHERT: Luiz, go ahead.

DR. BARBIERI: While they get this issue resolved, refresh my memory. For this snapper grouper MSE, what's the expected time of completion?

DR. REICHERT: Chip can answer that question.

DR. BARBIERI: How far along are we in the process?

DR. COLLIER: I'll get into that in the presentation, because how far along we are depends on your perspective, because we're kind of restarting.

DR. REICHERT: Thanks, Chip. Go ahead.

SNAPPER GROUPER MANAGEMENT STRATEGY EVALUATION UPDATE

DR. COLLIER: All right, and so just a reminder of the management strategy evaluation for the snapper grouper fishery. This doesn't come to a surprise to this SSC, but managing red snapper has been challenging for the council, and, you know, it's -- What we're trying to do with this, and I think Jim has articulated it very well, is to compare management alternatives, and not to pick the best one.

We're trying to evaluate them relative to each other and find out ones that don't work, and then have the council consider ones that could potentially work, but we're also not trying to develop acceptable biological catch levels or annual catch limits with this one. We're really trying to evaluate the management scenarios.

A couple of the stocks that we have in this management strategy evaluation, they are in rebuilding plans, and so, thinking about those, that's one of those must-pays that you have to have in Magnuson-Stevens, where we have to rebuild overfished stocks, and so that's one of the must-pays that we're including in there, but the other big issue that we're trying to address with this management strategy evaluation is the number of discards in the private recreational fishery.

It's been increasing, and it has been limiting landings, overall landings, in the fishery. If you look at some of the stocks, it's well over 80 percent is going to dead discards, and so that's definitely hampering what can be brought back to shore, and so not only the council has voiced a desire for a new approach, but also stakeholders have voiced a desire for a new approach, in order to move this fishery along and make it better for everyone involved.

Some of the background on the snapper grouper management strategy evaluation, we really started this back in 2022, with our first evaluation that was done, and, looking at this one, it was done with an operating model based on BAM assessments for black sea bass, gag, and red snapper, and they were using recent assessments for these high-profile species.

The management strategies that were evaluated were a status quo, full retention, minimum size limits, and spatial closures, and then investigating some of the performance metrics that were looked into, the probability of rebuilding, relative short-term landings, relative long -term landings, and the fraction of discards.

Then, with these management strategies evaluations, what we're trying to do is also make sure they're robust to different, I guess, alternative states of nature, and so we've looked into different natural mortality, recreational catch levels, effort, and recent recruitment. If you want to look at kind of the operating model for the management strategy evaluation, that is provided as a link in there.

The outputs from that 2022 was presented just last year, and one of the big things -- What it did was it developed a modeling framework to work with multiple snapper grouper species. It matched the BAM outputs very well. Usually, if you plotted them over the top of each other --

DR. REICHERT: The presentation wasn't on the web?

DR. COLLIER: It was a pause screen. Sorry.

DR. REICHERT: Okay. For those on the web, I think we are caught up.

DR. COLLIER: It was Attachment 13.

DR. REICHERT: Attachment 13, but I think we are back online with that, right?

DR. COLLIER: Yes.

DR. REICHERT: Okay. Thank you. Sorry for that.

DR. COLLIER: The snapper grouper management strategy evaluation outputs, one, it developed the modeling framework, as I had mentioned. Two, it matched the operating models from the BAM assessments very well. We weren't trying to develop a new stock assessment through this approach. We were trying to make sure it matched those, and it evaluated 132 different management scenarios. I think that's amazing that that amount of work was done. It didn't seem like it was that much, because he was able to stick it on a single slide, but that's what it did.

There were basically five management categories, as I mentioned before, that status quo and full retention, and then there were combinations of different management approaches, and then evaluating different levels of recreational effort.

The final piece that was included in this was a spatial structure, where it had three different areas, basically broken up latitudinally, and so we had south of Cape Canaveral, and we had Cape Canaveral to the Georgia-South Carolina border, and then North Carolina-South Carolina, and then, within each of those areas, there were depth zones, based on nearshore and offshore, which was roughly broken out at about a hundred feet.

Looking at some of the outcomes, and, just to remind folks on how things worked out, we have three different scenarios plotted here, looking at three different objectives, and so, in the top line here, all of them are being evaluated relative to the probability of rebuilding, and then we have the short-term yield at the top, we have long-term yield in the middle, and then fraction discarded in the bottom.

Looking at the short-term yield and long-term yield, what we want to do is get higher long-term yield and short-term yield, and then reduce the number of discards, or the fraction discarded, and so you're trying to see the top two go up, the bottom one go down, and then, for the rebuilding, you want it as far to the right as possible.

Diving into this, the SQ refers to the status quo. Then we have a scenario where the recreational effort is 35 percent of the current recreational effort, and then we also have a scenario where there's full retention for just an offshore fishery, and so the inshore fishery, from south Florida up to the North Carolina-Virginia border would be closed. That’s a pretty dramatic closure.

You can see here, for red snapper, this short-term yield for the full retention offshore, it increased the short-term relative yield, and it also got you to a higher probability relative to your status quo. Similar rebuilding probability occurred with 35 percent of the recreational effort. However, it did not have as much short-term yield as what was available in the status quo, as well as the full retention offshore.

Now, because we were looking at three different species, these scenarios varied in their successes, and so you can see that the status quo here for black sea bass had the highest short-term yield of all the scenarios, but it also had the lowest rebuilding, and that was pretty consistent through all of this, where looking at status quo typically had a pretty low probability of rebuilding, for multiple species, and some of these issues for the species are there's low recruitment, with the exception of red snapper, which is having high recruitment right now but the reason for black sea bass having relatively low yield in that full retention offshore is there's very few black sea bass in greater than a hundred feet of water, and so that scenario makes it very challenging to manage across multiple species.

Similar results were observed in the long-term yield, similar to the short-term yield, but then, diving down into the number, or the fraction discarded, obviously, for all three, if you had lower effort on that inshore side, where there's typically smaller fish, more abundant fish, you tended to have a lower fraction discarded.

Those are just some of the findings that were observed in the previous management strategy evaluation, but we are continuing on with this, and we're going to have this new contract through September of 2026 to revise the management scenario, the MSE, and we've been working to refine the management scenarios. The council talked about it at their September meeting. We're also exploring other management objectives, potentially consider additional uncertainties, and then revise the MSE to be presented to the SSC in April of 2026.

A really big component of this has been some of the work that the University of Florida is doing right now. They've done some surveys to really dive into some of the perspective of stakeholders, and so I'm going to hand it over to Kai, because he's been leading that group for the University of Florida.

DR. LORENZEN: Thanks, Chip. I just want to give you a very brief verbal update here, and so we did that situation assessment, which is basically a qualitative interview study of stakeholders, earlier this year, and among the outcomes of that was the realization that we needed opportunities for more -- Sort of more continued, and more close, engagement for a subgroup of the stakeholders with the MSE.

That led to some of the activities that we're doing in the current project, and so we had two short projects, basically, one, the situation assessment that ran for a few months, and now we're doing a recreational angler attitudes and preferences project, and the main part of that is a , that I'll come back to in a minute, but it also has put together a working group of stakeholders.

Those are not only recreational anglers, but this includes commercial and charter-for-hire people, to learn more about the MSE, and engage with the workings of the MSE during our project, but also hopefully continuing next year, when our project is done, to, you know, continually work with the MSE. The idea is that those people, and some of those are advisory panel members, that those will engage with the process, and then also provide the link with their communities and discussions about the MSE.

We also did a desk review of current knowledge about stakeholder attitudes and preferences in the South Atlantic recreational fisheries, and so, for that, we have a draft report, and there will be a paper coming out of that eventually, and now we're working on a survey, and that is really the main component of this, where we're looking at attitudes and management preferences.

That survey, I just have the more or less complete draft of that in my inbox, and we'll be sending that to the working group for pre-testing later this week, and that survey basically -- That will be done on a survey panel, and so we'll be -- Through a survey company, and we have a panel of anglers that we'll be using. We will also send it to a sample of the Florida reef fish permit holders, and so Florida being special, in that it has a reef fish survey, and basically a whole --

Then it will also be available to the general, you know, fishing public, through a web interface, and so anyone can go and do it, but you can see that we have several different ways of sampling here. There's the panel, and there's, you know, a sample of the reef fish permit holders in Florida, and then there's basically self-selected people, who can go and make their preferences known, and that survey includes a mixture of fairly general questions about attitudes and preferences and their own fishing experience.

Then it includes a discrete choice experiment, to get more detailed information on the sort of tradeoffs that people make, and I want to mention here that one of the things that we did try to do with the working group, and at the recent council meeting as well, was to see can we come up with quite specific sort of management scenarios that we could test, and it turns out that we're not really at that place.

What we're doing now is to take a broader approach and basically looking at different components of strategies and how people trade those off against each other, and so that's where we are. We have like a couple of months left to complete this work, and so the survey will go out very, very shortly, and, by the next time we meet, we will have results. Thank you.

DR. REICHERT: Thank you, Kai. I saw Chris's hand up.

DR. DUMAS: Thanks, Kai. That's really exciting to hear about that study. I think it's going to be very informative. One question I have about a specific possible outcome from the study, and are you asking questions, in the discrete choice experiment, or maybe some of your other questions on the survey, about preferences across number of fish caught, versus size caught, versus number kept, and the preferences across those?

DR. LORENZEN: Yes, and those are part of the --

DR. REICHERT: Thank you, Kai. Chip. Is that a clarifying question for Kai?

DR. TURNER: Yes.

DR. REICHERT: Steve, go ahead.

DR. TURNER: Kai, how did you select the recipients from the Florida permit list? I think, you know, you have east coast and west coast there, but you also have people who just were asked do you want to be on the list, and everybody says yes, and so was there -- Were there selection criteria?

DR. LORENZEN: Yes, and we have not selected that sample yet, but, essentially, I mean, we don't know. Yes, people say they want to be on that list, and then they're on that list, and so we do have questions about their recent fishing activities, so we can find out whether they actually have been reef fishing, but we won't know, you know, when we select them for the survey.

DR. TURNER: Will you be examining, you know, where they're departing from, the east coast, west coast, et cetera?

DR. LORENZEN: Yes.

DR. REICHERT: Thank you, Kai. Chip. I want to make sure -- Another clarifying question, because Chip still has part of a presentation, but go ahead, Jennifer.

DR. SWEENEY-TOOKES: I just wanted to ask you, and you're doing this really cool sampling through multiple avenues, and so is there any mechanism in place to make sure people are not responding through multiple avenues?

DR. LORENZEN: So we'll do the panel survey first, and then we'll put out the, you know, doing the sampling of the reef fish permit holders, and then it will go out for everyone else, so we're not getting -- So basically, we'll work our way to the more self-selected people at the end.

DR. LORENZEN: Well, they could, but, I mean, typically what we get is we get maybe a few tens, and sometimes a few hundred, people out of the self-selected will have a larger sample from the survey, but mostly our concern is to not have people who get selected through the panel or for the sample survey to instead go to the public input link, if you like. That's the main concern.

DR. REICHERT: Thanks. Thanks, Jennifer. I didn't mean to cut you off, but we have an opportunity later on during our questions and discussion to add some more questions for Kai. Chip.

DR. COLLIER: All right, and so, as Kai had mentioned, getting to the place of a management scenario has been challenging, and so we discussed this quite a bit, or the council discussed this quite a bit, at the September council meeting, and they recommended a series of management scenarios, and the big one that they would like to do is consider an aggregate bag limit.

What that is referring to is having multiple snapper grouper species be considered into the bag limit, and this is based on the idea that FWC has an exempted fishing permit going on right now, where they're evaluating this aggregate bag limit, and folks seem to be fairly interested in it, and it potentially seems to be a mechanism to reduce discards.

That's what we're hoping, and so, although aggregate bag limits themselves would not necessarily limit overall number of discards, mandatory stopping would, and so it would be a combination of those two approaches. Once folks reach an aggregate bag limit, the idea would be is they're going to stop fishing.

This may not be sufficient to end overfishing, or rebuild some of the stocks, and so we also requested additional management scenarios to explore, and they requested exploring spatial management, with not having extremely large areas closed, and then they also talked about seasonal management as two other management alternatives.

What species to include in this? For a management strategy evaluation, you're just trying to compare the overall management approaches. You don't necessarily need to get into the entire suite of fifty-five species, and so what the council is intending to do is recommend five to six species per state, with Florida having two zones, recognizing the fact that, around Cape Canaveral, you're getting a break in the species distributions, and so Florida would have a zone north and south of Cape Canaveral. I'm working with council members right now to develop a list of species of five or six.

In all likelihood, it's going to be the three that we had previously, which were black sea bass, red snapper, and gag grouper for those northern areas, and it may include a species like white grunt, that's currently unassessed, and so we're going to be talking about that, on how to deal with a species that's unassessed, but, in south Florida, it's likely to have species like mutton snapper included with it, and so just trying to figure out what species are targeted with red snapper, and working through that right now.

The operating model, we're looking to estimate abundance and biomass, as you need to have for the operating models for the different species. What we're proposing to do, what the technical team proposed to do, was use the most recent available assessments, update those with more recent information, and then, for species that don't have a stock assessment, use the open MSE's rapid conditioning model for some of these unassessed species.

It has been explored for some other species in the past. If you want to see examples, you can go to the Blue Matter webpage, and click on the rapid conditioning model, and they have a suite of species. They've worked in the Gulf of Mexico, looking at lane snapper, almaco jack, greater amberjack, and I think there was maybe one other species.

Some of the council performance objectives that they have considered for this management strategy evaluation, one is to rebuild, successfully rebuild, overfished stocks, or avoiding an overfished status, if the stock is not overfished. Short-term landings, look at average landings from years one to three in the projections, and then look at long-term landings, and those would be using the last ten years of the projections.

Discard fraction, recognizing that one of the main impetus for having this management strategy evaluation is to reduce the number of discards, and potentially extend at least the red snapper season a little bit longer, if we can get those discards down to an acceptable level. Every time we go out, we hear, from recreational anglers, what they would like the managers to consider, and that is access to the recreational anglers, and they view that as either number of days or number of trips. They want to be able to go out fishing as much as possible.

Right now, we do not have an economic proxy that's in this evaluation, but I think that could be -- I think it could be a very important part. Thinking about the -- We have the biology, and we have some of the social science in there, with the access, and then we just are lacking some of the economic values in there, but we're going to be working on trying to put an economic proxy in there.

What we would like, from the SSC, is a little bit of discussion on the operating model approach, and I'll come back to these questions after I've gone through them. Once again, we're going to be using past SEDAR assessments, where they're available, for the species that are being considered. For species that we do not have stock assessments, we're going to be using those rapid conditioning models, which basically ingests all the available information that you may have. It looks at a range of data-limited approaches, and it gives you potential outcomes from those different management approaches. Once again, the goal is to compare the management alternatives, and not to set an ABC.

The questions for the SSC that we have is, does the SSC have concerns using past SEDAR assessments or the rapid conditioning model, noting that the landings and indices of abundance would be updated as appropriate. Some of these stock assessments might be a little bit long in the tooth, and so we would need to update with some of the more recent information.

For some of the past SEDAR assessments, are there any diagnostics that you would like us to consider when we're matching the management strategy evaluation operating model with the outcomes of the management strategy evaluation operating model, and then, finally, what output should be included in the report for rapid conditioning model, if used? Trying to think about --

Trying to think ahead what you all would like to look into, in order to make sure that that model is representing some appropriate information.

Another series of questions for the SSC is aggregate bag limit is a challenging analysis to do. Basically, there's an assumption that, as the population increases, you would more likely reach a bag limit. Now, with an aggregate bag limit for multiple species, it's going to be even more challenging, and then potential desirability of the fish that would be in the bag. Are you more likely to keep a gag, versus a white grunt, that you had previously put in the box, and how does that work out?

With that, we do have a list of scenarios, on the left, where the aggregate limits -- We do have current aggregate limits in place for some of the snapper grouper species, and so there's aggregates for the deepwater complex, and there's aggregates for the shallow-water grouper, and there's aggregates for the other twenty species, and there's snapper aggregates. Those would all remain in place. This additional aggregate would be put on top of that. The current aggregates that are in place may need to be revisited, to be reduced, if the aggregate bag limit is currently less than what is allowed to be kept in those.

Size limits would remain in place, and, thinking about some of the size limits for two of the species we have in there, we have black sea bass and gag grouper. Those size limits seem to be the ones that are limiting harvest of the species, and so removing the size limits could impact severely what would be available in the offshore fishery. Both of those have an inshore component, where the juvenile fish would be more likely interacted with in shallow water, and removing the size limit could induce harvest in those shallow waters, where these fish are very small and potentially have a higher survivorship.

Mandatory stopping is going to be needed to reduce discards. People are going to have to stop once they get to their aggregate bag limit. Those are all assumptions that would be going into this analysis, and so the questions for the SSC are the aggregate bag limit is complicated, and a multispecies will have challenges.

Does the SSC have any examples of similar analyses that have been done in the past that can be used to help guide it? Blue Matter has done aggregate bag limit analysis in the past, but it's typically been done on a single species. They have some ideas, moving forward, but any ideas that the SSC might have would be greatly appreciated, and then modeling mandatory stopping.

We recognize that compliance is going to be a serious issue for , and we’re trying to figure out how to address this. Right now, we're thinking this is something that could potentially be done through robustness testing, but are there examples that the SSC could provide to help in modeling the compliance, and are there similar regulations that you all view, in your mind, that would potentially replicate something like a mandatory stopping?

Then the final part is just, once again, I talked about the spatial analysis. These are the different areas visualized. You can see the color differences there, and then we have the one and two for the North Carolina-South Carolina. That line that's in between them, that's the 100-foot line going up and down the coast, and just trying to put this out there, and one of the things that Adrian has been doing is using some of the outputs from the Cao et al. 2024, to really figure out how to place the different population levels into these different box areas, and so that's been a challenge that

Adrian has been working through, in order to address some of the spatial management. If we're going to be doing an MSE, you do have to parse out the biomass into these different areas, and, because we do not have a spatial model, we're having to do that on top of it. With that, I'll go back up to the questions, or the first question, which was the operating model approach.

DR. REICHERT: Thank you, Chip. Before we start discussing that, I want to open the floor for some clarifying questions. Then we'll go to public comment, and then we'll address the questions that Chip put up. Kelsey, go ahead.

DR. ROBERTS: A quick clarifying question. You mentioned that spatial closures were a management category that you considered. Were those fixed or dynamic closures?

DR. COLLIER: We have not talked about it in great detail. There was mention of having a combination of those, and some of the suggestion was to have a fixed open area, along with different potential of how you fix the closed areas, and so we haven't gotten great detail. The detail we have is no large closed areas.

DR. ROBERTS: Can the BAM model -- Does it have the architecture to integrate dynamic closures?

DR. COLLIER: It does not. It doesn't have a spatial component to it.

DR. ROBERTS: Thank you.

DR. REICHERT: Thanks, Kelsey. I had a question, and so these aggregate back limits are on top of the existing regulations, if I understand it correctly, and so, if the ACL is met for a particular species, or the bag limit is met for a particular species, that means that only the other species will remain in that aggregate bag limit, and so the fisherman can only keep the other species, because of reaching the bag limit for a particular species. Do you know what I'm -- So that's correct?

DR. COLLIER: Yes, and you're correct. So if -- Let's say a species was in there that has a lower ACL, and that is projected to be met, that species would be closed, and, although it would be in the aggregate bag limit, they would not be able to possess those, because we can't go over the ACL, and we can't go over the SSC's ABC recommendation.

DR. REICHERT: Thank you. Chris.

DR. DUMAS: So the angler would have to throw that fish back, but still count it towards their aggregate bag limit for that day?

DR. COLLIER: No, and so, right now, the way that we're envisioning this is it's a landings-based aggregate. It's not a catch-based aggregate.

DR. REICHERT: Alexei, go ahead.

DR. SHAROV: A couple of questions. In the full retention option, was it considered, or was it modeled, that the effort could be shifted from the like inshore area to the offshore area and then compensate, or attempt to compensate, for the closures?

DR. COLLIER: So are you asking if effort was shifted from inshore to offshore?

DR. SHAROV: No, and I was asking if it was part of the modeling, that if it was explored. That is, the option of the full retention, as I understood it, is so you close the area less than 100 feet in depth, right, and you allow for full retention in the offshore, or what we call an offshore area, and that's where the savings come from.

You know, a fraction of the population is distributed in the shallower waters, but you cannot fish there, and so you only catch the fish, you know, in the offshore region, but, if that's the case, then there could be an immediate response, in just simply, you know, trips now being longer, and people would be going and catching those fish, and that's what I'm asking, is that -- Was it part of the analysis that, yes, there will be a response, and the effort will be shifted to the offshore, and yet still we achieve the reduction and rebuilding?

DR. COLLIER: I would have to look into the report in more detail, on how they treated the offshore, the full retention offshore, looking at that effort part of it. I do believe there was some shifting of effort to the offshore part, but I'm not exactly certain how that was -- I can't remember how that was done, because remember this is also a recreational model, where we do not have spatial fishing effort, and so I would have to dive in to really see how that was parsed out.

DR. SHAROV: Okay, and one more question on the -- Was reduction and discard mortality considered as one of the management strategy options? I didn't see it here, that it was explored that, say if you reduce the discard mortality by half, and you get a benefit of X, Y, Z, et cetera.

DR. COLLIER: So Adrian has put together one for red snapper, and I'm just thinking about the version that was provided to the council in September. It was assuming that no discard mortality was occurring, and the overall benefits that would happen with that is the population, obviously, would increase, but that is an extreme assumption of no discard mortality, and it's not likely to happen.

DR. SHAROV: It's more like exploring the limits, right, and so no mortality, or the high mortality. Gotcha.

DR. REICHERT: Thanks, Alexei. Any other clarifying questions? Steve.

DR. TURNER: On the second slide, you indicate that the aggregate bag limit analysis will focus on data collected through MRIP. I'm wondering about other data sources, such as some of the observer information, that might be more useful than the MRIP data.

DR. COLLIER: Are you referring to for headboats and charter or private rec?

DR. TURNER: Well, I think the charter is very similar to private rec, and so it might be considered. Now, maybe I'm wrong about that, but that's my understanding, and so the charter might be useful in that analysis.

DR. REICHERT: Thanks, Steve. Any hands online, Judd, or Chip? No, and so let's go to an opportunity for public comment. Anyone in the room? Any hands up online? Seeing none, there's no public comment.

Then let's move into the questions and open the floor for discussions, or thoughts on the questions that Chip had in his presentation, and it may be good to pull up that first slide, and I think it's slide 11, and those questions are similar to those in the overview, our action items, and so anyone want to -- I'm going to open the floor for suggestions or comments. Do you want to -- Give us one second to talk about some of the logistics.

Okay. We'll keep the presentation on there, and then Judd will make some notes, and we'll take a look at the notes later. That was briefly what we were discussing. I had a couple of questions about, you know, the output of past SEDARs. Unfortunately, I don't have a lot of answers, but I do have a couple of questions, and so you're asking about past SEDAR assessments.

In a number of instances, we've seen that, with a new assessment, there were considerable differences with the previous assessment, either because new data were available, data were adjusted, new model approaches, or new models, adjusted models, and have you guys discussed how to how to approach that? If you want to use like -- Are you guys using multiple models, or the most recent model, or what's the what's the thought there?

DR. COLLIER: So we would be using the most recent stock assessment for the species.

DR. REICHERT: Because it because it said the past SEDAR assessments, but that would be the most recent? Okay, and I think it would be good to -- Anyway, to make sure that. Okay. Well, I think it would be good to at least list that that's the assessment that will be used.

DR. COLLIER: Yes, and it will describe which assessment is being used in the report, and so that's going to be very clear, where it's coming from and how it matches up to that assessment, and so it will look at the biomass levels and the F levels coming out of the assessment and compare.

DR. REICHERT: Okay. Thanks, and then, of course --

DR. TURNER: May I, to that point?

DR. REICHERT: Yes, and sorry. Go ahead, to that point, Steve.

DR. TURNER: I thought I heard, in this presentation, that, if an assessment was old, the MSE group would update that.

DR. COLLIER: Similar to what's been discussed for some of the projections, where it was incorporating new information where available, and so it would incorporate the landings that have occurred since then, as well as the index of abundance, if there's an index of abundance for the species. Hopefully, for these species that we're going to be working with, there will be an index of abundance. Otherwise, it's going to be very difficult to have something to use to base the MSE off of.

DR. REICHERT: Thanks, Steve. Another note I had is I'm not entirely sure how, for instance, uncertainties are incorporated, or assessment uncertainties are incorporated, in that, and so will you guys look at, for instance, CIE and SSC review, to look at significant uncertainties identified during those reviews? Again, I'm not sure how, or if it's possible to include that question, and, again, it may demonstrate some of my unfamiliarity with the inner workings of the MSE.

DR. COLLIER: So, during the robustness testing, that's where we're looking at some of that uncertainty, and what we've looked at in the past here -- We have listed natural mortality, recreational catch levels, and the reason that that was put in there is because, when we were starting this, or coming towards the end of it, that's where it was discovered that there's that potential bias in the MRIP survey, and so they wanted to incorporate that.

Changes in recreational effort was also investigated, and then, with many of these species, we're having different levels of recruitment in the more recent time period, and so those were investigated for the different species. If there's different pieces of robustness that SSC is recommending, please let us know, and we'll incorporate that where it's appropriate.

DR. REICHERT: Thank you. Luiz.

DR. BARBIERI: Thank you, Mr. Chairman. Well, Chip, I think that this is the best that they can do right now, right, is to really use the past assessments that have been completed, and reviewed, and uncertainties identified. I think that members of the public, and perhaps members, council members, as well, will have some concerns about the credibility of assessment results, depending on the species, right, and because -- You know, how could we adjust some of those issues, in terms of, for example, the level of discards, right, is a concern, and that's being measured really based on the older version of MRIP, right?

All of those things, but I just think you guys should be ready to address those questions and say, listen, this is the best we can do at this point, because I don't know what else could be done, you know, and that this is being looked at all from a relative point of view, and so it may not, in absolute terms, really provide what you're looking for, but, in relative terms, it might, and so I don't have anything better than what you've already recommended here.

DR. REICHERT: Thanks, Luiz, and that's why I said that, you know, I had some questions, but, unfortunately, few specific answers, and I saw Jeff's hand up online. Jeff, go ahead.

DR. BUCKEL: Thanks, Marcel. Chip, could you go back to this slide that has the list of new management approaches that the council developed? Thanks. I was curious about the, you know, the reduction in effort was explored in the last round of scenarios, the 35 percent reduction.

Was there any discussion about pushing that to a further reduction, in like a potential snapper grouper permit, right, and like there's a lottery, and, if it's your year, you get the permit, but they only give out a certain number of those, to reduce the effort, because that seems like a scenario, and maybe this dovetails with the UF study that that panel can discuss, and it's like would you rather have an area closed or --

You know, with the spatial management, right, or would you rather have it open all the time, but you -- Every three or four years, you get a permit to go, and so I guess that -- If you have any

information about the council discussion about that type of -- That other management scenario, which is just reducing effort through some lottery-based approach. Thank you.

DR. COLLIER: Yes, and the council did discuss this at their September meeting. I think we had a list of eight different options for them to select from, and a tag system was included in there, and so, within that tag system, you can imagine that that would be a lottery system, if you're using that to reduce overall effort, and it was -- The council was not in favor of incorporating that type of management approach right now.

They wanted to investigate these different areas, in order to see what would work best for the recreational fishery, recognizing the fact that they have explored tag approaches in the past, although it was usually at a single-species level, and not a multispecies level. In some of the discussions for those tags, it's very different than when you're looking at a management of wildlife, where they can give out a number of tags based on how they perceive harvest could work.

We have to prevent overfishing, and so we would not be able to give out beyond an ABC or an ACL for recreational fishery for each individual, and so that would mean, because some folks oversubscribe, like was mentioned earlier to the SRFS survey, it would likely occur in the private recreational fishery, where people would oversubscribe, and, therefore, not all the harvest would actually go to the folks that wanted to be able to harvest the fish.

DR. REICHERT: Thanks, Chip. Anyone else?

DR. BUCKEL: I guess maybe just to get others input, I feel like if the MSE is being done in a -- If they could run a scenario where it's with these different reduction in effort, right, and they did the 35 percent, and that didn't -- I don't think that did it for most species, if I followed the graphs that you showed, and so maybe just do a range, and see where it does -- Where that status quo, you know, of 45, 55, et cetera. I don't know how much work that would be, and probably not much, and just to see like, okay, well, this is -- We would have to reduce it this much to get these -- You know, what we're looking for, in terms of positive outcomes.

DR. REICHERT: Chip.

DR. COLLIER: In the previous one, that's where a lot of those 132 scenarios came from, was investigating different levels of effort that would be occurring in the recreational fishery, and so it was explored from 5 percent all the way up to 100 percent, and so that's -- That's where those were coming from, and sorry, and my brain just stopped. What was the question again, Jeff?

DR. BUCKEL: You answered it. It sounds like it's already been done, and so that's good, in case there was something that -- You know, if these other scenarios don't work out, and, you know, this has to be reconsidered, about just a reduction in effort, that those -- You have those results, and so we can take a look at that. Thank you.

DR. REICHERT: Thanks, Jeff. Coming back to the question overall, I sense that the SSC does not have any major concerns with using the output from the most recent SEDAR assessments, and we made some comments relative to that and the uncertainties. Anyone disagree? Seeing none, then I think that's -- Then, Chip, in terms of some of the other sub-questions do you -- Did you get enough feedback, or would you like some more specific comments from the committee?

DR. COLLIER: Just making sure that, when we're going through this rapid conditioning model, if a species like white grunt is included in the evaluation, that would be a completely new stock assessment, and so what -- What would you like to see for that kind of operating model, to verify that it's working? Usually there is a -- I'm just trying to pull it up now, where they have some descriptions of information that was used in previous rapid conditioning models, but I'll answer questions on that.

DR. REICHERT: I saw Jim's hand up.

DR. GARTLAND: Would it be possible, for some of the ones that we do have an assessment for, to make an operating model based on the assessment, and one based on the rapid conditioning model, just to see how they perform relative to each other? So we don't know which one is the truth, right, and the point of an operating model is to kind of model truth, just to see how close or not close an accepted assessment for one of these species and an operating model based on a rapid conditioning model -- How close they track, because we can't do much with, for example, white grunt. If you don't have an assessment, you have nothing to compare to, but, if we take one that we already have an assessment, and do the comparison, it might give us some idea of how close or not we are.

DR. REICHERT: Thanks, Jim. In case of white grunt, we do have a lot of information. We just don't have an assessment. Luiz.

DR. BARBIERI: Thank you, Mr. Chairman. Not necessarily in terms of white grunt, but I think that, for this rapid conditioning model, and I'm not familiar with the rapid conditioning model, right, and so I don't know exactly what you're talking about. If this is like a DLM-type of approach that you use, right, that's an index-based, right, sort of approach, in that case, I mean, I think that it's going to be complicated for them to do this in a way that's realistic.

I think about -- I think it was SEDAR 49 was the data-limited species, right, assessment that was trying to do, you know, I guess a composite of nine different species where the DLM package was applied, and there was a full data workshop, and there was like all sorts of assessment meetings that took place, and, eventually, there was a full CIE-based review workshop, and, at the end of the day, apparently only one species out of that group of nine was found to have enough data to support even a data-limited approach or index-based approach.

This is going to be complicated. You might have, from SERFS or SEFIS, right, and you might have, for white grunt, indices of abundance with enough spatial coverage for this, but, for others, you may not, right, and so --

DR. REICHERT: Even for white grunt, it's another species where there seem to be two populations, one of Florida and one further north, and then SEFIS is just touching the edge of that southern population, and so you're probably missing a large part, and correct me if I'm wrong, Wally.

DR. BUBLEY: There's the dive survey.

DR. REICHERT: That's true, yes, and so you have the dive survey. That's true. Okay. Anything else that you would like our input in relative to this question? Jie, go ahead.

DR. CAO: Well, I guess I just have a question. Probably I shouldn't be asking this question, being a member of the MSE technical team, but can you remind us what information will be used in conditioning those species for which we don't have assessment in the rapid conditioning model?

DR. COLLIER: It can be done in different ways, right? If there is age data that's available, that will be used. If there's length data that's available, that will be used. Landings, obviously, will be used, and an index of abundance will be used, and so we'll go through and try to work through all the different pieces of information. We'll basically do a data workshop for these species, see what's available, and then work it through the system, and that's why we're only doing five or six species, and hopefully no more than one or two would be in that data-limited slot.

DR. REICHERT: Thanks, Chip. A lot of work still to be done. Genny.

DR. NESSLAGE: I think the question was what outputs would we like to see, and my limited understanding of the SAM tool, the RCM program that they're using, there's actually a compare RCM plots, where they can look at multiple -- You can basically show the impact of multiple runs with different assumptions, different -- Whether you use age or not, et cetera, and so, if I understand it correctly, which this is outside my scope of expertise, but that would be something that I would like to see some of those diagnostics, even if it's in an appendix or some such, you know, just supplemental materials.

DR. REICHERT: Anyone else? Thank you. Let me confer real quick, because it's noon, if we are going to continue this, and so give me one second. Okay. Since there is one slide with some additional questions, we -- I just talked with Judd and Chip. Let's go through that and see if we can address those, real quick, before we go for lunch, so we don't have to come back to that after lunch, or later today or tomorrow, and so, Chip, that's the slide number --

DR. COLLIER: Yes, and it's looking at the aggregate -- It's slide number 12, and it's looking at the aggregate bag limit, along with mandatory stopping, and trying to figure out how to model this. You know, one is is anyone aware of similar analyses being done for maybe multiple species? I think I saw one maybe for some freshwater fish that was used, but I need to refresh my memory on that freshwater system that was used.

DR. REICHERT: Jim.

DR. GARTLAND: To answer your question, no. I don't know of any analyses like that, but, in the absence of that, could you envelope it, and what I mean by that is run a scenario where it runs ideally, let's say, right, whereas you would almost run it in a -- Without mandatory retention, but assuming that, right, and so, whatever you catch, in whatever order -- If you're allowed to keep six, you keep those, whatever the mix is, and then the other end of the spectrum is, you know, if you have Species A, B, and C, and everybody wants A, and they kind of like B, and C is all right, everybody --

The bag limit initially is only A, until it closes, and B and C are discarded, and then it's -- The bag limit after that is composed only of B, with A and C being discarded, and then only C, once B

closes, and A and B are being discarded. That will give you the full range, and you know you're somewhere in the middle there, right, and that could be a way at least to start.

DR. REICHERT: Thanks, Jim. Fred, and then Luiz.

DR. SCHARF: So I think -- I mean, I think you have to certainly investigate a scenario of a compliance of zero, right? I mean, just thinking about mandatory stopping, and somebody that's gone offshore, and they've hit their aggregate bag limit by 10:00 a.m., that they're going to stop fishing, as opposed to continuing to fish just to fish, or to potentially trade up, like kind of what Jim was just describing, where someone really wants Species A, but they've got their limit of Species B, and then they keep fishing, and the bite for Species A turns on in the afternoon, and they unload the fish from B out of the cooler and pick up A, right?

I guess, in terms of just an effort reduction scenario too, just, you know, talking about what Jeff mentioned about this, you know, potential lottery system, where folks that are able to get a snapper grouper permit -- It varies by year, and I know that he was hoping that the work that is happening in Florida might address whether the stakeholders are interested in that approach.

I know that there was another approach that had been talked about a couple years ago too about individual sort of days-at-sea limitations, so that individuals that had snapper grouper permits would have days-at-sea limitations, and they could choose the days they were going to fish, but they were only allowed to fish so many days. Clearly an enforcement nightmare, but just to understand whether stakeholders are even interested in that kind of approach would be good to know.

DR. REICHERT: Chip.

DR. COLLIER: Well, and I feel like -- Luiz might be able to speak to it, but that's somewhat being investigated within that FWC exempted fishing permit, where the people with that permit are limited to a certain number of days that they're allowed to go out using the permit, but that's for a very small number of people. It is not for the entire recreational fishery, which would come with its own challenges through a permitting system.

DR. REICHERT: Luiz.

DR. BARBIERI: Yes, and exactly, Chip. I mean, that's the thing. There are some differences there. The number of people is not actually that small. Of course, relative to the entire universe of potential private recreational anglers who target reef fish, tt's small, but still, because you have a fairly large number selected by that lottery, and that changes quarterly, right, and, at the end of the study, you're going to end up with a fairly good sample size.

Chelsey Crandall, who is in your SEP, right, has been deeply involved in that, and helping with that project quite a bit. I know that she and her staff have done, you know, numbers of interviews, right, similar to the approach that Kai was describing earlier, to try to identify angler preferences, right, and so, they have some results now.

This is the first year of the study, and that has a limited spatial scope compared to the range from North Carolina to the Florida Keys, right, and so it's not going to be complete there, but,

compliance, I mean, they -- Last week, they gave a presentation, and they are just about to finish the report, I guess, for year-one. I don't know if you've seen that presentation, but it was phenomenal.

All sorts of information about how angler behavior really is changing as a result of the different sort of management scenarios that they're implementing, right, in different areas, and compliance, or a lack thereof, and how you see that, even though a group that was selected, this private recreational and charter-for-hire, and there are trips that are directly observed, trips that have just cameras, and trips that are not observed at all, right, and all this is also being monitored inshore, when they land, so you actually have an idea of what's going on, in terms of what they retained.

It was phenomenal, but it's just one year, for that specific part of the coast, but I would reach out to Chelsey, and more people in that, because I was really impressed to see, for example, for the people who are supposed to be not allowed to retain red snapper, and this was a condition of them being selected for this, and some of the people harvested quite a bit of red snapper, right, even in the group that was not assigned to harvest red snapper, and vice versa, all sorts of combinations, that gives you a window into compliance and exactly the issue that Fred brought up. It's incomplete, but I guess it's the best you can get at this point from a field-based study.

DR. REICHERT: Thanks, Luiz. Chip.

DR. COLLIER: Yes, and so, within the technical team for this management strategy evaluation, there has been discussion about putting some FWC staff on there with Blue Matter, making sure that we have the guidance of, you know, what they're seeing in the exempted fishing permit, and making sure that would-- You know, I imagine they're envisioning different things, through aggregate bag limit or different pieces of information, and so they might be able to help analyze some of the data that's coming through other systems, and so, yes, I think that's a good option to look into, and I think they will be extremely valuable to the team.

DR. REICHERT: Thanks, Chip. Jennifer.

DR. SWEENEY-TOOKES: I'm glad you brought that up, Luiz. This is a great idea, and, as one of your non-modeling members, we've made several suggestions about comparing, you know, this model, and then using this data, and this model and using that data, and is there a way for us to use this really important data out of Florida to evaluate the models, and how the models are running, so that that can further inform the MSE as it goes forward?

DR. REICHERT: Thanks, Jennifer. Chip.

DR. COLLIER: I think so, but we would have to reach out to the FWC staff, to see how the data is collected, because I think understanding which data sources might be most appropriate to compare with I think will be critical.

DR. REICHERT: Thanks, Chip. Anyone else? Anyone online? No hands up? Chip, again, is this sufficient input from the committee to you for that group to move forward, do you think?

DR. COLLIER: I think so. We're going to continue to move forward, and hopefully be bringing something to you all in April that's going to be a more complete model, and hopefully have a management strategy that will be able to be compared.

DR. REICHERT: Nice. Thank you. Jie, I saw your hand up.

DR. CAO: Yes, and I just wanted to provide a comment on the last slide, with respect to the spatial dynamics, and so we've been working on a council project to update the model, and so that paper basically used the SERFS data up to 2022, and so we are working on updating the model, using more data, and including more species, and so potentially, we could provide updated information.

DR. REICHERT: Thank you, Jie. I remember, in a previous presentation, the committee actually discussed that spatial analysis, and so thank you for that update, and we're looking forward to seeing that. Anyone else? Seeing none. Chip, thank you so much for your presentation, and your feedback, and I suggest we break for lunch, and then, on Thursday, we can go through some of the notes that Judd had made, and the notes that you guys can provide, and so let's meet back at 1:30, and then we'll have the wreckfish MSE discussion. Thank you.

(Whereupon, a recess was taken.)

DR. REICHERT: Welcome back. As I mentioned earlier, we'll start off with the Agenda Item 12, the wreckfish management procedure update. There is Attachment 12a, 12c, and 12d, and the presentation will be provided later. We haven't received it yet, but the presenter is online.

It's been a while since we reviewed the previous assessment. I think only very few of us were on the SSC when we were reviewing the wreckfish assessment, and, as you may know, wreckfish is a bit of a unique fishery in the region. It's an ITQ fishery, and also the life history of wreckfish is quite unique, and we asked the presenters to include a little bit of background information, just to set it up. The assignments are Jeff, Amy, Alexei, and Jason. Judd, are we turning it over to the presenter, or are you going to introduce the agenda item? Thanks.

WRECKFISH MANAGEMENT PROCEDURE UPDATE

DR. CURTIS: Thanks. Before we go through the attachment summaries, I emailed the committee this afternoon with the most recent draft report, and then also uploaded that as a Google Doc as well, so we can use that to input your suggestions, text edits, and things. You have commenter access only, and so you can't edit the actual text. That's left up to me, but please use that for assisting us with compiling the report and putting in your contributions. If you have any questions, or issues accessing that, just let me know.

Before we move on to wreckfish, just to go through, in your briefing book package, you've got the preliminary stock assessment report that Dr. Jeremy Collie will be presenting here shortly, and then, as Marcel mentioned, it's been a while since wreckfish was last reviewed in the South Atlantic region.

As background information, you've got the wreckfish 2015 stock assessment report, which was also done external to SEDAR. It was a private stock assessment group that worked through that

stock assessment, and then the Attachment 12d is the SSC's report on that 2014 wreckfish review, and that should be 2015 wreckfish review. Pardon the typo. I guess, without further ado then, Jeremy, I will hand it over to you. Let me make you the presenter.

DR. COLLIE: Okay, and so do you see my screen yet?

DR. CURTIS: We're seeing the go-to tab, and we're getting some feedback as well. I'm not sure if that's internal or on your end. There, and that looks like the PowerPoint.

DR. COLLIE: Sorry. I had a couple of screens open. Okay, and so I wasn't quite sure how we were going to proceed.

DR. CURTIS: Jeremy, we're seeing your notes slide right now. If you go up to display settings, at the top of your menu, and swap the presenter and notes view. Swap presenter view and then slideshow. There. We've got the full screen presentation now. Take it away.

DR. COLLIE: Sorry, and I just got off the Zoom call, and so I'm still scrambling here with the GoToMeeting. Is Josh on the meeting? I wasn't sure whether Josh wanted to introduce this project or just leave that to me.

DR. CURTIS: I do not see him on the webinar currently. I'll let you know though by the --

DR. COLLIE: Okay. Good.

DR. CURTIS: Excuse me. Josh is available online, and, Josh, go ahead, if you would like to do an introduction.

DR. REICHERT: Josh, if you're talking, we cannot hear you.

DR. CURTIS: Josh, we're showing you're unmuted on our end and should have --

DR. NOWLIS: Are you hearing me?

DR. CURTIS: We're hearing you now.

DR. NOWLIS: Okay. Great. The third microphone was the charm. Thank you. It's a pleasure to be here. I just want to give a really quick overview of this whole project, for context, but also to prep the SSC for some of the stuff that's going to be coming out of it, and I will highlight that I'm not going to be able to be here for the entire session. I can definitely do thirty minutes. After that, I will probably have to check-out, but I'm going to see if I can at least be listening through that.

Okay, and so this project is funded by the council, and the goal of this project is to make the wreckfish management system more responsive to scientific insights and more reflective of stakeholder objectives. The main way that we're doing that is by really focusing in on the science policy and science stakeholder interfaces. We're doing this on behalf of Lynker, who is a contracting company I often work for. My own individual company is Bridge Environment, and I am leading this overall project.

We have three components to it. One is to update the assessment, and, as we just noted previously, the most recent assessment was done in 2014, with data that was only through 2010, and so it's quite due for an update. Jeremy will be focusing on that for the rest of this presentation.

We have a second component to the project, which is engaging with stakeholders. In the case of wreckfish, this is an ITQ fishery. It's actually the original ITQ fishery. It's been around for quite a while. There are a total of ten stakeholders, three of which catch the vast majority of the catch, and so we have a pretty small group to work with.

Then the last component of this project is taking the issues that are particularly relevant to stakeholders, as well as the assessment results, combining them into a decision support tool that we will be providing to stakeholders at workshops, so that they can review and come up with their -- Not only their own opinions, but, ideally, they'll be able to do some negotiation amongst themselves of what an effective harvest control role might look like for this fishery.

I will say, just to set the stage for things that will come up in the future, for anybody who does know this fishery, it will be no surprise, and perhaps it will be no surprise in general, that there's not a lot of trust or goodwill among the stakeholders and the science group, and I say that having worked at the Southeast Fisheries Science Center as a stock assessor back about fifteen years ago, and so I understand the challenges with that.

One of the big things that we will be looking for are whether there are better data that we can be collecting, with cooperation from the industry, so that that is more reflective of things that are -- More reflective of things that they are willing to hang their hat on, but also things that we as scientists can see may be more reliable measures, and so that's the background. I'm happy to take any questions on that, but I'm sure that you all are excited to get into the assessment, and I'm very happy to pass it on to Jeremy.

DR. REICHERT: I don't see any hands up. Thanks for that introduction, and I would say, Jeremy, take it away.

DR. COLLIE: Okay. Thank you very much. Thanks for the introduction, Josh. I'm Jeremy Collie. I'm a professor emeritus from the University of Rhode Island. I worked for decades, I guess, in the management of New England fisheries, most recently on the New England Fishery Management Council SSC, and so it's only recently, in the past year really, that I've taken a foray down south and gotten a little bit more involved with the South Atlantic, which I find very interesting.

I want to jump into our assessment update for wreckfish, and I'll just say that some of you, you know, probably know more about wreckfish than I do, and I welcome your feedback, and, in particular, if people have questions during the presentation, I'm happy to entertain them. I don't think we'll be that pressed for time, and so, since I'm kind of presenting to my computer screen, I would be happy to take any questions while I'm presenting, and so, with that, I'll get started. Hopefully, I'll get started. There we go.

All right, and so, as Josh said, this is part of a larger project of the Climate Response Strategy for a Data-Limited Fishery, using the wreckfish as an example. The primary assessment tool that's

been used in the past is a statistical age-length model. A dynamic production model has been used as a secondary assessment tool, and so we are updating the assessment with thirteen years of new additional data, and today's presentation is going to focus on the actual available data, and their interpretation going into the assessment, and so I'm not going to present an assessment model today, but we do anticipate that assessment model will be presented at the next SSC meeting on wreckfish.

The reason for this, that we're cautious about releasing a preliminary assessment which we might have to revise and walk back. As soon as it's out there, people will start, you know, considering the implications, and we don't want to get out ahead of our skis on that, and so I want to talk about the data sources and how we're interpreting them.

The first data source is the wreckfish landings, and you can see kind of a composite of the published landings on wreckfish going up to 2016. Some of the data sources are confidential, because of the low participation, and so these are ones that have been published, but you get the idea here that, as Josh said, an interesting thing about wreckfish is that we basically have data from the start of the fishery, and it's a relatively recent fishery, and you can see that landings increased dramatically in the early years, and then reduced, and have been kind of at a fairly stable rate since then.

The other thing to note is that these are commercial landings. There really aren't any consistent data on recreational catches, and discards are seemingly minor, and so we're really working with landings data, and so that's one data source. The other one is the development of a fishery-dependent abundance index has been used in previous assessments, and so the model I started with is to use a generalized additive model based on vessel trip reports, and you can see the equation that's being used here.

The GAM model is basically modeling the catch in weight, or landings in weight, as a function of hooks per line and hours fished, and so these first three are considered -- These are direct measures of fishing effort. The year effect is the one we're trying to isolate. That is what the abundance was in a given year, and then we have the fishing area and depth of fishing as covariates that could be influencing catch rate, and so this was fed with a standard GAM, and, because of the log link here, the variables lines, hooks per line and hours fished, are multiplicative, and so that's kind of what you would expect, that the catch success would depend on those three variables.

The area and depth were also found to be significant, and I just want to say here that this was a kind of an intuitive model, but there are other ways of measuring fishing effort that have been used, and could be used, and so I'm open to suggestion on how to develop that fishery-dependent index.

To look at some of these covariates, this just shows the spatial distribution of fishing, and, as you know, the fishery is a highly concentrated fishery off the coast of South Carolina, with also some effort off the coast of Florida. You notice that there are some reports that are clearly in error, and so we've struggled as to what to do with that, because you can think this one out in the Atlantic, the minus 70 degrees, is probably 80 degrees, and 40 degrees is probably 30, and 20 is probably 30, and so those are probably just errors in recording, or analyzing data, or data entry, and so we've thought about what to do about that.

If you look over on the right-hand plot, these are the coefficients from the GAM model, showing that the greatest fishing success is indeed these areas off of South Carolina, and so no surprise there, but we have wondered what to do about these obvious errors, whether just to use the data as reported, try to correct the area designation, and can kind of guess what the mistake was, or omit records with incorrect data, don't include area as a factor in the GAM, or resort to some simpler model, where you would just use stated , or something like that, as a location index, and that's a question that's up for debate, as far as trying to develop a fishery-dependent index.

If you look at the estimated depth effect, you can see that this is the smoother, and that's the reason for a GAM. There is a smooth curve, a dome-shaped effect on catch as a function of depth, maximum catch around 1,500 feet to 2,000 feet. There are a few trips -- The rug plot shows the trips, and there are a few trips at lower and deeper depths, and so it's very uncertain there, but it's clearly a dome-shaped relationship, and a concentration of catch within a specific depth range, and so that's depth.

What we're really interested in here is to try to get at what the year effect is, and so we interpret the year effect as a fishery-dependent index of abundance, and these are -- The points are the estimated values for each year, and the dotted line is the standard error, and so you can see that the estimates are pretty well constrained, and there is a pattern of fishing success, with an increase in the years 2005 to 2010, a decrease up to 2020, and then a more recent increase, and so there is a signal, I think, in the index.

What is a little bit perplexing to us is that it doesn't really match the CPUE index that was used in the previous assessment. I mean, overall in the pattern, but what we would expect would be, for a fishery that just started, there would be some kind of fishing-down effect, and so we would expect it to start high, and then go low, before fluctuating, and so we're kind of questioning what's going on in the early years that this index of CPUE is not picking it up. We're kind of reluctant to jump into it using this one until we understand it better.

One of the reasons that it’s tricky to interpret CPUE from this fishery is because of the participation. The participation has really changed over time, and with fewer number of vessels participating.

This is showing the number of vessels in each of the years, and then also parsing it out into ones which either entered that year, they stayed in the following year, or they exited the following year, and so you can see there's been quite a bit of turnover in participation here, and it has reduced to three to five vessels, and so it hasn't been the same vessels fishing the whole time. Normally, when you try to fit a CPUE index, you might include a vessel effect. That's very challenging here, because most of the vessels haven't fished all the years.

Just to point out that the first and last years have to be interpreted differently, because we don't know what happened before 1991, and so this bar of vessels that aren't shown as entering, they could have been fishing the year before, and we don't know, but you can see that, of that bar, quite a few of them actually exited the following year, and so they didn't stay in, and you can see there was a lot of interest in the early years, and a lot of those vessels exited, and then, since then, there's been a bit of turnover.

We have talked about different ways of analyzing the effort data to get a fishery-dependent index, and one would be just to concentrate on a smaller number of vessels, like choose a subset of the vessels that have a longer participation, and then just try to study their catch rates over time, as a more consistent measure of fishing effort, and so, again, I'm open to suggestions on how to handle that.

Just to complete this segment about the vessel trip report data, another variable is whether the CPUE is based on numbers or weight. Previous indices have used the number caught as the index of abundance, but both number and weight are reported, and so one can divide one by the other and get an estimate of the mean weight report in each trip, which I plotted over time here with bar and whisper plots.

Interestingly, the mean weight has been very consistent over time, and quite constrained, at around thirty-two pounds, with some variability, some larger fish in the early years, but that variability increased after 2009, and there was a dip in the mean weight in the years 2015 to 2021, with some really small mean weights occurring, and so we were interested in that, because of whether that was a signal of some change in the fishery, and trying to understand what was going on there, and so we had some hypotheses about what might be causing that change.

Some of the hypotheses, or explanations, are were the trips in shallower areas, or was it fishing in a nursery area? Was there some kind of recruitment event, or immigration from another area, and what we found was that those low mean weights were predominantly one vessel in the main fishing area, and I think you can see that here, that this is the mean weight, again plotted against depth, and those low mean weights, and they're pretty low, were occurring in the main fishing area, at the same depth as the bulk of the catch was occurring, and so it wasn't a shift in location. It was just a shift, and apparent shift, in size, and so we still don't completely understand that, whether it's really a true signal in the time series or something anomalous.

The next step would be to look at the actual measured length composition data, to see whether those smaller fish are showing up in length composition, and I'm going to move on to the length composition data.

I think a nice thing about this, for the assessment, is that there are complete length composition samples from the fishery, starting in 1984 and continuing until present. The sample sizes are variable, but, in general, they're pretty good, consistent sample sizes. I think that the takeaway that you see here, obviously, is that there's been a consistency in the size frequency over the whole history of the fishery.

If you look carefully, you can see there were some years when there were smaller wreckfish caught. There were some years with a few larger individuals in the early years. A suggestion of smaller fish in 2006, and we don't see that signal of smaller fish from 2015 to 2020. It's not appearing in the length frequency samples, and so those fish weren't included in the sampling, but, overall, I think it's a consistent size composition, which is important.

As far as the interpretation of the size composition, it's that most of the fish landed are between 800 and 1,200 millimeters, which is thirty-two to forty-six inches. You can see that size range, and this is an old table, but you can see that size composition range here. A few larger fish in the early years, but it's sort of dependent on sample size. We don't see evidence of smaller fish in that

more recent time period, and so the take-home is really the length distribution is stable over time, and you can think about, well, what could cause that stability, and what's the underlying reasons for that, and I'll come back to that. Maybe you'll have some ideas.

In order to use these data, I've normalized them by the landing weight of each trip, to try to weight them properly to the amount landed in each weight, to make them suitable for a Stock Synthesis catch and length model, which is the modeling platform that we're proposing to use.

As far as the input for the Stock Synthesis model, I've listed them in order by number, and so it's important to have life history information, and I'll show you those in a second, the length composition of the catches, which I showed you, commercial landings, and commercial fishing effort to derive a fishery-dependent index, and just to point out that, at present, we don't have any age composition data available, and so that's something that is presently lacking. Maybe I'll come back to that as well.

Just to show some of the life history information, this is from a paper by Walter Bubley. I don't know. I haven't actually met him, but I've corresponded with him. It's very good life history information coming from South Carolina, and so you see the growth curve here, the length-weight relationship, and the maturity ogive, and so these are important inputs to the stock assessment.

I'll come back to the growth curve here, which is interesting, because you see the rapid growth to asymptotic length, and then that last asymptotic length up until age 100, and so wreckfish, as you probably know, can live a long time, and there are -- The samples that go into this do go up to age-ninety anyhow, and so there are some really old wreckfish that have been sampled, but this growth curve has consequences for the assessment, because, coming back to that consistency of length frequency, if you take a length frequency sample, you don't know whether it's a bunch of eighty-year-old wreckfish or whether it's a bunch of thirty-year-old wreck fish.

You can't tell from their length alone, and so, even though the length composition is stable, that doesn't necessarily mean that the age composition is stable, and that's why having age composition samples for this fishery would be especially important.

The other thing that is kind of remarkable is that apparently they're fifty centimeters at age-zero, and there are samples for young ages going into this, and so one could wonder about how they could get so big so quickly, and then reach their asymptotic size, and so it's interesting from a life history perspective, but these assumptions do have consequences for the assessment, and so I wanted to point that out.

Okay, and so, finally, the assessment platform. The assessment platform is what Jason calls the stock assessment continuum tool, which is useful for data-limited fisheries, where you have a range of models that can be programmed in Stock Synthesis, depending on what the available data are, and so, in this case, we certainly have catch and length data, and so there's a catch-length module, which is particularly important for wreckfish, and just to point out the wreckfish landings -- I'm pretty sure these are all non-confidential, but that relatively low landings has been maintained in the more recent years.

There is a possibility of including a relative abundance index. It could be incorporated into this framework, so that -- If it's informative, and also if it's reliable, it is really a reliable index of

abundance, and so I'll be spending some more time on , to try to really just understand the CPUE index.

There are a number of big uncertainties here, but I think the main uncertainty for wreckfish is what's the level of stock depletion since the fishery started? I mean, it's been fairly stable, but the question is stable at what level? Is it at 40 percent of its unfished biomass? Is it at 80 percent, and so that is one of the main questions, or the main sources of uncertainty, and so, you know, I'm pretty sure we'll have a good assessment model, but it may be not one model. It may be assessment models.

There may be candidate models that, for example, assume different levels of stock depletion, and we'll be looking at the consequences of those for the harvest control rule, whether one or the other of the states of nature operating models is in fact the correct model, and that's exactly the type of framework that Josh and his colleagues have created in order to look at the performance of different harvest control rules.

I guess the final thing I'll mention, just to wrap back to what Josh said, is, when we think about what types of data would be most useful, it's clear that having age composition data, at least a snapshot of age composition, would be very informative, to try to ask the question about, or answer the question about, why the length composition has been so stable over time.

One hypothesis is that the age composition has actually changed, but you can't detect it, but there are other potential explanations for the length composition that we might want to discuss, and so that's all I have right now. Sorry that I didn't provide these to you ahead of time, but I was on another meeting, and I can certainly save this, and send it to you, if anybody wants to follow-up and look at it, and I welcome any suggestions or questions that you have. Thanks.

DR. REICHERT: Thanks, Jeremy. I appreciate that presentation. Any clarifying questions before we go to public comment, and followed by our discussions? I have one. Sorry, Alexei, and go ahead.

DR. SHAROV: Hi, Jeremy. This is Alexei. It’s good to hear you. Thank you for your presentation. I wonder if you considered, first DBSRA for this analysis, because -- Well, I don't know the history of the fishery. There could have been certainly some recreational removals, even before the start of the commercial fishery, but it appears that, if the scale is appropriate, then the large level of removal started in the middle 1980s, with the, you know, close to unexploited stock level, and so DBSRA could be maybe useful.

DR. COLLIE: Thanks for that, Alexei, and certainly, if I understand the history of this assessment correctly, that was the method that was used initially. I think Alec MacCall wrote a working paper on that, and maybe, in the previous assessment, he looked at it. I mean, I think the general answer, and not discounting that would be a useful tool, but I think the sense is here that, for wreckfish, it's actually more data rich than would be the case for stock reduction analysis. It's more like a data-moderate stock, and so that's why we feel like this stock assessment continuum tool is appropriate, because it can really take advantage of the data sources that do exist.

DR. SHAROV: Okay. Well, thank you. Yes, and I hope you're correct, but, looking at that, there is little variability in the length that you've shown, and no signs of recruitment variability, and at

least eighty years of -- Eighty age classes accumulated about the same size range, and that's going to be a challenge here.

DR. COLLIE: No, I think you're right, and so, you know, even if it's a data-moderate stock, that doesn't mean that it's information rich, and I think you really hit on it, that it's the scale of the stock that's really the uncertain part.

DR. REICHERT: Thank you. I have Kelsey, and then Luiz. Kelsey, go ahead.

DR. ROBERTS: Thank you, Jeremy, for the great presentation. My sincere apologies if you mentioned this, and I just missed it, but was there a reason that you didn't include temperature in your GAM model?

DR. COLLIE: Well, I think the obvious reason is it wasn't a field that was recorded, and so I guess two questions, and like is there some hypothesis, or relationship, that people know about that relates catch rates to temperature, and, if so, are there actual temperature data available that could be used to test it?

DR. REICHERT: You know, and Wally or others may comment also, and this is a deepwater fishery, and so I think -- First, I don't think there's a lot of temperature data, and not enough temperature data to include it in an index or anything, and the other thing is, since it's such a deepwater fishery, it's likely that the temperature fluctuations are probably not that high, but let me know if that doesn't make sense, but that's from what I know about the fishery. Kelsey, go ahead.

DR. ROBERTS: Well, I was just thinking that, you know, we have -- You know, the HYCOM product is available, and so there's -- You know, there's options. I wouldn't say that it's an issue with data availability, but that's probably my lack of familiarity with the relationship between some of these deeper-water species and catch rates. I was just curious.

DR. REICHERT: Luiz. Sorry, Jeremy. Go ahead.

DR. COLLIE: Just to finish up that thought, and so I think, Kelsey, what you're saying is that there are reconstructed temperature fields available for the east coast, even bottom temperature that could be looked at. Is that what you were implying?

DR. ROBERTS: Yes, Jeremy, and that's correct.

DR. COLLIE: Okay. I think one challenge about this is that the data reporting is on a fairly coarse scale, relative to probably the fine scale over which the fishery is operating, and the fine scale topography that captains are actually using to fish, and so, you know, we don't capture that level of variability.

DR. REICHERT: Thanks. Luiz, and then I have Kai.

DR. BARBIERI: Thank you, Mr. Chairman. Jeremy, thank you for the presentation. It's really, really helpful. I like the way that you laid this out in a way that, you know, presents all the questions and inputs you're looking for. The first question is looking at the life history information,

the age, growth, and mortality paper that Wally did. Were those data, Wally, out of the fishery, or those are fishery-independent?

DR. BUBLEY: I guess this question is for me, and so it's predominantly out of the fishery. There's just a handful of samples that were obtained from a bottom trawl survey, like twenty or so, that happened, but the vast majority are from the fishery itself.

DR. BARBIERI: Thank you, and, Jeremy, I'm asking this because, you know, you mentioned that you have length compositions, but no age composition data, right, for the assessment, and so this is because the samples that Wally used were just limited in time relative to the history of the fishery?

DR. BUBLEY: I will take that again. Yes, and so it was inconsistent, and so there were years that samples were collected and years -- Big gaps in between that there were not, and then this was over multiple projects, and so, I mean, we had samples collected from the 1990s through the last couple years, and so, some of those earlier projects, I am not privy to exactly how they collected those individuals. They might have been looking potentially for smaller ones, so they could fill in gaps to create a better age-growth curve, or something along those lines, but I am not 100 percent certain.

DR. BARBIERI: Right.

DR. BUBLEY: So we're not confident that they're unbiased.

DR. BARBIERI: Thank you for that, Wally. What I was trying to get to is I guess the fishery is not sampled consistently for ages, right? I mean, landings, right, at the fish house, biological sampling, right, is not really collecting otoliths for ageing?

DR. REICHERT: Jeremy can answer that, but Amy is very familiar with the sampling that was done, and so, Amy, can you come to the table, please, Amy Dukes.

DR. BARBIERI: Just in general, right?

DR. REICHERT: Sorry, Jeremy, but we --

MS. DUKES: Hi, Jeremy. Amy Dukes, SC DNR and a South Atlantic Council member. Yes, and so South Carolina DNR, along with other state agencies, have been collecting the TIP samples, the trip interview samples, and this was really Luiz's question, and we started that data -- We started that data collection back in the late 1980s, and wreckfish is a fish that is landed regularly in South Carolina, and we are collecting TIP samples, which would be linked and otoliths, and that is sent to the Beaufort lab, of course.

DR. BARBIERI: Yes. Super helpful. Thank you, Amy, because -- So the otoliths actually exist, right, and so, I mean, Jeremy, I would think that this would be important, that we can actually, right, develop the age information that will be supporting this assessment, right?

DR. COLLIE: No, and you're absolutely correct. I'm getting a little echo.

DR. BARBIERI: Just a couple more.

DR. REICHERT: No, and go ahead, Luiz. I haven't forgot about you, Kai.

DR. BARBIERI: Another one is about the stable length composition, Jeremy. I would think that -- I mean, you know, for the amount of work that has been done on this species, do you have an idea of selectivity, meaning, you know, perhaps availability of the size and age composition may not be reflected by the commercial landings, if selectivity is just, of course, selecting for a slice of the population that's there. Do you have any info on that?

DR. COLLIE: That's a really good question, and so I'll take the selectively one first, and then we can come back to the age comp, and so the selectivity is estimated by Stock Synthesis, and so that's an output of the assessment model, and so, given such a consistent and tight distribution in lengths, it does estimate what that selectivity curve will be, and so you can question about whether it's an availability thing, and, unfortunately, the selectivity is kind of correlated with what you assume about natural mortality, you know, as to whether they're actually shorter-lived.

Anyhow, those parameters in the model -- Selectivity is estimated, but there's some potential confounding -- I guess I'll leave it at that. It kind of seems unlikely that there's a large cryptic biomass. It kind of seems unlikely, in the sense that -- Given the observed length user data, I'll just say that it's unlikely that there's probably a large cryptic biomass, but it doesn't mean that the asymptotic length is 100 percent selected, necessarily. I don't know if that answers your question.

DR. BARBIERI: No, and it does. It does, and, you know, relating to the ages, I was thinking about stock juvenescence, right, and so I don't know what the maximum longevity of the species is. I don't remember, but, you know, depending on when we were still catching fish in the ninety-year-old range, right, I mean, that will give us an idea on whether the stock has juvenescence over time, right?

DR. COLLIE: You're exactly right, and we had this conversation on Monday, and, first of all, I want to thank Wally for providing these life history information. We haven't actually met yet, and so thank you for that. I think, as you pointed out, having the age comp data would be extremely informative, and it doesn't have to be a time series.

Often, for age-structured stock assessments, you need an annual age-length key, but, with Stock Synthesis, even having a snapshot of age competition would be highly informative to answer that question about juvenescence, and so I think that's something that we might pursue, you know, whether there is a snapshot of age composition.

Obviously, it has to be representative of the -- If the otoliths weren't taken from the catch, you would have to decide whether the sample was taken in a representative, or random, or unbiased way, but whether it would represent the age comp in a given year when it was collected, and the nice thing about this stock assessment continuum tool is you can just put in like one year of age comp data.

It can be integrated into Stock Synthesis and help inform the assessment, and that I think -- Just to follow up that thought, I think that was when Josh talked about potential data collection tools, things that might be envisioned for the future, collecting those samples. Obviously important, but

obviously analyzing them is equally important, and then it costs people's time and resources, and so obviously it's a priority thing, but thanks for your questions.

DR. BARBIERI: Sure. Thank you, and I have one last one, just about --

DR. REICHERT: If you will allow me, to that point, the selectivity and availability, I think, given the unique life history of wreckfish, I think that availability is probably an important component of that, because the recruitment of fish to the fishery is very likely coming from an area outside where the fishery is occurring, because you have that -- I think it's assumed that where the fishery is occurring is also a spawning area, and then the larva and juveniles actually make a large migration, and so it is, I think, assumed that a lot of the fish that come into the area for the fishery actually come from other places of the Atlantic.

I think that may potentially also play a role in the stability of the size distribution, because of the influx of fish from other areas, and I can't speak to the age composition, because we don't have that data. Maybe you can comment on that real quick, Jeremy.

DR. COLLIE: No, and I think you're absolutely correct, and, just to show a length frequency plot here, I think what you're suggesting is that the juveniles are not in the area of the fishery, and so that growth overfishing in this fishery isn't really a thing, because they're not available, and so they can't -- That's why you don't see young individuals in the catch. I think that's why, when we saw that sort of anomalous mean weight, that's why we really were wondering about that, and like how could that occur, given that the juveniles aren't in the area.

The other side of the distribution is it seems unlikely that there's a sort of cryptic biomass, unless the wreckfish are just moving off these reef areas, because the bulk of the catch is at the asymptotic length, and so they're not -- You know, they're not growing any bigger, and so it doesn't seem like the large individuals are being unselected for.

DR. REICHERT: Thank you. Again, sorry, Luiz. Go ahead.

DR. BARBIERI: No, and this is exactly where I was going. You know, Jeremy, just, you know, in terms of the number of curveballs you're having to handle here, right, with this analysis, and that's why we're trying to point out some stuff that can help you sort of start sorting out some of these things might be helpful for your analysis.

The last one that I thought was, you know, exactly what Marcel brought up, you know, about the unit stock, right, of this transcends the South Atlantic waters, right, and so, when you think about depletion and exploitation, there will be, I guess, all sorts of complications for you, because you're not going to be able to account, you know, to fishing that's happening over in Europe, right, and in the Mid-Atlantic region as well, and so just something to keep in mind, Jeremy, as you look at this, because, you know, it's going to be a little bit like reading the tea leaves there, and so I hope this helps. Thank you for the presentation. It was very interesting.

DR. REICHERT: Thanks, Luiz. Kai.

DR. LORENZEN: Thanks, Jeremy, for that very clear presentation. I was wondering if you have any more insight to share on the very different sort of patterns in the early time series of the indices,

and so the index that you're tentatively proposing, versus the index that was used in the Rademeyer-Butterworth assessment, because I'm assuming that that index would have been quite influential in the last assessment, because it sort of does what you expect after a big peak in catches, and so I was just wondering. You're presumably working from the same data, and I was wondering if you have any more insight on what underlies the very different patterns there.

DR. COLLIE: Thanks for your question. I was hoping you would answer it, or someone there, because, looking back at the previous assessments, I know that, when Doug Vaughan et al. looked at wreckfish in 2001, they developed a CPUE index based on catch numbers, and they used the top five fishing vessels as their subset to try to uncouple CPUE from total catch.

Unfortunately, Rademeyer and Butterworth don't articulate in their document how they developed the CPUE index, and so it's a question to me, and, if anybody actually knows, I couldn't uncover that by reading their document carefully, and so I'm not sure what they did, but I agree with you, Kai, that it is influential, because that's kind of what you would expect, a fishing-down phase, and they are seeing that, and it was that fishing-down phase which kind of anchored the level of depletion that they saw in their model.

DR. LORENZEN: Thank you, and so that's unfortunate. I had tried to find that information, but apparently, yes, it's not out there. Thank you.

DR. REICHERT: Thank you, Jeremy. I had a question about the index, also. I think, especially in the beginning, a lot was happening in that fishery. A lot of fishermen got into it, and then also a lot of fishermen went out of that fishery in those early years, and so I had a question. How did you guys -- You may have mentioned it, and so I apologize if that's the case, but how did you guys account for management actions in determining the relative abundance trends, or, in other words, developing that relative index, or that index of relative abundance?

DR. COLLIE: I guess the short answer is we didn't. We just took the landings data at face value. Going back to the first part of your comment though, which was that there was a lot of turnover in the fishery then, and so it has been suggested that a lot of the vessels and fishermen that were entering in the early years might have been kind of a sidelined, and maybe they weren't really -- You know, they hadn't really dialed in how to catch wreckfish, and so that is one potential explanation of why we're not seeing a fishing-down effect.

A lot of the catch was coming from vessels that were fairly, I guess you would say, inefficient in their operations, and so that might be one reason to kind of focus on, you know, a smaller number of highliners, who had a more consistent fishing history. It's also been suggested that there could have been some effort creep over time, you know, as the fishery developed, and the captains actually got better at it, and so maintained their catch rate even as the stock was going down, and so those are two, I think, potential explanations that have been advanced.

DR. REICHERT: Thank you, and, also, after the previous assessment, the SSC set an ABC, and correct me if I'm wrong, but that the ACL that was met, and it's an ITQ fishery, and so I assume that, in most years, the ACL was met. Is that not the case? In other words, the question I'm asking is if the landings are a true representation of the population size or whether it's basically what was allowed to be caught. There is probably a lot more sophisticated way to explain, or to say this, but Chip.

DR. COLLIER: I haven't gone through it all. Christina is online, and she knows this fishery much better than I do, but, looking in 1991, they put in a 10,000-pound trip limit for wreckfish. In 1992, they removed it, and so I think there's a 4,000-pound trip limit that's on them now, and so I'm looking to see where that went in place, but, getting back to your question that you just had, and what was it again?

DR. REICHERT: Well, there's an ACL. If that ACL is met, then the total landings are no longer representation of the population size.

DR. COLLIER: So this is an ITQ program, and so the fishermen are catching their shares, and, if they don't catch their shares, it's not going back to the next year, where they can get them. I have to be very careful about how I talk about it, because there are some years that it's confidential, and other years that it's not, and so just -- I don't think they're getting to their ACL, but that ACL is also -- I'm trying to think back. In like 2011, that was bouncing around a little bit, until the stock assessment came out, and so the ITQ, or the amount of landings that each individual was allowed, probably varied quite a bit.

DR. REICHERT: Thank you, Chip. I have Jennifer, and then Alexei, but, to that point, I think it would be perhaps worth looking into how management may affect that time series, in terms of the relationship to the population size. Chip.

DR. COLLIER: I mean, do you have suggestions on how to look at that, because, right now, it's basing it on, you know, the assumption that the fishermen are going out and catching fish as efficiently as possible. If there's a change in the population, you know, you would expect the trips to get longer, something along those lines, or they're catching less, and so just curious if there's -- Because we might have to search for another piece of information to look at that covariate.

DR. REICHERT: Jennifer.

DR. SWEENEY-TOOKES: Forgive me for wading into this. This was before my time on the SSC, and I -- Tracy Yandel and Scott Crossan wrote an analysis of the wreckfish fishery, published in 2015, and I'm desperately trying to read this paper right now, because we're talking about it, but, if I recall correctly, there was some indication that people were not -- They were not meeting the ACL, that they were deliberately underfishing, for a variety of other economic reasons that had nothing to do with the biomass, but, if there's anyone who has institutional memory longer than mine, I think this is important information we should bring to the table. Anyone? Anyone? We can all read the article.

DR. REICHERT: Thanks. Thanks, Jennifer. I saw Alexei's hand up.

DR. SHAROV: I'm still thinking about, you know, what we've seen so far, and so I have just one more question for Jeremy to, you know, provide us with some additional insights. Jeremy, while it clearly -- I mean, if there was any response of the population to the exploitation, the whole action, or most of the action, did happen between 1985 and the early 1990s, you know, looking at the catch information, at the very least, right, or through the mid-1990s.

If there was any significant depletion that ever happened to the stock, that was back then, but, if we look at your plot for the mean weights, they're surprisingly stable through this entire period, and, actually, there is much more variability , and some fluctuation in the recent history, where the removals are much smaller, and so, going back to that initial period, do you have any idea as to why would this be happening?

I mean, that is, if we were removing a notable part of the population, the size definitely should have been going down, but we don't have length, unfortunately, here. We have only weights, which could be masking, but still I wonder what your insight on this is. Thank you.

DR. COLLIE: I think that's a good observation, Alexei, but, I mean, in a kind of hypothetical fishery, you would expect the mean size to be going down as the fishery is depleted. I think we're at a special case here, where the smaller fish aren't available, and so it's just a question of fishing intensity on a certain size range, and so I'm not sure -- I mean, I think that's the reason you don't see a signal in the mean size of the fish as the fishery developed. I don't know if that answers your question, but it seems to be the case.

DR. REICHERT: Thanks, Jeremy. Alexei.

DR. SHAROV: No, and I'm not -- Well, thank you for the -- For the issue of time, I'll stop here.

DR. REICHERT: Any other questions? Genny.

DR. NESSLAGE: Hi, Jeremy. This is Genny Nesslage. I was just curious if you, with the CPUE index, if you potentially explored some sort of random effects for vessel, for instance something that would get at this difference, potentially, among the avid fishermen with good knowledge about the wreckfish fishery as well, versus those that aren't, as well as the ITQ differences in shares kind of an issue going on here.

DR. COLLIE: Thanks, Genny, for your suggestion. I think that would be a good thing to do, a natural thing to do. I struggled with it, because of the sparsity. When you look at the matrix of which vessels were fishing in which year, it's a very sparse matrix, and so you have to make some decisions about which vessels to track, and so I think that was the rationale for using a subset, but, if you have any good ideas, I would welcome them, and you could even follow-up after the meeting, if you would like, because that is something I think we should at least try to do, but it's not as simple as it might be in other fisheries, where you have more complete participation, so you can simply fit a random effect on vessel. I think we just have too many zeroes, or Nas, for that broad brush approach.

DR. REICHERT: Thanks, Jeremy. Fred Scharf.

DR. SCHARF: Jeremy, this is Fred Scharf. I was just wondering about the three different data streams for effort, and, in looking at those over the time series, if they showed any differences in terms of how they behaved, in terms of lines, or hooks per line, or hours fished, or if they showed generally the same similar signals through time.

DR. COLLIE: Thanks for your question, Fred, and I don't know. I can't give you a sure answer. I remember when I was doing this, and it was a few months ago, looking at the distribution, but I didn't actually look for trends, and so I think that's a good suggestion.

The other thing, while we're on it, whether other metrics of fishing effort might be more appropriate. I know that in the previous assessment, or the Vaughan et al. one, they just used days fished as a measure of fishing effort, and under the assumption that, if they've met their quota, they're not going to go fishing, and so they just used days fished. I started with this one, with the lines times hooks and hours fished, trying to be a little more specific, or granular, but it's up to discussion whether that's really an appropriate measure of effort or not.

DR. REICHERT: Thanks, Jeremy. I saw Luiz's hand, and Jim. Luiz, go ahead.

DR. BARBIERI: Thank you, Mr. Chairman. Well, Jeremy, I'm just wondering if there's consistency in operators per vessel, right, if there are different vessels that are operated by different people. I'm just trying to think about what Genny was bringing up about trying to find out, you know, if we can detect changes in either catch rates, you know, or even success in getting different sizes, that has to do with avidity or additional experience, but I don't know the granularity or completeness of the data, right, that you have, and if you know whether the same vessel is always operated by the same operator, and if you can track that or not, you know?

DR. COLLIE: Yes, and, I mean, I think the short answer is no. I think the idea of looking more carefully at that vessel effects is a good one, and so that's definitely something I'll follow up, but, to answer your question, like the trip reports are by vessel, but different captains fish on the same vessel, and so they have different fishing patterns, and experience, and so that's a level of granularity that is not reported. I think it's -- We're having a workshop in November about this, and so that's a question we could pose to some of the participants about that, about their experience, about asking the question about how fishing patterns and fishing success may actually vary among captains.

DR. REICHERT: Thank you, Jeremy. Jim.

DR. GARTLAND: Jeremy, this is Jim Gartland, and so something else that might be worth thinking about, if you get to talk to these folks, is whether -- I mean, given that it goes back to 1990, were there any technological changes since 1990 that helped in targeting the fish, and, if so, you might be able to use, like, a simple 0-1 type variable for, you know, pre-introduction of some technology, and post-introduction of some technology, to adjust the CPUE estimates across the introduction of that technology.

DR. COLLIE: Thanks very much. Definitely I've written that down, and it's something we'll bring to the workshop.

DR. REICHERT: Thanks, Jeremy. Anyone else? We kind of moved from clarifying questions into a discussion, but I haven't forgotten the public comment just yet. Chip Collier came to the table. Chip, go ahead.

DR. COLLIER: Well, and Jeremy just reminded me of a very important part, is they are meeting with shareholders next month, and, if there are certain questions that you all have, and that they

could potentially help fill out a better index, please let them know. They can ask those questions of the shareholders, and hopefully get a better index to be representative of the population.

DR. REICHERT: Jim.

DR. GARTLAND: I guess, just to follow-up on my point from earlier, in terms of technological changes, it could be gear changes, right, and so, if the type of line they're using to fish is more effective now than it was, or the hooks they're using, or baits, or whatever it is, and, you know, it doesn't have to necessarily be an electronic, or some sort of fancy tchotchke. It could just be a gear change that made the difference.

DR. COLLIE: Thanks for that, and that reminds me also that -- I mean, that's an important determinant of selectivity, the gear used, the hook size, and so that may be an important reason, you know, for not catching small fish, because the gear is not set up for that, and so that's something that we can discuss at the workshop.

DR. REICHERT: Jeremy, this is Marcel Reichert. That also reminded me, perhaps, and I thought about some of the behavioral changes, why certain fishermen go, and does that -- Is there a relationship, for instance, with the market, or time of the year, or when other fisheries open or close, and so that may be something that you can get some information from the stakeholders about, how the fishery is operated, whether they have a vessel that is rigged for wreckfish, which is a very specific rig, and whether they use that year-round, or they switch that off with fishing for other species that may need a different rig.

That may help interpreting, perhaps, some of the patterns in the index. I'm just thinking out loud, but I'm not sure if a wreckfish fisherman is a wreckfish fisherman year-round, or whether they switch that with other targeted fishes. You guys may have already thought about that, or asked that, but maybe some additional information available from the stakeholders. Alexei has his hand up.

DR. SHAROV: Sorry. Well, I mean, I find it interesting, and so this is maybe the last chance to contribute to it. Jeremy, do you have an idea, or did you do the sort of the calculation on a piece of paper and an Excel spreadsheet? I'm still thinking about why do we have like a stable, or presumably stable, size distribution of the harvest, if they harvest really pretty large fish, you know, at the close to asymptotic size.

I wonder -- I mean, if you -- Like knowing that they're up to 100 ages, and having some guess on the natural mortality, if you could, you know, very quickly simulate, in a spreadsheet, how much fishing mortality you have to apply to start seeing change in the average size of the fish. You know, assume some sort of, you know, selectivity curve that -- Because the young fish are not available where they're fishing, or how they're fishing, and my point is that I wonder if -- Well, just because they reach the maximum size by age of twenty, and live to age-100, and so you have eighty age groups compact there.

It could be that we are going there, and there is increased effort, and there is removal of the fish of the large size, and there is substantial rejuvenation of the population, but, because so many age classes are still of the same size, we do not notice that, because we measure only length, and so I wonder how far you would have to push the population so that you actually see the change in the

size of the fish that would be harvested by, you know, this type of fleet. That could give us some idea as to, you know, how far the exploitation could go when we actually start measuring this. Thank you.

DR. COLLIE: Thanks for that, Alexei. I mean, I guess my short answer is that, as far as a spreadsheet model, I think that's what Stock Synthesis does, and so we can kind of thank Rick Methot for setting up the platform already. We can investigate these different scenarios within this stock assessment continuum, and have different candidate models to ask those questions, and also run projections, with a potentially higher fishing mortality rate, to see what the consequence would be. I think, you know, that's the direction we're going, is to have different scenarios that would be consistent with the data.

DR. SHAROV: Thank you.

DR. REICHERT: Thanks, Jeremy. Any other comments? Seeing no hands, any hands online, Judd?

DR. CURTIS: No hands.

DR. REICHERT: Okay.

DR. CURTIS: We've got one. We've got Fred Serchuk.

DR. REICHERT: Fred Serchuk, go ahead. Fred, if you're talking, we cannot hear you.

DR. SERCHUK: Can you hear me now?

DR. REICHERT: Yes, and we can hear you now. Thanks, Fred.

DR. SERCHUK: Okay. You know, one of the things that strikes me is how few boats there have been in this fishery. If you look at Figure 5, you see that, generally, it's never been more than five or six, and, you know, I just wonder whether the information that could be gleaned from the logbooks themselves could be actually looked at by the vessels.

I think that's one of the reasons that I -- You know, looking at the Figure 8, and the length frequency distributions, they're very constant, and, you know, I think, you know, we're not talking about fifty boats anymore. We're talking about five to seven boats, it looks like, you know, since the early 2000, or since 2010, for example, and so you know, I think that this is not a large dataset, and I'm thinking that we could probably -- You could probably track individual vessels against one another, to get more information, because it's not a very large fleet. Was that something you could look at, Jeremy?

DR. COLLIE: Thanks, Fred. It's nice to hear from you . I thought, when I rotated off the New England SSC, that I wouldn't hear from you again, but here you are, and so it's nice to hear your voice. I mean, I think what you're getting at kind of relates to the earlier discussion about looking at the catch rates of individual vessels, especially the ones that are long in the fishery, and the ones that are persisting, and to kind of focus in on their catch rates, and their fishing patterns, to better understand the dynamics.

DR. SERCHUK: Okay. I mean, you know, that's a very small number of vessels that participate in the fishery every year. I presume that some of those have been in for a while. I don't see a lot of changes going on. I do see some enter, and some exit, but, generally, it tends to be a very small number, and so that, to me, means that the information for the vessels, if they wish to provide it, or you could get it, could be easily done, given the cooperation of the very few vessels in the fleet. Thank you.

DR. REICHERT: Thanks, Fred. Judd.

DR. CURTIS: To respond to that, I think Josh is off the phone, but he would probably speak to this a little bit, and this is going to be a critical part of kind of the shareholder engagement phase of this MSE project that will start occurring in November with the shareholders of the wreckfish fishery, and so, yes, there's -- We've actually already had conversations with some of the fishermen, and shareholders in the fishery, and gleaned some of that information from logbooks, as well as other observations, and so stay tuned. That that type of information will also be integrated into this MSE.

DR. REICHERT: Thank you, Judd. Any others? I don't see any hands. Jeremy, we really thank you for this overview, and for entertaining our questions. I think the committee looks forward to learning about the next phase of this project. Wreckfish is a kind of a complicated issue, and so thank you again for your presentation.

DR. COLLIE: Can I just respond?

DR. REICHERT: Absolutely. Go ahead, please.

DR. COLLIE: Thanks for allowing me to present this. I thought it would be important to kind of get in early, so all these questions about data interpretation could be thought about. You know, it would be nice to have kind of a finished stock assessment, but we don't want to have to backtrack, and so I think it's really important to have these detailed discussions at this point, and so I appreciate all your questions and suggestions, and I'll be following up on them, and so thanks for that.

DR. REICHERT: Absolutely, and we appreciate the fact that you allow us to chime-in in an early phase, and so thank you. Judd.

DR. CURTIS: Just as a follow-up, Jeremy, I'll be sure that we circulate the final report coming out of this SSC to you and your team, so that you can document some of the ideas and discussion that was around the table today for incorporation into the project.

DR. REICHERT: All right. Next on the agenda is public comment relative to the agenda item. Anyone in the room want to provide comment? Do we have anyone online, Judd?

DR. CURTIS: No. I don't see any hands online for public comment.

DR. REICHERT: All right, and so there's no public comment. With that, it's a quarter to three. Let's take a break, and we'll come back at 3:00 for the black sea bass genetics presentation.

(Whereupon, a recess was taken.)

DR. REICHERT: Welcome back. Next up is Agenda Item 11, Black Sea Bass Genetics and Stock Structure. The attachments are 11a and 11b. Assignments are Fred Scharf, Amy, Alexei, and Jason, and Dr. Rich Harrington and Dr. Tracey Smart are presenting the overview of that genetic structure study. Rich or Tracey? Tracey will start it off. Tracey, go ahead.

BLACK SEA BASS GENETICS AND STOCK STRUCTURE

DR. SMART: Great. Thank you all for having us. I know your meetings get busy, even when you have open agenda items, and they're still really busy, and so we are excited to show you some results from a recent study that we've undertaken in the last year, with funding from -- That the council provided, and the results are fresh off the electrophoresis gel. All right. Well, Marcel, got my puns. I appreciate that.

First, I want to introduce myself and Rich. We both work at South Carolina DNR, at the Research Institute. Rich heads up the genetics group, and I head up the coastal research group, and so this is a really nice collaboration, and I also want to thank other folks that worked on this project, our co-PI, Dr. Tanya Darden, who is also the director at the Research Institute, the Southeast Reef Fish Survey, the SEAMAP Coastal Trawl Survey, the Virginia Institute of Marine Science ChesMMAP and NEAMAP Surveys, as well as the NOAA Northeast Bottom Trawl Survey.

This is an east-coast-wide genetic project, which means we needed east-coast-wide help, and so that level of collaboration was absolutely essential, as well as that funding, to get this project underway. We couldn't be everywhere all at once, and so it was a super huge undertaking from central to southern Florida, all the way up into New Hampshire and the Gulf of Maine, and so, with that, we'll start off.

I'm going to start with a brief background of some knowledge going back into -- Sort of casting our memories back into the late 2000s, early 2010s, from the SEDAR 25 timeframe into some more recent genetic studies, and giving you what the impetus of this project was, what sort of drove us to look at the genetic structure again, as well as some other recent work that's been done with black sea bass in this region, and then I'll turn it over to Rich to talk about the details of this project in and of itself, and the more technical details of the genetic applications, because that is definitely his specialty instead of mine, and so we'll do a little tag-team today.

If you were around back in the late 2000s, and, if you weren't, just sort of remember what your hair looked like, your favorite pair of jeans, and probably acid wash at that point, and I really don't remember which, and so, back at that point, the sort of leading knowledge about the genetics of black sea bass along the U.S. east coast was support for split stocks, with really a break right around Cape Hatteras, which is conveniently located right between the South Atlantic and the Mid-Atlantic jurisdictional boundary at the North Carolina-Virginia border.

We have two examples of publications that came out right after the SEDAR 25 benchmark assessment was completed. For example, on the left-hand side, we have the haplotype frequency from mitochondrial DNA from Roy et al. in 2010, and that showed that there wasn't always a

complete 100 percent frequency of a given haplotype or another in each region, and so there was some mixing, but a really distinct crossover between haplotypes right around that break.

Then also McCartney et al., and that was published in 2013, but also was used for the stock ID portion of SEDAR 25, as Reference Document Number 42, and that, again, showed a bit of mixing. If you look at those pie charts with a little bit of green and yellow in the -- A high enough amount of yellow in the frequency of mitochondrial DNA polymorphisms in the south, versus a whole lot of green, and a little bit of yellow, in the north, but, again, you see that crossover at the North Carolina-Virginia border, and so not complete separation, but definitely a distinct change between the two.

Right after the SEDAR 25 benchmark, as well as at least one update was completed, and some more work on the genetics in the species was completed. For example, there was a graduate student at the University of South Carolina that continued some of the work that Roy et al. had finished, looking particularly at mixing rates between the South Atlantic and the Mid-Atlantic, and they found that there was actually differential levels of mixing, where it was more likely that you would find a signal of South Atlantic genetics in the Mid-Atlantic at a higher rate than you would find Mid-Atlantic signals in the South Atlantic stock, and so, again, mixing, but there was definitely sort of a directionality to it.

Then O'Donnell and Darden developed a microsatellite panel for black sea bass, involving ten to thirteen loci, and they were able to show that the South Atlantic itself was a well-mixed stock, and so the technology, in terms of what we looked at, was advancing, as well as just the information within a stock, and across stocks as well, and so that's sort of where we left off, in terms of genetics for the east coast, at about the mid-2000s, or sorry, in the mid-2010s.

Why were we looking at the genetic structure along the coast again? Well, in the last decade in particular, things have been changing quite drastically, and so, in particular, if we look in the last decade or so in the Mid-Atlantic, and we look at things like the recreational and the commercial landings just in and of itself, as well as their stock assessments, there's a really distinct trend of an increasing population, increasing landings, as well as an expansion of that population and expansion of that stock into new areas farther to the north.

By comparison, in the most recent decade in the South Atlantic, a very distinct decrease in terms of landings, as well as our stock status, and our stock numbers and biomass. Additionally, more particular for my lab, why we were interested in this, and we published this earlier this year, and, from our Southeast Reef Fish Survey data, we wanted to look more particularly about what was happening with our survey abundance, and, when we modeled our regional bottom temperature, it has been increasing, in particular in the last decade.

Our black sea bass abundance has been dropping quite quickly, as we all know from the most recent stock assessment, and then our center of distribution has been shifting to the north, at about the same time when that warming has been occurring, and you can see that both here, in terms of the center distribution, just plotted as -- As well as these most recent years, with their small abundance, based on the bubble plot size, with the dark colors being the most recent years, versus the earlier years in the time series being further to the south.

We really started thinking, you know, what is going on with this southern stock? Is this, you know, an indication of similar to the northern stock? Is this a migration to the north, or are we just seeing that the southern stock is getting kind of compressed up against that genetic break at Cape Hatteras, and so what we did is we decided to enter the geneticists, and also some other information, and, sorry, and I forgot there was one more slide.

The other thing that we started thinking about was, you know, there are other concerns with black sea bass in the south right now, and Kyle Schertzer and others have brought these up, in particular with the recruitment, knowing that our recruitment rates have been quite, quite low in the last decade, and that idea of being so dramatically low, and there are concerns of what is sort of the overall health and condition, of this stock in particular, and, you know, sort of what does the future hold, and what does it look like now, compared to what it used to be, and so now we enter the geneticists to help us answer some of those questions, and so I'm going to turn it over to Rich.

DR. HARRINGTON: All right. Thank you, Tracey, for the introduction and backstory. Part of the backstory is that, every time I cross paths with Tracey in the hallway at work, we end up in a conversation about black sea bass, and it almost always ends in just speculation about what has happened, and how could genetic data inform these trends that she's been observing for the past few years.

Our motivation here was to apply some genetic data and try to answer this question of is the southern stock contracting within the South Atlantic, or is it -- Are we witnessing a shift in the boundary between the South and North Atlantic populations of black sea bass, and so it's pretty exciting that we finally have some data to have in our conversations in the hallway at work.

Just to kind of streamline the materials and methods section of the presentation here, I'm just going to jump right into the material that we're working with, and you see, on the map on the left, all of the collection localities for genetic material in this study, and this is -- It's an exciting dataset to work with.

I think it's a pretty powerful geographic, comprehensive geographic, coverage of the species range on the east coast, and that's -- You know, all credit goes to Tracey, and the work that her crew has done, and also kind of rounding up these collaborations with the other survey groups to collect a really large amount, a large number of fin clips, across the east coast, all in a single field season, and so this is all from 2024.

In total, we got 1,105 fin clips. Our genetics lab processed 792. The reason was that we wanted to kind of even out the coverage of our samples across the range, and so we wanted approximately an equal number of samples from the south, middle, and north parts of the range.

When I say we processed the 792 samples, I mean that we collected genotype data for those samples. Of the 792, 773 crossed the finish line with enough data for our analyses, and we are genotyping them for a microsatellite panel that had been developed, or first used, by the South Carolina DNR Genetics Lab, by Tonya Darden and Tim O'Donnell that Tracey had just mentioned.

Before I really describe our genetic dataset, I just want to pause and give us a little refresher on some genetics jargon that I'm going to be using every ten to fifteen seconds for the next fifteen minutes. The first word, vocabulary word, today is locus. The plural of that is loci, and it just

refers to a particular location or position in the genome, and the second glossary term is allele, and that refers to one of two or more variants of a single locus, and alleles arise through mutation, insertion, and deletion. Because of the way genetic diversity sorts out in populations through time, it's complicated. We're dealing with sexual reproduction and recombination. It's really useful to have many loci in your dataset.

We're dealing with this thirteen loci microsatellite panel, and, after we genotyped all the samples for these loci, we analyzed locus-by-locus and determined that two of them were out of Hardy-Weinberg equilibrium, which is a pretty foundational assumption for population genetic analyses, and so we had to remove them from further analysis.

There were two additional loci that were not very informative. They were basically dominated by a single allele across the whole range of the species, or along the east coast, and so we tried some initial analyses with those uninformative loci. They didn't really make a difference between including them or removing them, and so I'm presenting the results today just from the nine highly-variable loci in our dataset.

To give you an idea of how variable these are, these nine loci have a range of between fourteen and thirty-seven alleles, and the average number of alleles per locus is 20.8, and so it's a pretty variable set here that can give us some power to look at geographic patterns of genetic diversity across the range.

Before I dive into our results, I just want to describe our overall methodological approach. We're starting out with some exploratory analyses, using the computer program Structure, to really identify the number of distinct populations that we're dealing with, and to use that to identify potential transition zones, or boundary zones, between those populations. Then we're going to pivot to using some different analyses to characterize the differentiation between those populations, characterize migration rates between those populations, and, finally, just characterize the genetic diversity within each of those populations.

Okay, and so that first major type of analysis that we're conducting is a Structure analysis, and I know a lot of people in this room have probably seen Structure plots before in various genetics publications. I thought I would just briefly walk you through what a Structure analysis is. This is a clustering analysis that's attempting to assign individuals in your dataset to a user-specified number of distinct populations, or clusters. In the parlance of the Structure computer program, we refer to those populations, or clusters, as K, the letter K.

The user defines the number of populations that we want to assess, and the computer program uses a Bayesian MCMC algorithm to assign individuals to those distinct clusters. It optimizes that assignment of individuals, and, at the end of the optimization, it calculates an overall likelihood of the fit of your data to that model, and the model being the number of different distinct populations that you're assessing.

The computer program also gives you an estimate of the percentage of the genetic cluster assignment, or the percentage of an individual fish's genome that is descendant from each of those different populations, or clusters, and this is an iterative approach, and so you perform the analysis with one level of K, and then you perform several more iterations at the next higher level of K.

Typically, we start with a K equal one, and then go up to whatever you, the user, or biologist, thinks is a reasonable number of populations to explore, and so you run through those iterations, and, at the end of that iterative process, you can compare those overall likelihood scores of your data to those different models, or you can -- And/or both, you can examine, visually examine, the percent ancestry assignment per individuals in the form of these Structure plots.

Structure plots are basically just stacked bar plots that each bar, each vertical bar, in these Structure plots represents an individual fish, and it's colored by the percentage of ancestry assignment, or membership, in each of the distinct clusters at those iterations of different iterations of K, and so I'm showing here just an example I pulled from the literature.

It's a freshwater fish that is in Portugal, and K two, K three, and K four are Structure plots, and the good thing about freshwater fish species is that it takes just no time for them to genetically structure across the geographic landscape, and so you end up with really clean Structure plots, that are often just big, solid blocks of color.

At K equal two, you see a couple of individuals at this location, that's mostly green, and it will have a little percentage of the purple ancestry, and then it gets more interesting at the K equal three plot. We get a new cluster color, but there's a lot more admixture with these individuals in this blue population.

Okay, and so I think that's enough of the overall introduction to Structure before I dive into our results, and so I'm going to be presenting a series of structure plots. We've run many different iterations, or modifications, to Structure analyses. The one that I'm starting with here is demonstrating K equal two for our entire dataset.

This is Figure 2 in the report, and all of the Structure plots I'm going to be showing are organized from south, in the left, to north, in the right, and so by latitude, and the little complication here is that Chesapeake samples from the ChesMMAP survey are at the same latitude as your Virginia, Maryland, Delaware, and so we just put the whole block of Chesapeake first, and then go back to the Virginia and Maryland samples and go north.

What I'm also including on the slide, which is not quite in the report, but just to help us visualize what's going on here, are these little pie charts underneath the Structure plot that show the average percent ancestry assignment for each of these groupings that I've demarcated with the white lines, and then below the pie charts are just the average percent ancestry assignment of the orange cluster.

The reason I'm putting this here is just to make it easier for us to track and look at trends across the Structure plots, and so I know, when we take a step back and look at the Structure plot, and this is the first time I'm seeing it from maybe forty feet away, and it looks like they're -- I think, saying complex genetic ancestry is maybe not an overstatement, but, by that, I mean there's a lot of within-population or within-region variation, and there's some between-region variation that we can see.

We can really identify that between-region variation by tracking that average ancestry assignment to what we're calling the orange cluster here, and so, in the far south, it's like a 50-50 split between the orange and the blue cluster, and then it's going up, and we seem to have a sudden shift here,

once we get to the Chesapeake samples. It's more like a two-thirds-one-third average proportions within these northern populations.

Okay, and, before I move to the next slide, I'll just also just explain that a lot of the analyses that we performed are including a location prior and so the Structure program allows us to input some prior information, and usually it's location, and we've made a lot of modifications to our location prior, just to see what impact that might have on the result.

In some cases, we found that -- Not with this study in particular, but, in some cases, you find, particularly with subtle genetic ancestry assignments, including a location prior can help the analysis converge on those ancestry assignments, and so this particular graph you're looking at has a location prior for these eight regions that we defined on a combination of just gaps in collection area, or state boundaries, or if it's in the Chesapeake Bay, and so forth.

This next one, we simplify the location prior to categorize fish as either belonging to the north or the south, with the dividing line here being the North Carolina-Virginia border. It makes that shift look a little more drastic, at least visually here. I don't know if the visual effect is just because we don't have so many vertical white lines breaking up our plot, but we look at the average ancestor assignment pie charts below, and we see similar numbers to what we did in the previous slide, about 50-50 ancestry assignment to each genetic cluster in the south, and two-thirds-one-third ancestry assignment among the northern populations, and so this transition zone seems to be a little more apparent here, and it's occurring around that North Carolina-Virginia border.

Another modification we made, just as a way of exploring our data, is looking for potential impact from different collection group, and so we used location prior based on the survey group, SERFS, ChesMMAP, NEAMAP, and so forth, and, again, this really doesn't change those overall ancestry assignments, and we see the same overall shift, from a 50-50 genetic signature in the south to a two-thirds-one-third, roughly a two-thirds-one-third, in the north, and that transition occurs at the North Carolina-Virginia border, and that conveniently also coincides with the SERFS range.

Okay. The next two slides I'm going to show you are not modifying location priors, but just screening out different sets of individuals, also exploring the impact of different groups, or classes, of individuals, and, the first one I'm showing, we just wanted to explore the potential influence of your class on our analysis, and the only year class that we could identify in our dataset would be that age-zero to one fish, just because they were so small, and so we removed those from the analysis.

We have many fewer fish, but the overall split in average ancestry assignment in the south and the north is very similar to the previous couple of slides that I showed you, but we see that shift occurring, and the white line on this bar plot is at the North Carolina-Virginia border.

Then, finally, after thinking about, and having a lot of conversations with our group, and with Judd and Chip, and thinking about the potential influence of a transition zone, where fish may have admixed, or sort of intermediate genotypes, we thought it would be a good idea to remove samples from the Cape Hatteras-Outer Banks region and see if that would change our overall result. This is kind of a well-known soft spot of Structure analyses, is instances where you have gradual, or clinal, variation across the geographic range of the species. Structure can struggle to assign individuals to those distinct genetic clusters when there's a clinal variation.

I think what we find here is it doesn't really change ancestry assignments of individual fish, but it just makes that break, or that shift, between the southern and the northern group a lot more visually striking, because you don't have fishes that are sort of intermediate in their genetic ancestry assignment.

What I'm showing you are a decent selection of all of the different types of iterations we've done on the Structure analyses, and it seems to be converging on our conclusion that we're dealing with two populations, and the genetic distinction between them may be a little subtle, but there is a real different signature, an overall different genetic signature, in the southern population versus the northern population.

Like I said earlier, the Structure analysis is just one tool for analyzing patterns in genetic differentiation and geographic structuring of populations, but it doesn't provide a really handy way to quantify that differentiation, and so I think, next, we would like to turn to F_{ST} statistics, or the fixation index.

This is a statistic, or summary, index here that we can use to quantify the amount of differentiation and allele frequencies between populations. It's an index that ranges from zero to one, with zero indicating complete panmixia and one suggesting complete segregation, and so, at the bottom here, I'm showing just like the most simplified cartoon version of the extremes of F_{ST}, under the most simple scenario of a single locus with two possible alleles, and so F_{ST} of zero, even number of red and blue fish in each of the two populations, an F_{ST} of one, and those two populations are fixed for the opposite allele.

With multi-locus datasets, the mathematics are a lot more complicated, and not just multi-locus datasets, but multi-locus datasets that have a large number of alleles, and you inevitably are going to have some degree of allele sharing between populations when you're dealing with large multi-locus datasets that are highly variable.

That has a tendency to push your F_{ST} values lower, and I also want to stress that F_{ST} is a little more nuanced, in that it's also accounting for the variance within a population, as well as the difference in allele frequencies between populations, and so, the more variance that you have within a population, the lower your F_{ST} is going to end up, and the reason I'm emphasizing this is just because we should not have expectations of F_{ST} being pegged at one. We're going to be living in that lower F_{ST} zone, and so I'm setting this up for our F_{ST} results here.

It may be hard to see on the screen here, but I'm going to start by talking about our pairwise F_{ST} table, and I'm using the same geographic collection areas, the 2 through 8, and these are pairwise F_{ST} values between those collection areas.

Below the diagonal are the F_{ST} values, and above the diagonal are their associated P values, and I put, in bold, everything that is significant at a P value of 0.05, and, also, just to help guide us on this F_{ST} table, I've shaded, in gray, that block of contrast that represents trans-Hatteras contrast between populations, and so F_{ST} between one of the populations in the south and one of the populations in the north. You'll notice the only things that are in bold in this chart, or this table, are in that gray zone, and so south versus north contrast.

Another pattern I think worth pointing out is that none of the contrasts between our North Carolina and the northern samples are in bold, and so we're interpreting this broadly to support this conclusion that there are two populations we're dealing with, with significant allele differentiation between them.

Zooming out to that two-population level, we've estimated an F_{ST} value between the south and the north of 0.002, and, when we started this, we were just, I think by default, including North Carolina as part of the south, but, after making those modifications in the Structure analyses, and thinking about the potential impact of transition zone, or boundary zone, specimens on either the Structure or other population genetic analyses, we thought it would be interesting to see the impact of removing those transition zone samples from Cape Hatteras from our estimate entirely, and so we've estimated F_{ST} after removing the Cape Hatteras samples.

That had the result of increasing our F_{ST} by about 50 percent, and it's now up to 0.003, and what that tells us is that the twenty-eight samples that were collected from Cape Hatteras -- When they were grouped with the southern population, they were either including alleles in the southern population that were -- It was decreasing the difference in allele frequencies between the north and the south, or it was increasing the variance within the southern population, and both of those things could have the result of lowering our F_{ST} value. Probably both of those were happening simultaneously.

There's a couple more things we can do with F_{ST} values, and the first one I'm sharing with you here is an isolation by distance analysis, and it's using F_{ST} as this proxy of genetic distance, or genetic differentiation, and so the genetic distance on the Y-axis here, pairwise genetic distance, directly from that F_{ST} table in the previous slide, versus pairwise geographic distance on the X-axis, and isolation by distance analyses are just Mantel tests, and our result here is that there's no significant relationship between pairwise genetic distance and geographic distance.

You'll find, in the literature, all sorts of variants of log transform geographic distance, or linearize the genetic distance, and we've conducted all of those variants of transformations, and we always get the same non-significant correlation between genetic and geographic distance.

If this had been an isolation by distance model, or if these -- If black sea bass were following an isolation by distance model, or a stepping stone model, we would expect a tighter relationship that is positive, you know, a significant positive relationship, and fewer of these contrasts that are relatively short geographic distance, but also relatively high genetic distance, or F_{ST}, and we think this is consistent with the two population scenario where the edges of -- You know, one edge of each of the populations are budding up next to each other, and so it gives you the opportunity to have really short distances, characterized by relatively high F_{ST} contrast.

This gives us another line of evidence supporting that two-population scenario, and, using FST statistics, we can also start to study migration rate. Migration rates are estimated based on, largely based on, F_{ST} estimates, and I should clarify here that, anytime you hear a population geneticist say migration rate, we actually are talking about gene flow between populations, and so it's effective migration, or, in other words, the number of individuals that are between populations that are reproducing.

Our estimate, overall estimate, for migration rate between the north and the south falls right in the middle of the migration rate estimates presented in both of those 2012-2013 studies. They each have kind of conducted this migration rate analysis in a slightly different way. Roy did five iterations, and just reported all of their results as a range. McCartney, in 2013, broke up his estimates of migration rate from Mid-Atlantic to Cape Hatteras, and then Mid-Atlantic to south of Cape Hatteras, but our interpretation here is that these migration rates are really consistent with the migration rates observed twelve or thirteen years ago.

Then the final result I would like to leave you with are just summary statistics of genetic diversity for each of the populations, and the overall summary here is that both populations are characterized by high diversity. We see relatively high levels of heterozygosity, and so our index, or statistic, that we calculated here is expected and observed heterozygosity, and so H_E. That's a relatively high number, and FIS, which is an indication of the rate of inbreeding, that's a very low value, and so high diversity and a high chance of encountering an individual that's heterozygous for any particular locus in our dataset.

Both populations, based on the Garza-Williamson index, have a signature of some kind of a previous genetic bottleneck. In other words, at some point in their history, they have had a rapid loss in genetic diversity, and then, finally, both populations are characterized by a relatively large and similar effective population size, and I really should emphasize here that effective population size estimated from genetic data does not equal census size, or has real relation to measures of abundance of the fish in the wild.

This is a statistic, or a metric, that can be heavily influenced by a large number of biological or historical factors, and so we have to keep that in mind when we're interpreting measures of effective population size, but what it does tell us is that there is a lot of standing diversity here and adaptive potential.

What I also should kind of clarify is that, even though those two estimates are roughly similar, that does not mean that both the north and the south population are currently roughly the same population size, or have experienced recent similar demographic events. They could have had very different histories, or experiencing very different phenomenon, and just happen to have very similar effective population size.

Okay, and so just to conclude here, so we can start conversation about the results, it seems like all of the different results that we presented here are converging on a two-population scenario, where the boundary zone, or transition zone, between populations is somewhere in that North Carolina-Virginia border, the Cape Hatteras-Outer Banks region, and that's consistent with the last most comprehensive genetic studies of the east coast populations.

The north and south appear to be weakly differentiated. You could characterize that as weak differentiation, and it could be explained by levels of effective migration, or gene flow, between the north and the south, and those rates do not appear to have changed since, or from, the datasets that were collected about fifteen years ago, and, like I just said on the previous slide, genetic health, you could call it, or just genetic diversity stats, high diversity, and so that's a good situation for both populations.

Now, to circle back to those -- All of the questions and the conversations I've had with Tracey over the past couple of years regarding, you know, what is the -- What could genetics tell us about these phenomenon that are being observed in the Southern population of black sea bass, and we don't find any indication that there is a northward shift in our population, that the transition zone, or boundary zone, seems to be about the same as what was observed in those previous genetic studies, and so I think our conclusion is that what's happening in the south is apparently restricted to the south, and we're not -- We're not seeing spillover into black sea bass north of the Cape Hatteras region. That's all I had to say, and so I think I'll turn it over.

DR. SMART: Yes, and if you -- You may have noticed that there are slides past this, that are just some history, as well as some other information, if it comes up in conversation, but that's -- This is really all we're going to present today, unless, you know, there are other conversations.

DR. REICHERT: Thank you both for this comprehensive overview. A lot of work. As you said, a lot of collaborators, and so thank you for that. I would like to open the floor for some clarifying questions, and then we'll go to public comment, and have a discussion. Jie.

DR. CAO: Thank you so much for the presentation. It's very interesting work, and I think it's very important work. I'm just curious about the inference of the location prior on the results, and so have you tried not specifying, you know, informative prior for the location?

DR. HARRINGTON: We did run all of our analyses with and without location prior, and just visually examining the difference in the Structure plots didn't -- We didn't see a visual difference in individual ancestry assignment. It also did not change the overall likelihood score, you know, when you look at the likelihood score across different K iterations. The overall sort of rate of change between different K values looked very similar for the analyses we ran without a location prior versus the location prior included, and so we could have presented the no location prior. For me, it's easier to break it up into these different discrete units, but it didn't seem to have a huge influence on the result in this analysis.

DR. REICHERT: Luiz.

DR. BARBIERI: Just a quick question. Thank you for that, Rich and Tracey, and I agree with Jie that this is super important, you know, work, because I think -- You know, thinking about stock assessments, right, and I'm thinking about unit stock recruitment sources, right, and inputs, and how all of this can help us better understand population productivity, right, and so understanding this is very important.

Without going into discussion, Mr. Chairman, just right now, did you try -- I was going to ask exactly what Jie asked, about the location prior, right, because, to me, a location prior would be the equivalent of a super very well informed Bayesian prior, right, that will basically decrease your probability of generating a posterior, right, that is independent, and so that is something I would advise you to work -- I mean, as you move this into publication, work it without the location prior, because I think that, when you get to the review stage, this is going to be a comment.

Another one is you never showed it the result of a K equal one, right, and, I mean, just looking, to me, you have, throughout, so much right over the entire range that it's very difficult for you to interpret, and so, when we get to discussion, we can, right, go into more into this. I mean, I think

this is a super important presentation, and discussion. I appreciate you guys not just doing the work, but coming over to present to us, because the timing of this is critical.

DR. REICHERT: Thank you. Rich, go ahead.

DR. HARRINGTON: Was that a --

DR. BARBIERI: Did you provide a K equal one?

DR. HARRINGTON: Yes, we did. We performed analyses with K equal one, two, three, and four. Of course, a Structure plot with K equal one, everything would have a 100 percent ancestry assignment to the single cluster, and so there's no good way to visualize that, other than say everything is one population, but the way that we considered, or contemplated, or considered the result was comparing those overall posterior probability across the different K values. Of course, all of the analyses that we performed, K equal one had a slightly higher likelihood than a K equal two, and then we had a more drastic drop-off at K equal three and four. Go ahead.

DR. BARBIERI: Right, and so I'm thinking -- That's exactly my point, right, is that -- I mean, in a way, and this is something that I learned, right, that, with Structure, that Structure software, this can happen. When you predefine K, you sort of condition, right, the software already to -- It's to assess the directionality for the software to kind of give you the outcomes that are kind of sort of predetermined, and add to that location prior, and so, if you have all of those results, I would strongly recommend, right, that you present them sequentially, going with the K equal one, you know, and integrating all the other statistics that are produced, right, so people can actually make that comparison, seeing all the full range, right, of experimental trials that you --

DR. HARRINGTON: That's a good point, and I can flip ahead here, and so these are some of the K plots at different -- Those likelihood plots at different levels of K, and so, yes, we can -- I had thought about including these in the presentation, but it's in the report, and I think that would be something we would really discuss at length in any kind of publication.

I do want to reiterate though that -- Or maybe not reiterate, but just iterate for the first time, Structure does not have to be a prescriptive analysis. I think you can use it as an exploratory tool, and K equal one just says everything is one population, even though if the likelihood score is a little higher. K equal 2, or -- You know, depending on the scenario, K equal three, or four, or higher, could still provide some important biological insight into the patterns of genetic variation across the landscape.

DR. BARBIERI: Exactly. I mean, here, because you give us the full range of K values -- I mean, there's a reason why, right, you start with a K equal one, even knowing that that's going to give you the -- But then you can see the full range of the values there that are obtained, and I think this is more informative for the reader to get that, you know.

DR. REICHERT: Thanks, Luiz. Fred.

DR. SCHARF: This is the question probably for Tracey, and so, if you go back up in the beginning, when you were showing the catches, and it looked like the abundance maybe was increasing in the northern part of the South Atlantic range, did you also see evidence if you just

look for presence-absence of sea bass at stations, and like are they occurring fewer stations more recently, or, at the stations in the south, are you seeing more absences than you saw twenty years, or, you know, ten years ago, or in the in the SEFIS survey? I know that the new SEFIS survey is not that old. Then you go back to the Chevron trap.

DR. SMART: Yes, and I'm trying to remember if we've done those percent positives, or catch rates, sort of officially, or just sort of eyeballing it. If we run the sort of the heat maps year to year, you definitely see that hotspot diminish off of Florida.

DR. SCHARF: Okay.

DR. SMART: It stays about the same South Carolina and North Carolina, although some of our high abundance areas are definitely diminishing off of South Carolina now as well in the most recent years, probably the most recent five years or so. I don't know that we've hit the point where they're absent, completely absent, in places, but I'm trying to remember the catch map from the most recent years, and it might we -- We could probably look, and we can look that very easily, because we do produce that regularly when we run an index, and so we would have that information available in the working paper from SEDAR 76.

DR. REICHERT: Wally, go ahead.

DR. BUBLEY: With this, you have to remember what these -- The traps at least. When we're in areas that are high abundance of black sea bass, we're talking about two to 400 black sea bass in a trap, and so changing -- Going down to ten in the trap is still a huge difference, but it's still not going to be the presence-absence type aspect, because these fish do -- If you've ever watched videos on when that trap gets in there, and that bait is down there, they will beeline straight to it, and so they would probably have to be just completely out of the area to not have any.

DR. SMART: But those presence-absence maps by year are in both the catch index paper from SEDAR 76 as well as the video working paper, and so we could easily bring those up.

DR. REICHERT: Thank you. Steve.

DR. TURNER: Thinking about the loglikelihood values for the Structure analysis, and so this is the first time I've seen a Structure analysis, and so I have a few questions, but so, clearly visually, there's some separation, but the loglikelihood is telling us that there's one stock, if it's rational to interpret the higher loglikelihood value of one, versus two, and so, if that's not correct, is it noise in each area that's driving that, or so help me with this.

DR. HARRINGTON: Potentially -- I see Tonya getting agitated, like she puts the microphone. I'll try to provide an answer, and if Tonya has any additional thoughts. This potentially could be driven by within-population variation. I think we're also in a weak spot of Structure analysis, where the differentiation between the two distinct populations is slight enough that increasing K to two does not improve the likelihood. The similarity in this genetic cluster, or the genetic clusters are close enough to each other, that increasing the number of clusters is not is not helping.

DR. TURNER: Another question is would the model allow you to let it define the number of clusters?

DR. HARRINGTON: This computer does not -- This computer program does not operate like that. You have to just give it a range of cluster population scenarios to analyze, and then it's up to the user to assess it. There's no -- There isn't a great automated program for -- Or not program, but a great automated way of just relying on Structure to tell you how many -- Or to diagnose for you the number of distinct populations. I think it's really important for the user, or the biologist, to look both at the likelihood scores after the analyses have completed and evaluate those patterns in the Structure plot.

DR. REICHERT: Thanks, Steve. Thanks, Rich. Jared.

DR. FLOWERS: I had two questions. One is just clarification, and so, the migration rate estimates, those individuals, those are actual individual fish, and not necessarily like genetic population, genetic abundant, fish?

DR. HARRINGTON: What the migration rate means is the number of fish -- It's an estimate of the number of fish that would need to be migrating and reproducing between the two populations in order to explain the amount of shared alleles between the two populations.

DR. FLOWERS: So it's related to actual number of fish, and not the effective population size?

DR. HARRINGTON: Well, it's tricky, and so, just like I said that there's a lot of caveats with our estimate of effective population size, and effective population size actually is a component of our estimate of migration rate, and so this is not a literal number of fish. It is -- It comes with all of the caveats that our estimation of effective population size comes with.

DR. FLOWERS: So then just a follow-up, and so, if there's no directionality in some of the movement, that kind of seems, to me, to be like it does indicate there is kind of a transition mixing zone.

DR. HARRINGTON: The way we estimated this was to not infer directionality. We're using a model that just assumes the two populations are at equilibrium. The previous studies used a model-based approach to estimate -- It's really -- It's fundamentally based on the same $F_{ST,}$ and effective population size estimates, but their model-based approach allowed them to just to speculate, or make inferences, about directionality. We're just estimating a directionless number between two populations at equilibrium, is our assumption.

DR. FLOWERS: It kind of occurred to me that, if you had kind of maybe like a mixing zone, and you kind of knew rate of movement, maybe you could have some prediction about when that zone, you know, maybe changes to reflect one population or the other over time, and kind of --

DR. HARRINGTON: Yes, and I think that could be a follow-up analysis that we do to try to dissect that out, kind of like McCartney did in the numbers at the bottom of that table.

DR. SMART: Yes, and so they assumed a summer versus winter, whether the mixing zone was more representative of Mid-Atlantic versus South Atlantic.

DR. REICHERT: I've got Luiz and Steve, but I'd like to suggest, before we do that, let's go to public comment, so we can continue the conversation without having to break that, and so, again, I'm going to ask if there's anyone in the room, or anyone online, who would like to provide public comment.

DR. CURTIS: I don't see anybody, Marcel.

DR. REICHERT: So we have no public comment, and so I have Luiz, because that's related to what Jared just said, and I think you have a comment to that also, and so Luiz, and then Steve. Luiz, go ahead.

DR. BARBIERI: Yes, and I was trying to interpret, right, your results, in terms of your numbers for effective population size, and in the context of two separate populations, right, and so your effective population size actually is very poorly defined, right, and it has a wide range, both for the north and the south.

They go to infinity, right, and so, basically, what that's telling you is that it cannot define properly an effective population size, right, and so that cannot be properly estimated, within the bounds of going from whatever numbers they are all the way to infinity, right, and so I'm trying to reconcile that with the fact that you're telling me that those are two distinct genetic populations, and the degree of mixing, and help me understand this, Rich, because, you know, I'm thinking about the stock assessment, right, and the idea of the stock assessment is you're counting cards in a deck of cards. You don't mix the two decks. You have two decks of cards, and you count them, whatever many types of cards you have there.

Now, just like the conversation that we had about wreckfish, right, if the fish are being fished in one area, whatever the area might be, and they are receiving recruits, or migrants, from other areas, right, that is actually contaminating the single stock unit assumption of a stock assessment, right, and then our measures of stock productivity, which are supposed to be based on reproduction and recruitment, you can't tease that apart from the inputs that are coming from external of your area.

So this is like -- I'm looking here, and new data continues to support two genetic populations, but there's weak differentiation, due to effective migration. I would expect a couple of different things. One is that, for you to be able to determine a degree of separation, they have to be isolated to some extent for long enough, right, for those differences to actually be noticeable, because, as you know, a minimum amount of mixing will create a problem for you to differentiate between the two.

The second issue that I'm trying to understand here is, if your effective population size is poorly defined in each one of those areas -- I mean, that's my definition of a very large range, right, that goes from whatever number it is, from a number of 200, or 3,300, to infinity. That means I don't have certainty about what their number is, correct? Otherwise, I would have a reasonable upper bound for each one of those.

Because your effective population size really represents a repository of reproductive capacity, right, I would expect that, if you have two separate populations, your effective population sizes will be better defined for each one of those areas, meaning, right, that you would have a pool, a deck of cards over here and a deck of cards over here, and you can define how many cards you

have in each one of those decks. That's not what I find. What am I missing here, Rich, or correct me, and this is a discussion. This is not my field, and so by all means.

DR. HARRINGTON: Tanya is wanting to wave in, but I do have some thoughts, too. One of the points you brought up about migration, I think migration is one hypothesis that could explain the amount of allele sharing between the north and the south. Another hypothesis is some historic scenario that the north and south were separated across -- By a biogeographic boundary, Cape Hatteras, and they experienced a period of separation, and, during that period, their allele frequencies began to drift apart, but maybe -- Maybe there's a scenario that does not require migration to explain the amount of allele frequencies shared.

It could just be effective population size was large enough that they haven't drifted -- They haven't genetically drifted to a point of higher F_{ST} value, or lower estimate of effective migration, but these are marine fish, and so I assume that there probably is some migration happening.

DR. REICHERT: Thank you, Rich. Dr. Tanya Darden came to the table. Tanya, go ahead.

DR. DARDEN: Thanks. Tanya Darden, and so I just wanted to clarify that those effective population sizes were calculated with the program that's known as LDNA, which is based on linkage disequilibrium, and we use that to estimate this because it can actually detect a change in the effective population size within a generation, and so this would allow us, again, to determine whether we saw a change from the last assessment we did until now, which is great, except that, as you can see from those numbers right there, if it's a big population, it doesn't do very well.

If you were to give an example of when we work in freshwater systems, like with something that's very isolated and small, it can give you a number that's like twenty, with the bound of, you know, seven to forty-four, or 200, with bounds. In the marine world, where populations are big, it cannot do it, and so I don't know that it means that it doesn't know what the size is. The interpretation, from a genetic standpoint, would be it's big, and we can't tell whether they're the same size or not, but they're both big, in terms of how you would interpret that number there. Is that fair enough, Rich?

Yes, and then the other piece that I was going to mention too is the effective population, right, and that means that genes have to be exchanged between the population. 116 fish, if you want to think about that over an entire generation, and so divide that by the generation time, and you're looking at tens of fish that are exchanging genes in any given year.

Considering the size of the populations we think they are in both the north and the south, even in different areas, that's not very much, right, but, as you pointed out, it doesn't take much to mess up our gene flow, and the fact that we can still detect the gene flow patterns with that amount of exchange suggests that it's true.

DR. BARBIERI: Okay, and so, to get to the bottom line of what we're going to have to get here, an interpretive part of this, right, as we look into the stock assessment for this stock, right, north and south, right, what you're telling me is that the productivity of the northern stock is completely independent. There are two populations, two units that are separate, and we're going to have to assess them separately, because they are completely independent of each other. Is that --

DR. DARDEN: This is Tanya again. That is a decision that the council needs to make, but what I would say is this study suggests that there has been no change in that pattern over the last couple of decades. In terms of black sea bass structure genetically, it's no different than what was seen in any of those prior papers that Rich and Tracey described, and this isn't the only piece of information, as Tracey is hinting at, that was used to define stocks, and so, with this data alone, I don't know how big of a soapbox I would get on, but, with all the other data, I think it supports it, and I'll let Tracey address those.

DR. SMART: I mean, if you all want to, we do have the information in here about what was used in the two previous SEDARs, SEDAR 2 and SEDAR 25, to determine three things, the genetics, life history, migration and movement. There's also a summary of new studies that have been done since then in both regions that are available, and so there is information out there that can help.

DR. BARBIERI: Just a quick follow-up, and I'm sorry, and then I'll shut up. I mean, I don't have a dog in this fight, right, and so, to me, one or two populations, I don't care, right? I mean, I think this study is very interesting. I think that -- Right? But our role here is to provide scientific advice to the council, right, and we're going to have to make some interpretations of things, because there will be a stock assessment at some point, and we're going to have to identify data sources and productivity metrics, in terms of spawning potential, right, that are going to be associated with each one of those assessments.

For example, many years back, right here, we had a discussion about -- In that case, it was red grouper, right, and we noticed some anomalies in the stock assessment at the time, because the estimates of maximum sustainable yield were way higher than what would seem reasonable, right, given the size of the stock, the size of the fishery, that we have in the South Atlantic, and so a lot of conversation started about, you know, you might be actually trying to estimate MSY from a population that is receiving inputs, right, from external sources, and that's contaminating, really, your data as you try to estimate what the productivity of the stock is in terms of probability of success in producing recruits.

You know, for us here, it's going to be important to determine if this southern stock is really, right, receiving potential inputs here, or exchanging with the other one, or if they actually represent separate units that need to be -- So that's why I'm trying to -- I'm getting to that, just because this is so interesting, and a question that we've been wondering about for a long time, and so thank you.

DR. REICHERT: Exactly, and that's one of the questions in our action items, is to provide some recommendations. I have Fred and C.J. Sorry. Fred, Kai, and C.J.

DR. SCHARF: So this is kind of for both Richard and Tanya. Just I wonder if you could maybe speculate for me for a second on what the results might have looked like if you applied the same mitochondrial DNA approaches that were done in those previous studies, the McCartney study and the other study, to this dataset, right, given what you just said about the analysis here suggests that things haven't changed much since then. Then I guess, more broadly, talk a little bit about the advantages, or maybe potential drawbacks, of using microsatellites, versus mitochondrial DNA, to address these broad questions.

DR. REICHERT: Rich, you want to --

DR. HARRINGTON: I'll start, and then I'm sure Tanya wants to chime in too, but I think it would be -- It has crossed my mind how handy it would be just to have also the mitochondrial data. It didn't cross my mind, until I was preparing to give this presentation, to make that direct comparison, because there are some important differences between mitochondrial analyses and nuclear loci.

Mitochondrial loci are -- They have a smaller effective population size, and so they would drift faster, or respond to drift more quickly, rapidly, over time. One thing that could be considered a link between our dataset and theirs would be those estimates of migration rate. They use the model based approach and came up with similar values, but Tanya probably -- Do you have anything you would add to that?

DR. DARDEN: The only thing I think I would add was that, obviously, the microsatellite, or the nuclear loci, give you both the maternal and the paternal aspect of it, because, if you're just looking at the mitochondrial, you could have maternal behavior that's different than paternal behavior, and so you may see different pieces of it.

The fact that the maternal one shows the same as the mixed pattern, to me makes us more confident that what we were seeing before, with those same locations, in the same transition zone and effective migration rates that we're seeing between the marker sets, is how we came to the conclusion that there really hasn't been a change in that structure along the east coast.

DR. REICHERT: Thank you, Tanya. Kai.

DR. LORENZEN: I wanted to come back to this question of so if they're -- If they’re not strongly separated in the genetic analysis, does that mean that we have to treat them as one stock, and I would say no, because it has to -- You know, for the genetic differentiation to be there, I think you have to have very low migration rates, and correct me if I'm wrong, but, even if you had something like a few percent per generation or so, whereas, if you had a bit more, the genetic differentiation would no longer show up, but they could still be ecologically quite separate. I think it doesn't mean that, if the differentiation here is weak, or non-existent, that they're necessarily one -- You know, ecologically one stock.

DR. REICHERT: Thank you. C.J., and then Steve. Sorry. Steve, to that point -- Are you also to that point?

DR. SCHLICK: Yes.

DR. REICHERT: So I'll go to C.J., and then Steve.

DR. SCHLICK: I was going to say very similar to Kai, in that, when you're looking at these generations -- You know, Tanya said it's 116 per generation, and so, if you're trying to calculate that down to a year, you're maybe ten or twenty per year. If you look at it at a tagging study, are you going to say you need to have one stock, when you have ten lost fish in a tagging study, out of a couple thousand, or are you going to say, no, we just have ten lost fish? It's not a direct comparison, but, when you have these individuals per generation this low, I think it's kind of indicative that it's two stocks.

DR. REICHERT: Thank you. Steve, you've waited for a while. Sorry about that.

DR. TURNER: I'm a little hesitant about the 163, or 116, fish per generation, because I wonder if that's kind of like the effective population size, in that it's effective fish that migrated, but the geneticists might be able to tell me, but I'm hesitant to think that, okay, that number tells us there's tens of fish per year. Maybe effectively it is, but maybe there's a heck of a lot more, but I don't think that matters, because the F_{ST} number says they're separate, right?

DR. REICHERT: Rich, go ahead.

DR. HARRINGTON: The F_{ST} would suggest that there are differences, significant differences.

DR. TURNER: Would strongly suggest. Am I correct that it strongly suggests, that it looks like it's a very low probability? Am I correct that that's a probability?

DR. DARDEN: They're statistically different, yes, if that's what you're looking for.

DR. TURNER: They're strongly statistically different.

DR. DARDEN: It's less than 0.05, yes. I wouldn't put qualifiers on significant levels.

DR. REICHERT: Numbers are okay. Qualifiers, maybe not. Thank you. Anyone else? If not, Tanya, go ahead.

DR. DARDEN: I almost hate to bring this back up, but, in the discussion of the likelihood plots earlier, I might want to add just a little bit to that, since that was something you all discussed. Can we go back to that slide real quick? One thing that I wanted to add, and Rich did a great job of explaining how finicky this analysis can be, and it's a really powerful analysis, but you have to understand what it's looking for first, and we typically apply this in a hierarchical approach, and so it won't typically find -- If you had a dataset that had like six populations in it, you would have to look at the strongest separation first, and find that, and then you would analyze those separately, define them down as you get down to K equals one, and so it can be sensitive to that.

As Rich pointed out in the report, it's sensitive to family structure, and so you have to make sure that you don't have a ton of siblings in there, because it can find that as well too, and so, when we get to these likelihood plots, we tend to look at patterns, and it's hard to -- I mean, the math is back there, and it's calculating these likelihood plots, but the line, the red line, is simply put on there wherever the highest value is.

When we look at them, we look at the amount of variation that increases between each subsequent K, as you get higher, and the one where you see the largest jump, in terms of that variability, is when you really start to get worried, and you don't want to go past there.

If you look -- Because there was a request to see the K equals one plot. There isn't one, because it's all going to be the same color, green or red or whatever color it is, but it's 100 percent across the way, but, if you look at K equals two, and you truly had a single population, what you would

see, which is a straight line with no variability at all in it, is a straight line all the way across at 50 percent.

From this analysis, we know, just from seeing lots of different populations and different gene flow patterns, what those look like, and there's an interpretation component to this, right, and so, for instance, if we look at -- B and E are the ones that are north-south comparisons, that have transition zone and no transition zone, right, Rich? Okay.

If you look at those two right there, you can see that, when the transition zone is in there, the variability, when you go to K equals two, increases a bit, but it increases substantially more when you go to K equals three, but, when you take those transition zones out, when you get on to plot E, the variability at K two is very, very tiny and it increases humongously when you get to K three, which is, in our opinion -- Our interpretation is that supports that we're looking at a K equals two. All the analysis that Rich has done to look at these different groupings, and our interpretation of how they're affecting these plots, along with the visualization, is how we came to the conclusion of K equals two, if that helps.

DR. REICHERT: Thank you. That was very helpful. Kai.

DR. LORENZEN: I'm confused about the F_{ST}. The way you explained it, basically, the F_{ST} equals zero would be complete panmixia, and, if it equals one, it's complete segregation, and so then the estimates you have are very close to zero, right, and you're saying that -- If I interpret that table correctly, I presume the bold ones are significant, but so even those that are significant are very, very low numbers, and so then they don't go up to anything very high, and so that would suggest to me that, yes, it's significant, but it's not very different from --

DR. REICHERT: Rich, to that point?

DR. HARRINGTON: You're correct that those are low F_{ST} values, and the interpretation is that there are shared alleles, and probably high variance, within population. Both of those phenomenon can drive your F_{ST} value down. The significance here is in your permutation test, where you're building a distribution and comparing your observed F_{ST} to that distribution, and ours -- You know, in this context, those contrasts between the south and the north were the ones that surpassed that significance threshold of 0.05, but the interpretation is there's still a fair amount of shared alleles between populations. Tanya definitely has more to say.

DR. DARDEN: I just want to add a little bit of context to that, and so that's the theoretical range of the F_{ST} value, but anything over -- If you take an intro to genetics class, anything over 0.2, I think is what they're teaching now, and 0.2 is a crazy amount of structure. I don't know that I've even seen anything over a 0.2, unless you're in a freshwater system, that are in different isolated drainages, that haven't seen each other for thousands and thousands of years. In the marine world, they are very low like this, and this tends to be typical, but that shouldn't be interpreted that it's not significant. It's for the reasons that Rich just mentioned that they're really low.

DR. LORENZEN: I guess it could be significant, but, I mean, 0.002 is very low. I mean, it does seem to me that it is literally close to zero, but so it's not structure screaming out at you, if that's correct.

DR. REICHERT: Rich, go ahead. Luiz, I have you next. Let Rich reply, and then I'll read you.

DR. BARBIERI: Okay.

DR. REICHERT: I know you're eager to jump in.

DR. HARRINGTON: I've been a coauthor in papers before that estimated F_{ST} for a bunch of sister species pairs using SNP data, and even comparing lineages that were presumably divergent over millions of years, and the F_{ST} values were not one. It was still lower than one, and so, dealing with intraspecific contrast between adjacent populations, I think we just have to get comfortable with a low F_{ST} value, but also to think about, you know, their statistical significance, but we're the biologists in the room, and we get to decide what the biological significance is.

To do that, I think we have to look at those F_{ST} values in the context of the other analyses we performed, such as structure, the context of the previous publications, like the McCartney and Roy, the context of there is a biogeographic break here that's putatively influencing all sorts of organisms, distributions, or movement patterns. That's my opinion, and I don't know if it weighs very much.

DR. REICHERT: Thanks, Rich. Luiz.

DR. BARBIERI: Well, to Kai's point, I mean, here, they say, in the conclusion slide, that there is weak differentiation. They're saying they're different, but their differentiation is weak, and I was wondering, right, if this low F_{ST} value might be due, really, to the time period of that separation, that this could be a more recent -- That the longer, right, that they stay just slightly connected with those few individuals that exchange genes along the border there, that this number would progressively -- 300 years from now, or 1,000 years from now, it could be different, right?

That this could be the result of just not having been separated for long enough, and enough to be separate, but getting -- Of course, you know, they were sympatric at some point, perhaps, and who knows, right, but they are now -- The allopatry is going to be extending over time, over geological time probably, right, and that number could change. I'm trying to interpret this, right?

DR. REICHERT: Jim, I saw your hand up.

DR. GARTLAND: So, thinking about when these fish were collected, too, right, and so the NEAMAP stuff, the ChesMMAP stuff, and the Northeast Center stuff happened during, I'm assuming, spring and/or fall, right? That's when those surveys run, and so the fish are kind of on the move then too anyway, right, in our area. I wonder if the results would look any different. This has to be a total thought experiment, because it doesn't exist, but, if collections could be made during a time when the fish were sitting still, which is the summer and the winter, right, when they're kind of, quote, settled, and then I have another thought after this as well.

DR. SMART: It is a good point, and so, up in the northern area, for those who aren't familiar with it, there is a summer -- Sorry. A winter migration, where fish move offshore into deeper water. One of the limitations with the sampling up in the north is the surveys basically caught fish and provided fin clips when they were available to the surveys.

Some of the NEMAP and ChesMMAP fin clips were actually -- They were able to catch fish both in the spring and the fall. The Northeast Bottom Trawl Survey were only able to capture fish and provide them during the fall. They did not see any in the spring, and so that was certainly one limitation. SERFS and Coastal Trawl Survey were able to capture them April through October, the few that the coastal trawl survey even captured, and so that's certainly a consideration.

DR. REICHERT: Go ahead, Jim.

DR. GARTLAND: Then, just to follow up, and so this is not genetics related, but it kind of reinforces what you all found. As part of the most recent northern black sea bass stock assessment, the analysts applied a VAST model to the northern and southern components of the northern stock, and what was found was, for the northern component, and so this was north of the Hudson, there was no change in the center of gravity, but there was an expansion of the effective area occupied.

For the southern stock, the southern component of the northern stock, there was a northward movement in the center of gravity. If your fish were filling in the holes off of where I live, you wouldn't expect that to happen, right, and so that's a little more evidence, I think, that what you found, is there is a separation, and your stuff isn't spilling over off of Virginia, for example.

DR. REICHERT: Tanya.

DR. DARDEN: I wanted to add one more comment to your previous question about the sampling. While sampling is super important to try to pick up things, I don't know that the movement piece would be that, if we had fish just moving around, and they were being collected in the areas where they're not spawning, and, when we tend to see that, the signatures we tend to get in those structure patterns is that -- Not the split variability between the complex ancestries, but you'll see one that is like a different signal, or a complete different color, and so the individuals are clearly in the wrong place. They're in the wrong group compared to where the ancestry signal is, and that is not something we saw with any of these datasets, and so I think -- I think there would be limited -- I would anticipate limited influence of that on this dataset, based on what we've seen.

DR. REICHERT: Thanks, Tanya. Wally.

DR. BUBLEY: Just to beat a dead horse a little bit more, the movement pattern of -- Like you see all the differentiation between -- Or all the separate location parts that they analyzed here are essentially north-south. What the movement pattern of what the black sea bass are doing, presumably, in the Mid-Atlantic and New England areas, they're going inshore and offshore, and so, if they're moving more offshore --

UNIDENTIFIED: (The comment is not audible on the recording.)

DR. BUBLEY: Right, but we're not seeing it. Any of the studies that we have done, tagging studies, they're doing more of that than they're moving up and down the coast, and so I'm not sure how much that would affect this as well.

DR. REICHERT: Luiz.

DR. BARBIERI: One more question, just, you know, because this question is bound to come up from either council members or other people who participate in this thing, because, you know, Rich mentioned SNPs, right, and so -- Just because the council is going to be exposed to this study, right, that Dave Portenoy conducted with the Patterson team, right, and South Carolina DNR, that generated a population estimate based on CKMR, right, using SNPs.

If this study were to be repeated, right, the same way that what you did here, and you looked at the previous studies that were using mitochondrial DNA, and now you're using microsatellites, you know, would there be some possibility of different results if you did this analysis using SNPs? I don't understand enough about it, but I'm just trying to understand, you know, if there would be the probability of a different result if you use SNPs, versus the microsatellites, and why would that be?

DR. DARDEN: I would not anticipate a difference, and the reason I say that is because a study that has a decent sample size across its distribution, and reasonable power in the microsatellite or the nuclear marker set, albeit the maternal-paternal limitation we mentioned already before -- There really haven't been any studies that have been published to-date when they compare between marker sets that you get different patterns.

The SNP benefits come into account where they become really powerful when you're looking at adaptive differences, and we're looking at neutral differences. We want to know where genes are being exchanged, right, who is reproducing with who.

When you get into the adaptive world, the SNP datasets can be super powerful, or, in the case with a close-kin mark-recapture, you need that excessive amount of data in order to identify those parent-offspring relationships, especially in large populations, right, with the low number of ones that you even found with that huge dataset. You need that variability to identify that.

That is where you're going to be able to get into -- Like this data set would not be appropriate to try to do close-kin mark-recapture work in it. It's not big enough, or powerful enough, to do that, and so the SNPs would help with that, but it's not going to give you a different structure or gene flow pattern. It should not.

DR. BARBIERI: Thank you. Thank you for that, because that's -- You know, I think that's a question that's going to come up, and we're going to have to respond to, and so, if I understand correctly, just to confirm, I mean, this is basically where the mitochondrial DNA and the microsatellites -- We've been looking at things more from the ancestry perspective in the evolutionary time, sort of timescale versus ecological timescales, where you're actually just looking at contingents, or more recent movement and exchange, and they may not have had enough time, really, to create the degree of separation that we are seeing over here.

DR. DARDEN: With a hard boundary, yes. In the marine world, there's rarely hard boundary thought, and so with the caveat.

DR. REICHERT: Thank you. At this -- Steve.

DR. TURNER: It probably doesn't matter, but it could come up when you go to the council. There seems to be a difference in where the fish are taken inshore and offshore, north versus south, and

perhaps you would want to think about that. I don't know if -- I doubt that size composition would matter in genetic analyses, but it might be interesting to look at the size composition north-south, but there are differences there, and that may come up.

DR. SMART: Steve, that's a, that's a great point, and so SERFS, NEAMAP, and the Northeast Bottom Trawl Survey catch pretty similar age composition and length composition. Coastal Trawl Survey and ChesMMAP are the most closely similar between south and north. However, the Coastal Trawl Survey catches a one-hundredth, or one-thousandth, of the number of black sea bass that ChesMMAP were able to catch in 2024, and so that was a limitation, and so that was one of the versions that that was run with, was with those smallest fish, primarily from ChesMMAP and the Coastal Trawl Survey removed, and so that was one of the iterations that Rich and his team did try, and it didn't make a difference.

DR. REICHERT: Thank you for the clarification. Yes, and I saw the six. That's probably all they had for the trawl survey. Okay. Thank you. At this point, what I would like to do, Judd, if you don't mind, is pull up your notes and look at the action items. Perhaps it's -- If you guys don't mind staying with us, unless you need to head out, but there may be another question, while we're going through our notes, that may come up that may need some input.

DR. CURTIS: Hang on. I've just got to do some technical wizardry to get to the Google Doc. This will just take ten seconds.

DR. REICHERT: Tracey, Rich and Tanya, thank you for that presentation. As we've said earlier, this has some significant implications for both the stock assessments and the management, which we will discuss shortly, and so thanks for that presentation and answering our questions.

Our first action item was to review the Black Sea Bass East Coast Genetic Structure Summary Report, and we did that, and we provided -- We had several questions, and we were provided with a lot of feedback, and I think the committee provided some feedback to Rich and Tracey. Maybe you can quickly go through your notes, and please let us know if you have any additional comments there that Judd may want to enter. Wally, go ahead.

DR. BUBLEY: They mentioned this, and I'm assuming it's in the -- Something is in the final report with it, but that very first one, and we talked about the selecting the prior, to look at it, and Rich had mentioned that they did run that, and so I don't know if that needs to be a recommendation, since it's there. I'm not sure if it's in the report, but they did look at it at some point, and, if it needs to be in the report, I think we can ask that.

DR. REICHERT: Luiz.

DR. BARBIERI: Just to clarify, I mean, really, the question, and the point, was that people reading this might want to see those results as well, right, and so that was just -- You know, then eventually they had that there in there, because, all of this, you want to look and compare to other things, and so having that K equal one there gives you that perspective, and so it was just for that point.

DR. REICHERT: Maybe you can scroll down just a little bit, and I see you making notes, Rich, but if the three of you would take a look, and, if there's anything in there that you feel we are

misrepresenting, in terms of your answers, please let us know. That would be very helpful, rather than have to correct that later.

The answer to that question, that you just scrolled through from Tanya and Rich, was, no, and they expected it would be the same, correct, and is that in there? Okay. Similar. Okay. Thanks. We're good? Scroll down a little bit.

The question is that first bullet point basically means that the SSC agrees with the conclusions of two genetically distinct stocks, and, of course, we provided feedback, but there's no one disagreeing with that conclusion, and it also means that the implications are that separate stock assessments, and separate management, is appropriate, and that the SSC recommends that. C.J.

DR. SCHLICK: Just one thing. Do we need to list that we agree with the location of the separation as well, and not just saying South and Mid-Atlantic, but agreeing that they defined it at around Cape Hatteras, North Carolina, or the North Carolina-Virginia border, or is this sufficient?

DR. REICHERT: Yes. Thank you. That would be good. I think that's implied, but I think it would be good to be specific in our report, and so thank you. That's a good point. Alexei, I saw your hand up.

DR. SHAROV: Yes. Well, I'm not a geneticist, but I wonder -- Considering, you know, that the information received on the level of their difference -- Yes, there is some statistical difference in the parameter. We can declare that there are separate stocks, but, at the same time, with so much commonality as well in the genetics, and I wonder -- Where does it make it different, to the extent that this genetically different stocks should be managed separately? I understand that's a commonplace, a common, sort of approach, but, biologically speaking, there is -- What are the implications of the genetic differences into -- Related to stock productivity stock growth, et cetera, et cetera, et cetera?

They're not really demonstrated. I understand, and I don't want to derail it, but I just -- You know, the statement, because we're currently saying, well, they're genetically distinct, and, therefore, they've got to be managed separately.

DR. REICHERT: Well, to that point, and I see Jim and Steve have their hands up, we could -- As a committee, we could recommend that separate stock assessments are appropriate, and leave the management decisions up to the managers. I just realized that, you know, how it's managed is not the South Atlantic SSC's purview, and so I'm not sure whether that entirely answers your question, but I think it would be good to separate that, and so just let -- As a committee, talk about the implications for the stock assessments only, and not talking about management, but I have Jim, Steve, and I think Luiz had his hand up. Jim, go ahead.

DR. GARTLAND: I think the genetic differentiation is just a part of it, right? I mean, it's in the second bullet there. We had the lake fisheries are a bit different, and the movement studies show they're a bit different, and now we have a genetic study that also shows they're a bit different. That's just that much more evidence for treating it as two separate stocks. It's not a standalone thing.

DR. REICHERT: Yes, Thank you, Steve.

DR. TURNER: I think about Canadian cod, and the differences there, and I think there were strong indications that they should have been managed separately, and so, if there are differences, you need to pay attention to them, and be very careful if you're managing them as one unit.

DR. REICHERT: Thank you, Steve. Luiz.

DR. BARBIERI: Right. Exactly what Steve just said, but, also, I think that them looking at directionality was important, right, because this is something else that we're trying to understand, is whether the two things are exchanging enough, and so there's a quantification that the exchange that exists was small enough to maintain them as two separate stocks, and so it's probably not high enough. It could be, like you said, Steve, but it's probably not high enough, because it wouldn't come out this way if it were, right?

Then there is no -- I wouldn't expect enough input of recruits coming from north, right, and providing recruits into the southern population, because then that that would dilute that difference as well, and it wouldn't be seen, and so, from a stock assessment perspective, I think that this is helpful, you know, to see that they did not find that directionality.

DR. REICHERT: Thank you, Luiz. Fred has his hand up, and then I have a question for Alexei. Fred, go ahead.

DR. SERCHUK: My comment is just to maybe modify the sentence that says two separate stocks between the South Atlantic and Mid-Atlantic. Maybe it should be Mid-Atlantic/New England, because black sea bass are not only restricted to the Mid-Atlantic, and they go up to New England as well. Thank you.

DR. REICHERT: Thanks, Fred. You're right, and Judd made that comment. Alexei, did the conversation, or discussion we had after you made your comments, alleviate some of your concerns, or do we still need to address that a little further? I'm not entirely sure.

DR. SHAROV: Yes, and that's fine. I mean, at this point, what I was talking about might not be necessarily helpful for the generation of the report, but I was -- The point I was trying to make is that we want to manage stocks separately when we, you know, define them as separate stocks. Thinking of them being a unity, primarily, from my point of view, from the reproductive ability, and that is, if we overexploit it, for example, right, that leads to, you know, a stock being overfished, collapsed, et cetera, and that's the self-reproducing unit.

If there is an exchange, if there is the, you know, recruitment coming from either one side or both sides, in both ways, then that's a different story, but we are not in a position -- So, I mean, obviously, there is quite a bit of exchange there, despite the fact that there are genetic differences, and so, I mean, having genetic differences, of course, helps to formulate that, yes, these are two distinct stocks, and we should manage them separately.

I'm fine with that, although I -- Biologically speaking, I see that there is likely to be quite a bit of exchange. To what extent that means that, you know, each of them is a totally separate, reproductively separate unit, I'm not sure, but I'm sorry that I brought this in. I just wanted to bring

this in for the completion, for the completeness of the discussion, but not necessarily for the, you know, changes in the reporting.

DR. REICHERT: Thank you. I have Chris and Fred.

DR. DUMAS: I think it's important also, perhaps, that we say - That we mention the finding that the rate of exchange, the gene flow between the two populations, are stable across several studies, and stable across time, so that we're not -- My understanding is we're not seeing big changes. If there is some gene flow, we're not seeing big changes in that gene flow across time since the -- I think you said since the last assessment, and so I think that's also important, and not just the state, but also the rate of change is low.

DR. REICHERT: Thank you, Chris. Fred.

DR. SCHARF: Just kind of coming back to Alexei's point, you know, there's a couple slides at the end of the presentation, that they didn't show, but they show that, in the last decade or so, there's four directed studies on movement, and eight directed studies on life history traits of black sea bass in the Mid-Atlantic, and we have none in the South Atlantic.

Given that information on life history traits is key to know whether we should manage them in different ways, maybe just a simple statement of -- It's sort of all the way at the end, you know, and so you see the movement results from 2017 on, and then the next slide is even more striking, in terms of new life history information.

DR. REICHERT: This is something I, because it wasn't part of the presentation, but this is something I didn't quite understand, because I know there's a lot of stuff done in the Mid-Atlantic and Northeast, because of the significant changes in the black sea bass population, and that always initiates new studies, but, for the South Atlantic, from what I know, we know a lot about black sea bass. There may not be a lot of new papers, but, Wally, maybe -- You're probably in a much better situation to comment on that.

DR. BUBLEY: I think what Marcel was talking about there is that -- I mean, I remember going to an AFS meeting, in 2016 or something, at a black sea bass symposium in Atlantic City, and we -- The people in the South Atlantic found it amusing, because every presentation from someone in the Mid-Atlantic or New England talked about how it's a data-limited stock, and, down here in the South Atlantic, that was the complete opposite. Like, we knew a lot of information, and so I think a lot of those new studies are because they are newer, and they're gathering more data.

One part that was left out of there though is that we have been providing life history data for stock assessments throughout that process, and so, while it's not technically a published manuscript, they're still being looked at over that time period.

DR. REICHERT: Tracey.

DR. SMART: Yes, and I just want to clarify, in addition to what Wally just said, and so we didn't include anything that's already been through the stock assessment process, that has been included in like SEDAR 76, or the Mid-Atlantic or Northeast assessments, because they're already in the stock assessment process, and then it's publications since SEDAR 25, since, you know, stock ID

has been looked at. There's certainly historical studies on life history, et cetera, and this may not be an exhaustive list. It's what we could compile in the last, you know, six to eight weeks.

DR. SCHARF: Just, you know, I wonder about some of the sort of more focused movement studies in particular, and how it would maybe help inform some of the genetic -- I know that Jeff's group has done some work, but it was at a much finer scale, and more looking at sort of site fidelity, as opposed to at a broad regional scale, and so I think we would benefit from some of those types of efforts, just to have a better sense that -- It might also inform some of the ideas about, you know, whether they're being constricted or not.

DR. REICHERT: Thanks. The second bullet point that Judd is working on said evaluate conclusions, and so the conclusions -- Judd, it's not necessary to pull that presentation up again, but that was on slide 22, and I'm just going to read it. New data continue to support two genetic populations, and the weak differentiation, genetic health, and, therefore, the southern stock is experiencing a constriction of its range, and that's something that we haven't talked about a whole lot, and so I just wanted to make sure that the committee is comfortable with that conclusion, too.

I certainly am, but that may have some implications for the interpretation of the potential results of the stock assessment, and also for the management, and I think it may be good to -- We can add it later, Judd, to briefly mention these four conclusions, because not everyone may take a look at the presentation, but that's just an editing issue, and we can add those later. Any comments on the committee? Any hands up online? I'll let Judd finish some of his notes. Jeff, go ahead. Jeff, if you're speaking, we cannot hear you.

DR. BUCKEL: Thanks. This is in reference to what Fred had said before about the tagging, and so I've mentioned this before, but we have new members. We've tagged thousands of black sea bass with conventional tags out of Morehead City, and between Cape Lookout and Cape Hatteras, and so that was -- The questions were about discard mortality, and not movement, but one of the, you know, byproducts you can get out of those studies is you see where fish go after you tag them.

We didn't have any go north of Hatteras, and so -- Even though we've not published a movement study from those fish, because they pretty much stayed in the same place where you tag them, and so it's not too exciting, the high site fidelity, as Fred said, but the other -- The upshot is that they don't move north of Hatteras, and that supports this separation at Hatteras.

DR. REICHERT: Thanks, Jeff.

DR. BUCKEL: You're welcome. I'll let Judd type that, and I had another comment on the bullet point above.

DR. REICHERT: Okay, and, while Judd is typing his comment, and that's consistent with some of the work that South Carolina DNR has done in the past, and I know of at least two tagging studies, and the same conclusion. They just don't move around a lot. They're very site -- They have a high site fidelity, and this is in the South Atlantic, yes. The South Atlantic. One study was off of Georgia, and I think the other --

DR. BUCKEL: I just had an edit on one of the first bullet points, Marcel, if we can do that now. Otherwise, I can take care of it later.

DR. REICHERT: No, and go ahead. Go ahead.

DR. BUCKEL It's the bullet point that talks about the likelihood, and the K equals one. I think it's one of the first ones. It's the second one.

DR. REICHERT: Go ahead.

DR. BUCKEL: If I read that second bullet, I would think it's one homogenous stock, and so I wonder if we should add a little more there, that -- That is true, right, but then Rich provided information, Rich and Tanya provided information, on why it wasn't three or one, and why they felt it was two, and so just to make it clear to the reader why later on it says it's two, but here we have something that suggests it would be one.

DR. REICHERT: Thanks. Steve, go ahead.

DR. TURNER: I might read this -- Just drop the loglikelihood plots for structure and just say interpretation of the structure analyses favored K equals two.

DR. BUCKEL: Yes, and, if Rich agrees with that, and I think that's -- That was my takeaway, and so thanks, Steve. I agree with that edit.

DR. REICHERT: The plot, I was wondering if that was number 23 of the presentation, or just verify -- Or you just checked that, Judd? In the report?

DR. CURTIS: Yes.

DR. REICHERT: Okay. Thanks. That question was answered. Steve.

DR. TURNER: I just think that the first sentence there will be very confusing. While the loglikelihood was highest, I think we heard that you look at where there are substantial changes in loglikelihood, which is different than we think about loglikelihood in a statistical sense, and so I would drop that sentence, because it's really interpretation of the structure analysis that results in the conclusion.

DR. REICHERT: What you're saying is, in bullet point two, delete the first sentence?

DR. TURNER: Yes.

DR. REICHERT: I think Jeff also mentioned that earlier. Right, Jeff?

DR. BUCKEL: Yes. That was the one that -- That's the sentence that gave me heartburn. I mean, it's true, but, at the same time, it's not the -- You would conclude something different about how many stocks were out there, if you read that sentence, and so it either needs more interpretation or just go with the structure analysis favored K equals two.

DR. REICHERT: Yes, and I agree, and of course -- Yes, and I'm also thinking about my report to the council, and I can -- We can talk a little bit more later, and that Structure analysis favored K

two may not help me a lot when I go to the council, or if someone reads our report in the next couple of weeks. Fred.

DR. SCHARF: Maybe Richard or Tanya could provide a little text when we go, but it's not just the likelihood, and it's the change in the variation on the likelihood, right, and so it was those patterns as well, and so, when they considered additional 's, they saw big shifts in the variability, big increases in variability around the likelihood, which is what suggested K equals two.

DR. DARDEN: Yes, and there's a good statement in the report that might help you with that for wording.

DR. REICHERT: Thank you. If you guys would be willing to provide that, then we can --

DR. DARDEN: Yes.

DR. REICHERT: Thank you so much. That helps a lot.

DR. CURTIS: Yes, and I think that would be real helpful. I think we should retain that statement about the loglikelihood plots showing one within the explanation, right, that we just justified of why we're seeing -- That we see that K equals one on those plots, but there was discussion on why Structure analysis is favoring two.

DR. REICHERT: Thank you. Thank you, Judd. I have Wally, and then Steve.

DR. BUBLEY: Just to that point, I mean, it was -- I agree that I'm fine with leaving in loglikelihood itself showed -- It favored a K equals one, but I think, if you add a qualifier after that, or a however, or a but, or something like that, saying looking at the change in loglikelihood, the change in the error around it, and what other -- Like Tanya said, they probably will have language that speaks a lot better than I do, but I'm fine with leaving that first part of the sentence in, as long as we have that qualifier afterwards that says, but, because of this, this, and this, we believe that there's a K equals two.

DR. REICHERT: Thank you. Steve.

DR. TURNER: I might -- If we want to include that K equals one loglikelihood, I wouldn't lead with it, because people might just read the first sentence of every paragraph, and come away with the wrong conclusion, and I might start with something about the change, and change in loglikelihood, and then later go into your explanation. It’s probably going to end up with more text, but it might be easier to interpret for the reader.

DR. REICHERT: Yes, and I also have to say, because this is a matter that is not always familiar to everyone, in this case, a little more text would at least help me in my presentation to the council, rather than a very succinct bullet point, but, again, we'll get some additional language, and we can take a look at that later. Jim, go ahead.

DR. GARTLAND: We could do it later, or we could take out the word “favored” and just say “loglikelihood plots performed across all combinations of locations at the highest value for K equals one”, right? That says what it was, but it doesn't mean it was favored, because, in this case,

favored is where you have a drop-off and where, when you make the plot, you don't have a 50-50 split across the whole thing, right, and that's the key, and so favored and highest are not synonymous here.

DR. REICHERT: Thank you. Luiz.

DR. BARBIERI: That's exactly the point, Jim, yes, right? So the idea of us trying to see the K equal one, relative to the other case, we want to see something below two and above two, right, so you can see the range of likelihoods and the uncertainty around them. You know, it's not really to qualify anything as being favored, right? Yes, and I agree, Jim.

DR. REICHERT: I think that's much better language. All right. I think we went through that. I think we have a really good draft of this one. It is 5:06. Let's recess until 8:30 tomorrow, and we'll start with the proxy working group discussion, and then we go through the working groups, and it's a nice transition, and then we -- Judd and I will take a look at the report, and we can go through the report.

I probably am going to suggest to look in particular to some sections that we haven't had a chance to look at after the agenda item, and so, with that, we'll recess, and we'll see each other tomorrow at 8:30. Thank you so much, and, again, Rich, Tracey, Tanya, thanks for your presentation. It was very, very useful.

(Whereupon, the meeting recessed on October 22, 2025.)

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OCTOBER 23, 2025

THURSDAY MORNING SESSION

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The Scientific and Statistical Committee of the South Atlantic Fishery Management Council reconvened at the Town & Country Inn in Charleston, South Carolina on October 23, 2025, and was called to order by Dr. Marcel Reichert.

DR. REICHERT: Good morning, and welcome back to the South Atlantic SSC meeting. Today, we'll start with Agenda Item 10, that we skipped earlier, the proxy working groups, and I talked with Judd and Wally a little bit, and we're merging that with Agenda Item 15, which is the discussion of the working groups, because it's kind of a similar topic.

Item 15 is, of course, our SSC working groups and SEDAR panel discussions. Since there are no presentations or new information to present, let's do public comment first, and I want to mention that, of course, there's another opportunity for public comment under Agenda Item 17 later this morning, and so I'm going to ask Judd if there are any hands up online, or anyone in the room who would like to make public comment.

DR. CURTIS: No hands are raised on the webinar, and none in person.

DR. REICHERT: Thank you, and so no public comment, and so let's start with the proxy working group, and I'll hand it over to Judd.

MSY PROXIES IN SOUTH ATLANTIC STOCK ASSESSMENTS AND SSC WORKGROUPS AND SEDAR PANELS

DR. CURTIS: All right. Thank you, Mr. Chair, and so Agenda Item 10 is the MSY proxies and in South Atlantic stock assessments. We had been scheduled to hear a presentation from Dr. Erik Williams at the Science Center, but, because of the shutdown, he's not available. The materials are part of the briefing book, and so you can look through them, but we're not going to review those at this time. Perhaps we can add that at a later agenda topic, or that it can be part of the charge for the workgroup that we're going to form here shortly.

A little background for this idea and the concept of the joint MSY workgroup, right, and this has been something that has been kind of bubbling to the surface for a little bit of time now, through various assessments, and we had some conversation already earlier this week, just with the tilefish assessment and the estimate of MSY, and whether it would be more appropriate to use a proxy, and some questions around the precision of estimating steepness, et cetera.

This also was discussed heavily during the joint review of yellowtail snapper and mutton snapper at the joint SSC meeting in February of this past year, and so, in the italic font there, this is the consensus statement that came out of that meeting from the joint SSC, which you can read it there, but it's basically to address some of the concerns surrounding the precision of estimating steepness, and then coming up with a more concrete methodology for the determination of appropriate SPR proxies, given life history values among different types of fish species, and so it may not always be appropriate to apply a uniform SPR proxy when you have such divergent life histories between groupers, snappers, other species, mackerels, that are managed by the councils.

Out of this, we've drafted this workgroup plan, and so this has been reviewed at the Gulf SSC meeting earlier this month, in October, and the charge of this work group will be to develop a best practices guidance document, with an associated decision matrix, to recommend a standardized approach to develop MSY proxies, i.e., SPR values, for completed and upcoming stock assessments for the Southeast Region, so both Gulf and South Atlantic.

Scrolling down, the workgroup composition will look like this. It's going to be three SSC members from each of the Gulf and South Atlantic Councils. We'll have one center representative, and a Florida analyst as well, and then Gulf Council staff, myself, or Ryan Rindone, from the Gulf Council staff, and myself, from the South Atlantic Council staff, and then we thought it would be good to have another SSC member, or a subject matter expert, from outside the Southeast Region, to provide some sort of context on how things are done in other regions of the country and what kind of decision making criteria they might be using for -- Sorry, and the screen should be unpaused now. Getting an outside subject matter expert, from outside the Southeast Region, to impart their wisdom on how they do things in other regions of the country.

The format that we discussed would look like two or three half-day webinar meetings initially, and then potentially scheduling an in-person meeting to kind of finalize the report and the guidance

document, and so you see kind of a skeleton timeline of what this might look like, what the charges in each of the meetings would be, and then, the timeline here, we would hope to get a kickoff meeting before the end of 2025, and then webinar meetings every couple months starting in 2026.

That potential in-person meeting would be meeting sometime next summer and fall, with then the final deliverables, the report and guiding matrix, to be reviewed by both committees at their fall 2026 meetings, and so, as part of the workgroup appointments, we'll be looking for three SSC members from the South Atlantic Council to join this joint workgroup.

I had mentioned earlier, and we can look at the workgroup rosters, and we did have already formed a South-Atlantic-specific MSY proxies workgroup, right, that a couple of people had volunteered to join, and so I'll leave it up to them if they want to continue on in that same capacity, and maybe give them first crack at joining the joint workgroup, but you're by no means bound to that as well, and it's open for anybody.

DR. REICHERT: Judd, I remember we discussed chairmanship of this group, and whether that should come out of the three -- Each three SSC members, because we discussed that, as chair, it sometimes is complicated to fully participate in the discussions, et cetera, and so do you -- Were there any further discussions about that, and what the final recommendation was there?

DR. CURTIS: Yes, and we did discuss this internally, and with Gulf staff, and we thought that a chair would be necessary for this, as it's a workgroup, and not necessarily like a SEDAR review panel, and that either council staff leads can kind of take more of a role in orchestrating a chair, a chair role, if necessary, but, yes, we did not think that would be necessary to have like a formal chair for this workgroup.

DR. REICHERT: Something else we discussed was the roles of each of these members, whether, for instance -- Whether or not the Science Center staff, the Florida analyst, and the outside SSC member -- Whether they would be -- Kind of have an advisory role or part of the working group, in terms of the decision-making process, and so can you clarify that, or have you guys talked about that a little further? When we were discussing this, I mentioned that it is good to define those roles from the get-go, rather than adjusting those roles during the process.

DR. CURTIS: We didn't discuss the specific, you know, authority of each of the workgroup members, based on their roles, and my thought is that, you know, it being a workgroup, it's more of an informal process, and any contributions would be useful to development of the deliverables that are charged with being prepared, and so, no, the specific kind of authority, and the roles, have not been discussed.

DR. REICHERT: Okay, and the reason I brought it up is because, ultimately, these decisions will need to be made, in terms of recommendations to both SSCs. You know, for instance, a decision tree or -- So, in that respect, I think it's -- I have no preference one way or the other, but I think the role should -- I think it's important that those roles are being defined, you know, in terms of who contributes to the ultimate consensus statements or recommendations to both SSCs. Any feedback relative to the workplan, suggestions or recommendations? Do people agree or disagree with what I just said? Luiz.

DR. BARBIERI: Thank you, Mr. Chairman. I just don't understand it, I don't think, Marcel, what you mean there, right? I mean, my view of this was more in line with what Judd explained, that all of these people -- It's a working group composed of multiple components. There is no hierarchy. There's no chair, and so decisions are made by the group, I would guess, by consensus.

DR. REICHERT: No, and I'm very comfortable with that. I just want to make sure that that is clear from the get-go.

DR. BARBIERI: Right.

DR. REICHERT: And that certain people -- Well, we don't have names yet, but certain people in these groups are not there just in an advisory role, and everyone is equally participating and contributing to the ultimate decisions and recommendations, and I'm very comfortable with that, but I think it's important that that's clear from the get-go. Okay. Thanks.

DR. CURTIS: All right. The witching hour is here. It's time to populate SEDAR panels and SSC workgroups, and so we gave a quick, or I gave a quick, overview of what was coming down the ranks, and where we need membership from the SSC, on both SEDAR panels that are upcoming and then also the workgroups, including that joint MSY proxies, as well as the assessment development -- The assessment technical team that we talked about during the SEDAR, which may need a little bit more discussion as well, but we'll start here with the SEDAR panel memberships.

We're looking for two more -- We're looking for a review chair and a review member for SEDAR 90, red snapper. Thank you, Chris Dumas, who had volunteered already to serve in that role, as one of the reviewers, and so would anybody else like to throw their hat in the ring for this?

DR. REICHERT: This is attachment 5a, right?

DR. CURTIS: Yes. Correct.

DR. REICHERT: Genny.

DR. NESSLAGE: It's September, and is that correct, and when will you know the dates?

DR. CURTIS: Yes, and it's September in Beaufort or Raleigh, TBD, and that might change.

DR. NESSLAGE: If it changes, I would be happy to be on the review panel, and chair, if you would like me, but September is going to be rough for me. I'm going to be overseas.

DR. REICHERT: Can you increase this? Alexei.

DR. SHAROV: I'll volunteer as well, unless somebody else is willing, and I certainly would step down immediately if somebody else wants to get in.

DR. REICHERT: Yes, and this may be -- People may already know that, but correct me if I'm wrong, Judd. In the SEDAR reviews, the chair is not a reviewer.

DR. CURTIS: Yes, and that's correct.

DR. REICHERT: But the chair is ultimately responsible for getting the report together and stuff like that, and so, just to help you, especially for people who are relatively new, and not intimately familiar with the SEDAR process, and that may give you an idea of workload and commitment. Thanks, Genny. If there's an issue, and Genny is not available, you can put my name there as an alternate.

DR. NESSLAGE: If you would rather do it, that's fine. I just figured it would be hard to find one, and I would be interested in doing it.

DR. REICHERT: I mean, I'm happy to be backup. Only backup.

DR. CURTIS: Excellent. Okay. Moving along swiftly, SEDAR 106, gag grouper, and so we had reviewed the terms of reference at our last meeting, and presented this schedule. This will be a topical working group that focuses on the reproductive dynamics side of gag grouper. We've got Wally appointed to this topical working group already, and we need two more SSC members, preferably with expertise in reproductive dynamics.

DR. REICHERT: We have Fred and Luiz. Thank you, guys. Appreciate it.

DR. CURTIS: Okay. King mackerel, we do not need any participants, aside from that assessment technical team, which we'll talk about in a little bit. Spanish mackerel, we presented the terms of reference, right, and there was a recommendation in order to include some of the northern data streams and things. We would be holding data webinars, a series of webinars, serving as a data workshop, and so we're looking for three SSC members to participate in a data workshop.

DR. REICHERT: Jim. Jim, thanks, and Jared. Thank you, Jared.

DR. CURTIS: I'm looking online. Anyone online interested in serving on this workgroup, SSC members?

DR. REICHERT: We can always volunteer, people.

DR. CURTIS: Okay. We should have a little bit of time to populate the last member before we start having to draft people into it. Just to highlight some of the other assessments that are coming up as well, that we don't need to populate the various groups at this meeting, but we will at later meetings, red grouper and snowy grouper, and you reviewed the terms of reference for those at this meeting, and amberjack and red porgy, for the two next assessments, as of right now, but that could all change as well.

DR. REICHERT: So you don't want any names there now? Okay, but please take a look at that, because, obviously, we will come back to this next year, in our April and October meetings, and so, ultimately, we need to populate these working groups.

DR. CURTIS: It just dawned on me that I'll send an updated list of these appointments, or a copy of these, the SEDAR list and SSC workgroups, once we populate them at the end of the meeting, so you all know where you volunteered your time.

Moving on to the SSC workgroups, so I think the first discussion I would like to have is just whether we want to retain this South Atlantic MSY proxies workgroup, that we had Kai and Jie appointed to, and we were still looking for a couple members, but it hadn't yet met, because we had been waiting on some other work to be done, and so this new joint MSY proxies group with the Gulf somewhat supersedes this older group that we have. Shall we just dissolve the South-Atlantic-specific group, and just combine with the MSY proxies, or does the committee think there is some benefit in retaining that group as well?

DR. REICHERT: How many times has that group met?

DR. CURTIS: Zero.

DR. REICHERT: So my recommendation is to merge this into this new working group. The only difference is this was kind of a standing working group, and, obviously, this new working group has a very defined timeline, but, you know, ultimately, we can always reconvene any groups in the future, if that's necessary, and so anyone disagree with that idea? No? Then let's do that. Then the next question is -- Sorry, Chip. Go ahead.

DR. COLLIER: Judd, I'm trying to remember the charge of this MSY proxies and reference points working group. The reason for that was to get in front of some of the stock assessments as they were coming to the SSC. We wanted this workgroup to look at some preliminary information and provide draft P*. That way, the analysts could have P* values presented at the SSC, and we wouldn't have to follow back up, either at the meeting or at a following meeting, and this was trying to frontload some of that P* analysis, and is that -- Am I remembering that correct?

DR. REICHERT: I don't remember. I don't remember that. It doesn't mean that that's an incorrect assumption, but I simply don't remember. Anyone else remember the impetus of this group? My biggest thing is that we've seen -- This working group has been on that list for quite a while, and it hasn't met once, and so then, if we leave this group in place, I think we should have a brief discussion about then what the charge is, and make that more active.

Otherwise, in one or two years, we are having the same conversation, and no meetings, but so is that still something that the committee feels -- Chip, is that still something that the committee feels is an important issue that may help streamline our discussions when we review the assessments? Anyone?

DR. COLLIER: I think it would still be useful, you know, trying to make sure we're getting some P* values that have at least some of the members of the SSC thinking about, and making sure that, you know, as we come to the meeting, you all are getting the full package, and we're not having to wait for additional information, and thinking about these things at the last minute.

This way, you're able to look at the full package. It's coming two weeks ahead of time. You know, it's getting a thorough review, and it’s -- So I see the benefit of it, but I'm just trying to think why we -- If we have a charge for the group, and maybe I'm misremembering. I don't know, and hopefully, I'm not dreaming this thing up. That would be a really bad dream.

DR. REICHERT: But the P* rolls out of our ABC control rule, and so then what you're saying is then, the piece of our ABC control rule that's the SSC's charge, this working group would look at that, and so that's basically the matrix, filling in that matrix. That's a little bit different than MSY proxies. It's a lot different than MSY proxies.

DR. COLLIER: Yes, and it might be a different group that was doing this. I can't remember. We talked about it, and so we'll have to check, and we'll get back with you, and so I would say let's not dissolve this right yet. Let's figure out what the charge of this group was, and make sure we're not moving too quickly.

DR. REICHERT: Okay.

DR. COLLIER: They haven't met, and so it's no cost.

DR. REICHERT: Sorry, and what?

DR. COLLIER: They haven't met, and so it's no cost.

DR. REICHERT: Well, exactly, but the only caveat there is that, you know, then that becomes a little bit of an uncertainty, in terms of workloads for these two people, but that's a minor issue, and so let's make sure we -- Let's make sure we come back to this in April, to either define or redefine the charge of this group, or dissolve it, because there's a couple of other groups that have never met, and so we will have the same discussion there.

Judd is making some notes here, and so bear with us for a second, but we still need people for that. We still need the three names for the joint proxy working group with the Gulf SSC, and so, of course, the first question is, Jie and Kai, would you be willing to partake in that working group? Kai's name remains on that list.

DR. LORENZEN: I guess it makes sense that, you know, if we have our own proxy working group, that those people are also on the shared one. I don't want to speak for Jie.

DR. REICHERT: Alexei.

DR. SHAROV: I'm personally very much interested in that subject. It always, you know, brought my attention to it, and so I would be interested in participating.

DR. REICHERT: Thank you, Alexei. Luiz, you are also on the Gulf SSC, and have they populated that working group? Okay. Thank you.

DR. BARBIERI: So I'm already a member of that group, which, you know, in this case, I feel just to leave a space here, to have more South Atlantic members participating.

DR. REICHERT: Thank you.

DR. CURTIS: Jie, I saw you nod your head. You're willing to serve on this? Great. Okay. Before going on to the assessment technical team, which I think we'll have a little bit more discussion about, let's go down to the Greater Amberjack Independent Estimate Project, and this will be a

review panel scheduled for March 24 to March 27, and that's still accurate as far as I know. As far as anyone in this room knows, that's still the case. We have Luiz, who volunteered to serve as the chair already for this review panel. We need two more members from the South Atlantic SSC to serve on the review panel.

DR. REICHERT: Anyone online? We have still quite a few slots to fill, and so I'm really encouraging SSC members to consider taking part in some of these activities.

DR. CURTIS: One thing to keep in mind is this is the independent estimate project. This is not, you know, the SEDAR review workshop, where they'll be integrating the estimates from this project into management, and so this will look more at survey design, how they came up with the estimates. There's a number of different methodologies, including tagging methodologies, video survey sampling, and so it's not strictly a review panel charge for the SSC members in this particular area. We will be looking for review panel members for the greater amberjack SEDAR review, when that happens, in I forget what year, 2028 or something like that.

DR. REICHERT: This is also like the -- This is different than the red snapper, because this is both a Gulf and a South Atlantic project that is --

DR. CURTIS: Correct, yes, and there is also review members from the Gulf SSC on this as well.

DR. GARTLAND: I would be interested in being involved, but, much like Genny with the red snapper, I might be on the water then. We should be done with our fishing by then, but, if we're not -- So maybe put me in as a if nobody else type thing, just like Genny with the chair for the red snapper.

DR. NESSLAGE: I'm interested, but that week is bad, and so, if things get bumped, let me know.

DR. GARTLAND: Kind of the same. If that moves into April, I'm available.

DR. REICHERT: Go ahead.

DR. NEER: Like Chip had said, we don't really see any reason why we would be moving that workshop week, because those are -- The PIs for that are not feds, and we struggled to get that even week. They wanted to have it earlier, because that grant is ending, and they need to get this done, and so I doubt it will be postponed, and so, if anyone is actually available, as opposed to if you can't find someone else, we would love to hear from you. Just an FYI, the reviewers -- Luiz is chairing it, and the Gulf reviewers are Trevor Moncrief and Dave Chagaris, are the people who were appointed, in case that sweetens the deal, or actually makes you not want to go, and now you know. It will be in-person, and it will be held at the Gulf Council's office in Tampa.

DR. GARTLAND: With that, I've probably got to come off, because we probably won't get back to the dock in Rhode Island until about the 22nd or 23rd.

DR. REICHERT: Okay. For now, you can pencil me in. Anyone else? Steve.

DR. TURNER: I would be willing to do it. I would be interested in it, but, you know, I'm not so great on survey design, and so, somebody else with expertise, I would be happy to back out.

DR. REICHERT: Yes, and the same, and, again, I'm really trying to encourage everyone to consider participating. Obviously, we like to kind of spread the workload a little bit, and, as you probably know, and, if you look through that list, some of the same names pop up over and over, and so we would like to populate that with some other people.

DR. CURTIS: Okay. I think that's all the appointments, minus the assessment technical team.

DR. REICHERT: Well, before we go to that, a couple of things. We did not talk about any of the other working groups, and so I would really like to go through them. The data limited unassessed stocks, ABC Category 4, and I'm going to ask that same question. How often has that group met, and, if they haven't met, we either need to revive that or ask whether that group is really needed. Chip comes to the table.

I think -- Because this was the discussion about the Category 4, and I think I mentioned before that, even in some of the other categories, right now in our ABC control rule, there's not a lot of guidance, and so we've discussed that. We really need to come up with some ways to approach those assessments. Chip.

DR. COLLIER: So, with the data limited unassessed stocks, we have been waiting on methods coming from MRIP on how to estimate stocks with high PSE, and so that process is coming to an end, I believe. I think MRIP is putting together, or they were putting together, a report, before the shutdown, and hopefully we can get something in April on that, but there was no point in starting this group unless we could estimate recreational landings with some degree of accuracy, and now the next part that had come up, for the data limited part, was trying to estimate discards.

The commercial discards, that could be an issue, but, you know, I think we can put this workgroup together and get them thinking about some of the information, after we get a report from the Science Center, or OST, on how to estimate species with high PSEs, because, when we're thinking about these, the other species, the unassessed species, the PSEs are quite often unacceptable at an annual basis.

DR. REICHERT: Thanks, Chip, and so what I'm hearing you say is that it's likely that there will be work to be done for this working group, and so let's keep that. Do we know anything, because, if this working group is going to be more active, then we need to make sure that we get that Science Center rep and outside experts names filled in before that working group is actually going to do some work, and we have a chair for that working group, and so thanks for that. Ecopath, Ecosim, Ecospace, we've met. Sorry, and go ahead, Luiz. Sorry.

DR. BARBIERI: Sorry, and I just fell behind a little bit there. Sorry. Just curiosity, Chip. For this data-limited unassessed stocks thing, will the analysis be conducted by the working group or by the Science Center?

DR. COLLIER: That hasn't been worked out, but I think we could do it by either one. In the past, when the SSC had developed their recommendations for ABC, they developed those. Council staff came up with the method, provided you all with the results from those, and then moved those forward, and so I think we can work together to put together the appropriate packages, whether it's the Science Center working on it or council staff working on it.

DR. BARBIERI: No, and that sounds good. I was just thinking about the workload there now, you know, with them getting staff reductions and all, and so, if there's capacity internally, right, for the council staff to work, and SSC members, to get this accomplished, you will help things move forward. Thank you.

DR. COLLIER: Yes, and Judd will love to do this.

DR. REICHERT: On the record. The Ecopath, Ecosim Ecospace, this working group was quite active when that model was developed. I'm kind of looking at, Chip, whether council staff, or the council, is expecting some more activities relative to this working group?

DR. COLLIER: So we are in the final stages of one of our climate resiliency fishery grants that we have, that we're applying through NMFS for. It was part of the IRA stuff, and so we're still working through this. There is a part of it that would be associated with the Ecosim and Ecospace, trying to look more at how species are moving up and down the coast, and how that's kind of potentially impacting communities, and so we're envisioning this workgroup would still be needed, but we don't have final approval for the grant yet, and so I can't give an answer. Hopefully we will need it.

DR. REICHERT: No, and I think that's good to know, but there's still an open spot there, and, also, this group currently does not have a chair, because we went through -- Some people left that group, because they left the SSC, and so is anyone interested in participating, as the fourth member, and is any of the people that are currently on the list willing to act as chair of this working group? Go ahead, Chip.

DR. COLLIER: So I would say that, in the past, the people that have been working on this project have really served as chairs. You don't necessarily need an SSC chair. It truly was a workgroup and --

DR. REICHERT: Okay. I appreciate that. Thank you, and you're right, and so then the only thing is, is anyone else in the group, in the SSC, interested in filling that fourth spot? Am I missing someone? Jared. Okay. Thank you. Sorry, and I may be looking at an old -- The same thing is true for the regime shift.

DR. CURTIS: Sorry, and I think -- Jared reminded me that he had volunteered to serve on both this group and the regime shifts group at a previous meeting, and I had forgotten to put his name into the roster, but you're seeing an updated version on the screen now, but that's different than what's in your briefing.

DR. REICHERT: Okay. Thank you, Jared. Regime shifts. Okay, and so regime shifts. You know, same questions. How many times have they met? Is that still something we want to retain?

DR. CURTIS: So the regime shifts, right, was formed a couple of years ago, and since the center has been working -- They've got their own internal workgroup, and they've been working in detail on this low recruitment issue for the South Atlantic, specific South Atlantic stocks, and we've seen some reports from the work that's been produced from that workgroup already, and so, again, this workgroup, the SSC workgroup, was waiting until they had finished their -- The center had

finished their workgroup progress, and generate a report, before we could figure out how then to integrate that into the South Atlantic assessments.

DR. REICHERT: So we will retain that one. There is a fourth spot, I believe, that's open. Thank you, and C.J. volunteered for that spot. Okay, and then there was a motion, in the June council meeting, that states populate and convene a new working group comprised of shrimp harvest sector representatives, NMFS staff, council staff, council member, and an SSC member, and so that's a working group that I don't believe is on the list, and so we need an SSC member to be part of that working group. It's to identify workable solutions that aim to reduce interactions with smalltooth sawfish and giant manta ray in the South Atlantic federal shrimp trawl fishery.

DR. FLOWERS: I was invited to that, and so I think I'll be the one serving.

DR. REICHERT: Thanks, Jared.

DR. CURTIS: Sorry, and we didn't include that as a workgroup, because it was a workgroup of one, and Jared had volunteered to step up into that role.

DR. REICHERT: Yes, but it would be good to add that to the list, because we talked about workload, and so it would be good to list who is involved in what working groups or panels. All right. I think the last one is this -- Go ahead. Shrimp working group, and it's a working group. Thank you. So what we have left is the assessment technical team, correct, Judd?

I think we need a little bit more discussion about that. Judd and I talked a little bit about it, and I think where we left it off -- It was a little unclear, because -- Whether this was a kind of a standing team, with the same five SSC members for every single assessment, and I personally think that, especially if there's multiple assessments, that would be really a heavy lift, and we can recommend some other solutions.

One would be to make two five-member teams, and then, you know, one team takes one assessment, and another team takes another. We can propose to expand the number. We can put the entire SSC on there, and then, depending on the type of assessment, people can either volunteer, or people can be asked to be part of the technical team.

I'm not sure how much leeway we have. I'm looking at Julie, to see how much leeway we have to -- Of course, we can recommend anything we want, but how much leeway we have, in terms of the procedure, but I am -- If it's going to be those five members, I'm afraid that, especially in years where there are a lot of assessments, that may be a bit of a heavy lift. Fred.

DR. SCHARF: Yes, and so these are the technical teams that may or may not be asked for input, right, and it would include other cooperators, or collaborators, in addition to potentially SSC members. My question was, does it have to be five? Like could it be three SSC members on a particular assessment?

DR. NEER: So the technical team -- So it will include the analytic team from the agency. They will be the ones convening these meetings to have this conversation, and the way it is envisioned is that the technical team is made up of both the science piece and the stakeholder piece, and you all may meet together, or the individuals might meet.

You might just need scientific feedback at some point, stakeholder feedback, and at other times we'll need everybody, and so there is no -- Within SEDAR, there is no restraint with regard to the numbers, or there is no restraint with regard to being a standing committee or populating a group for any individual assessment. That is up to the cooperator, and so Chip can speak maybe to the South Atlantic's vision for what they're thinking about for now, and also remember this is all new.

We do have an outstanding question from NOAA GC with regard to whether we can do this all with zero public-facing pieces. That was the way we thought it was going to run, using information and guidance and how we operate for other pieces of the puzzle within SEDAR, but we don't know, and obviously now we're not getting any new guidance anytime soon, but, at the most, the way we envisioned it, which we thought will be okay at the very least, is that this team will be able to meet offline, with a flexible schedule, and then, if we have to, we will then --

SEDAR will hold one webinar for the public option for these are all the things we talked about, and this is what the team is recommending, and here you go. Right now, we're envisioning no sort of scheduled FRN publicly-noticed webinars, or anything for the technical teams. If in fact we have to hold one of those, it should just be one, and so, in terms of that piece of the puzzle. In terms of numbers and scheduling, cheaper.

DR. CURTIS: Thank you, Julie. So, in terms of numbers, we are envisioning, you know, around five SSC members. We're also envisioning members from the Beaufort assessment team being on this group, and maybe some additional experts, and then some stakeholders. We ideally would like a single group that does this, because we want to get consistent feedback to the analysts.

You know, as you put new people on, they come up with different ideas, that may go against the previous recommendations, and that's not necessarily a problem, but we would like consistent guidance coming to the analysts. I know there is a lot of concern on the workload coming forward for this potential technical team, and rightly so, but we're also envisioning the new process is going to be getting more throughput, and that is the overall goal, and so the technical teams may not need to meet every stock assessment.

If there is a big issue that this SSC is worried about, that should be addressed through a topical working group, with the experts associated with that topic, and then get that integrated, and so hopefully the SSC is identifying these big issues prior to, and it's just small issues that might come up, helping to make some decisions along the way, and it's not going to be a day-long meeting or anything like that that we're envisioning for these technical teams.

We're envisioning short tactical meetings, where they're talking through things, making sure that the decisions going into the assessment are based on sound judgment, and then the final recommendation would be coming from you all at a formal public meeting, either through the acceptance of the stock assessment or through the pre-decisional check-ins.

DR. REICHERT: C.J., go ahead.

DR. SCHLICK: Well, given that guidance, and the fact that the team would be called on by the analysts, wouldn't it be -- Wouldn’t they be wanting input from people that are more species-specific, or fishery-specific, and not necessarily assessment-specific? Would an assessment team

of assessment scientists really be helpful, or a team that's more biologically and ecologically based, that can look at the graphs and say, no, that's not biologically relevant, and something is off?

DR. COLLIER: Yes, and, I mean, that's why we're trying to get some of the stakeholders, and figuring out the best way to do that. That's where we're running into some of our challenges, is figuring out, you know, who is going to have the most information on the fishery itself, and maybe not the biology, but the fishery. The biology, I hadn't really thought about that, but we can definitely work through it.

We're not envisioning these technical teams necessarily by trying to think about when we're doing a full benchmark assessment, right? That's when we need the biology of the fish, and it's really addressed through the data workshop. You know, they will go through that life history part, and so that's a good point. We'll have to think about that some more.

DR. REICHERT: Julie, go ahead.

DR. NEER: I was going to say that so a perfect example of this was the one you guys just did, where you said we were going to have a TWG to look at reproductive dynamics, and so the way we envision it is, if there's a big issue, and like we know there's some new reproductive data, or there's something that is requiring us to take a deeper dive into one of these pieces of data, then the TWG does that part of it, and that's where you populate it with those biologists, or ecologists, as needed.

Then the technical team will also meet, but they're meeting for -- In theory, the recommendations on how to move forward with the reproductive dynamic information was already recommended from the topical working group, the TWG, and then you guys are, again, talking about, okay, we have this new reproductive data, and, now that we have this, it's causing something weird in the selectivity, or the retention functions, or something else, right, and so then the technical team will weigh in on those pieces, and so you can have both.

If there's a big topic, that we would need more of say biological, we would populate that group with the people who have those expertise, and the technical team is supposed to sort of help with, like Chip said, that consistency in the modeling approaches, and, if we have a specific topic that requires specific advice, or expertise, hopefully we would have a topical working group to address those pieces of the puzzle.

Like Chip said, when you have the closest thing to what we call a benchmark now, and red grouper is the perfect example, we're going to have, essentially, a stock ID, a data workshop, and that's where all those people will populate as regular -- Like how we've always done it, and then the technical team will come in at the assessment phase of it and tackle those things.

DR. REICHERT: Correct me if I misunderstood you. There's the assessments where we already -- Where already a TWG was already defined in the terms of reference, et cetera, but then, earlier, you said, well, there are examples where, for instance, the technical working group, or the analytical team, the assessment team, identifies an issue, and then there is a TWG, but you're not saying that, during the process, a TWG can be formed, or can it?

DR. NEER: It can, but hopefully that won't be needed. The assumption is that, when we put it together, and we talked about what components we need, and what data we have, we identify that this is a big topic, and we can address it, and bring -- Develop and say there's going to be a TWG. Now, things sometimes show up, and then we have to do it, but, when we do that, just again, that notes to, when you start adding additional components after things are underway, it's just going to delay the whole process.

Hopefully those negotiations, and that conversation with you guys here first, suggesting what components and data need to be investigated, goes into that feedback loop of those negotiations, and we know that going in, so, by the time we get to the terms of reference and everything, you guys have identified that we need a TWG for this, and we're going to have the technical team for the assessment portion, and then it will come to you for review.

DR. REICHERT: Okay. Thanks. Chip, go ahead.

DR. COLLIER: Just to follow-up on can we add a TWG after a stock assessment has started, blueline tilefish is an example of where that did occur. The analyst identified a problem, and SEDAR staff worked with Science Center staff, and council staff, to get that topical working group started. It did delay the assessment, but, you know, it all got done, and it leads to challenges, but hopefully, if we're doing these stock assessments on a more regular basis, we're not going to be running into as many issues.

We're going to be able to address smaller issues that pop up throughout the system, and hopefully get things done in a more timely fashion. We want more throughput. We don't want stock assessments every six, seven, ten years. We would prefer them every three to four, and maybe that's not going to have the full suite of information that they had before, but more regular information we're feeling is going to provide us a more consistent management regime, and we don't have to have shocks to the system, because, when you shock the fishery system, that often leads to very slow development of management measures.

DR. REICHERT: Thank you, but then that goes -- The two things that you said earlier that, obviously, this hopefully leads to more throughput, more assessments, and so, you know, at the same time, you said, well, not every assessment needs a technical team, but there are more assessments coming through, and so that's also increases the likelihood that the technical teams are needed, and so that's what I'm trying to wrap my head around, in terms of workload and how we need to format this, five members or more multiple groups, and I would like some feedback from the committee on that. Julie.

DR. NEER: Well, to that point, Marcel, the hope is that, yes, you'll get more information every three to four years, as opposed to six or seven years, but we won't have to do the full monte everything gets reviewed if we -- So then the technical teams are less likely to be needed.

The topical working groups will hopefully be less likely to be needed, because we're doing more of that top tier sort of update approach, where we won't really -- You know, if we're doing it more frequently, the chances are there won't be as many things that are stewing in the background for three, four, five years, and then we have to bring everybody in.

The hope is that, once you get a good assessment underway, where we've updated and looked at everything, then these in-between sort of ones will be more about like here's a check-in, and we've updated the landings, and we updated this one index, and nothing new, and we have no new datasets, and we're just asking -- So the hope is those type of assessments won't need technical teams, but it's providing more frequent information for the managers to react.

DR. REICHERT: I understand that, and, again, I don't want to be the squeaky wheel, but what you're telling me is that it is more likely that those technical teams are actually being called upon during the first year or two, and then it tapers off, and so that goes back to our current working load and whether or not -- What we can do is get a list of five people together, just see how that works, and then reevaluate that sometime next year, when we have a couple of assessments under our belt, so to say. Is that agreeable with the committee, because I feel I've been doing a lot of talking, but I would really like some feedback from the committee.

DR. NEER: Schedule-wise, you only have gag next year, in 2026, and 2027 currently says there's three or four things on the agenda for assessments. I don't think we're going to get four assessments in 2027.

DR. REICHERT: Jim.

DR. GARTLAND: So I was the one, before the meeting, started to come up with the hockey line change idea of having two teams that could alternate, but, given the discussion, I think I'm fine having one team, to see how it goes, and reserving the right to make a change in a year or two if we say like, boy, this team is just getting dogged, and we've got to do something else. That all said, given that the team might get dogged, and I just said that, I'm happy to be involved, if you guys want me involved. I'm not going to say we should work people to death and then sit back. That's not how I work.

DR. REICHERT: Thank you. C.J.

DR. SCHLICK: Well, in interest of having that consistency, maybe adding an extra slot or two that, if the team gets tasked with something, and a person is unable to fill in, you have one person dropping off, and not an entire team changeover, and so maybe having a pool of six or seven, and expecting four to show up when they're called, if that makes sense, and then you at least have a consistency with who could be in it, but --

DR. REICHERT: That makes perfect sense. The challenge will be filling in those names, and so, Jennifer, I saw your hand up.

DR. SWEENEY-TOOKES: As I'm listening to this, I keep circling back to what you started with, Marcel, which is do we just all need to be on this list, because different expertise will be needed at different times, for different parts of that process, or will a list of six or seven cover our bases?

DR. REICHERT: Thank you, and that goes back to the comment that Chip made earlier. The idea was to have kind of a similar group, so you get kind of more consistent recommendations, or advice, and then, of course, all those assessments will ultimately come to the full SSC, where that broad spectrum of expertise can weigh in, Jim.

DR. GARTLAND: Well, in the case where we might need some particular expertise, it doesn't mean we can't call someone from this team who isn't on that particular group, right? I mean, we could just reach out and say, hey, we need your help with X, because none of these five or six know anything about that.

DR. NEER: Procedurally, every assessment, the cooperator is going to send a list of participants' names and contact information to the center, and so, if in fact, an assessment comes up, and they say, well, we have our core team of five, but, in talking with you guys, it would be really good if we had person Y also on it, they can just add that. That's up to the cooperators, but, procedurally, how it works is, every assessment, they're going to get a list that are sent to the analytic agency saying these are the people that you can contact, that we've appointed for this particular assessment, and it can procedurally change. It's just the need of appointing people.

DR. REICHERT: I have C.J., and then Chip and Luiz.

DR. SCHLICK: I was just going to say on my recommendation of seven to eight members -- When the assessment is about to kick off, then the smaller component of those seven to eight would be timed in, and so, even if they get a call, or don't get a call, is dependent on how that assessment goes, but before the assessment starts, you know who of those seven or eight are already participating on the given assessment.

DR. REICHERT: Thank you, C.J. Chip.

DR. COLLIER: Yes, and just a reminder that it's not just the SSC that's going to be on this technical team, and so there are going to be other people that will be on the team, and so we don't want it too large, because as you get a workgroup larger and larger, or a technical team larger and larger, that is going to potentially dilute the amount of advice that you would get, and so we do want to keep it somewhat small, but I can definitely see the point of maybe seven or eight members within the pool, and seeing their availability like during a three or four-month time period, because, once again, we're envisioning these being fast assessments, and so it's not like it's going to go over a year period.

It is going to be a time period, and let's say somebody like Wally would be considered for a technical team. Well, summertime is awful for him, because he's offshore quite often, and so maybe that would be a reason why he wouldn't be available, and then Jim has some work that he's doing apparently in March, and so, yes, figuring out who would be available I think would be very useful.

DR. REICHERT: Thank you, Chip, and so I'm looking around the room one more time, if anyone is willing to throw their hat in. C.J. and Jennifer, and we already have Jim, and so we have three.

DR. CURTIS: Jie.

DR. REICHERT: Jie is four, and Genny is five. Steve is six. Thank you, because I was going to say, if we still need to fill slots, expect an email or call from me, but thank you so much. Alexei, go ahead.

DR. SHAROV: Thank you, and not volunteering yet, but just making a comment. I thought -- You know, my impression, when we discussed when the changes in the SEDAR process, and the concept of the technical working group was introduced, my impression was that it was really -- It was saying that the group will be consulted as needed, and will be consulted when and if the assessment team feels that they need advice, or they need a particular expertise, and so I think, in this process, the assessment team probably should be allowed to sort of make a request, make a list of what -- You know, who or what kind of people they're looking for, and so it should be very dynamic.

You know, it could be Person 1 or 2 in one case, and then maybe 5 in another case, and so I -- I'm not against, you know, having like, you know, the emergency room squad, that Genny and others will be on-call all the time, and then -- But I feel like the idea was, every time, to have it, you know, really focused on the assessment type, or the species, or both the methods in the species.

DR. REICHERT: Thank you, Alexei, but I want to remind you, and I don't want to put words in your mouth, Chip, that one of the ideas was to have that consistent group, to have consistent approaches, and so that's -- What I think we kind of came up with is a hybrid, where there is a team, but, of course, there's always an opportunity for the assessment team to call on people with specific expertise. Thank you. Jeff, go ahead.

DR. BUCKEL: I was just going to say that I volunteer to be on the technical team.

DR. REICHERT: Thank you, Jeff. Appreciate that.

DR. BUCKEL: You're welcome.

DR. REICHERT: I would like, and I -- For some reason, I thought we had it when we were discussing the new SEDAR procedure, but I think it would be good to put in there that it would be good for the SSC to kind of re-evaluate the workload, and see if that works out, or maybe we need to make adjustments to how this is approached, and so maybe sometime next year. Well, next year, we have only one, you said?

DR. NEER: Yes.

DR. REICHERT: So maybe, you know, that -- I mean, realistically, I think sometime in 2027, maybe the end of 2027, we should kind of take a look at that, and see how this all worked out. Chip.

DR. COLLIER: I'm almost thinking about this as trying to communicate with staff at SEDAR and the Science Center and saying, all right, are you envisioning a high workload for this technical team, because I would rather get in front of any issues, if they're envisioning to need to talk to this team quite a bit, and we have two or three projects going on that need to talk to a technical team, I would rather come to you all before burning SSC members out, as opposed to SSC members coming and saying I'm done, and I'm not reapplying, and so let's keep the workload manageable in the front. Maybe, you know, if we have two or three, two or three assessments going on, that need technical teams, we'll get up with the analysts, to make sure that it's what they're envisioning for it.

DR. REICHERT: Julie.

DR. NEER: I was just going to say, along those lines, some of this I think will also be helped when we get in the proper cycle of having the conversations early on of what components we're going to use, and so we'll have a vision of how much data stuff we're going to need, versus how much is going to be analytic support and stuff, and Emily has already prepared an infographic with the cycle of how we go from all these stages, since we were struggling with that a bit on the first day. We're tweaking it, and we'll have it available for you.

Like I said, I think, once we get going with the timing, and get in the cycle, and we'll know -- We're going to actually start working on the 2027 scheduling, and we hope to have feedback on how much they can actually do in 2027 at our February SEDAR Steering Committee meeting, and so we'll already know, by hopefully February, if you're really getting four assessments in 2027 or not.

DR. REICHERT: Thank you, Julie, and I think there's a task for us, as individual members, also. I mean, if your schedule frees up, don't hesitate to contact Judd, or the chair, and, also, when you look at your schedule, and you feel that, you know, your workload is -- Your SSC workload is a little too much, reach out and then see if someone else is available to take on some tasks, and so, in terms of spreading the workload, of course, we all have our individual responsibilities there, too. Thank you, everyone who volunteered. Is that the end of -- That's it? Good. Thank you.

DR. CURTIS: Yes, and thank you, members, for volunteering for the various SEDAR panels and workgroups, and I'll update that list and circulate it after the meeting.

OTHER BUSINESS

DR. REICHERT: Thank you, Judd, and next up is Other Business. I have one item. Anne Markwith informed us that this will be her last meeting as an SSC, as a South Atlantic SSC, member. Anne joined us in December of 2023, and she occupies the North Carolina state seat on our SSC, and so she will be -- In December, we'll know who will replace her, but this will be her last meeting. Anne, thank you so much for your service and contributions to this SSC. I certainly enjoyed working with you, not only on the SSC, but on some of the panels, and so you will be certainly missed, and so, again, thank you so much for everything you've done for this SSC.

Item 17 is public comment. Anyone in the room, or anyone online, who wants to make a general public comment relative to what we discussed during these three days? No hands? No one in the room, and no public comment. What we have left is consensus statements, and going over the next meetings. I suggest a five minute -- Fred Surchuk, go ahead.

DR. SERCHUK: One of the reasons that I have not been as active is a situation that developed between the meeting schedule of the South Atlantic Council, of South Atlantic SSC, and the New England SSC. Regrettably, they're both meeting the same time this week, and I made the point to the New England SSC that it would be worthwhile to check in the future if there are other SSC meetings going on during the time that you envision to hold your SSC. The same is true for Kai. He's a member of the New England SSC now, and of course, we can't be at two places at once, and so I don't know whether you interact with -- Whether there's a way, when you plan your

meetings, to make sure there are no duplication of SSC meetings, because you do have some people that are members of both. Thank you.

DR. REICHERT: That's a good point, Fred, and we have Luiz, who is also serving on the Gulf SSC, and so we will certainly discuss that and see if we can avoid overlap, if at all possible. One caveat there, obviously, is there's a lot of meetings going on, and not just for us SSC members, but also for staff, but, Fred, your point is well taken, and we'll definitely take a look and see if we can make adjustments, if there is overlap, and so thank you for that point.

DR. SERCHUK: It's one of the reasons I haven't volunteered for more -- For very much stuff now, because I don't know what's happening in New England that will lead my -- Where I could provide expertise, and so I understand that -- Once I understand what happened this meeting, I may get back and say, well, wait a second, and I think I can serve on one of the two of the groups that you mentioned, but I don't want to do that before I have an understanding of what went on in New England. Thank you.

DR. REICHERT: Thanks, Fred. Let's take a ten-minute break. I think -- I'll talk with Judd. I think we have a pretty good draft of the report, but there is a couple of items that we want to go through, and so we'll do that after the break, and then I know I may have to eat my words, but maybe we can adjourn a little early. Let’s come back at 9:50.

(Whereupon, a recess was taken.)

DR. REICHERT: Welcome back. Judd, Wally, and I briefly discussed the review of the report, and so Judd will take us through the report. Fortunately, this meeting, we had a lot of time to review our notes after the agenda items. I think that was very helpful, and I'm going to try to see if we can do that again at our next meeting, rather than going through that review at the end of the meeting, where maybe some memories faded, or at least my memory fades at the end of a meeting, and so Judd will take us through the report, and, in particular, some of the key recommendations we have for the council, and thanks everyone for providing notes already to Judd, and so Judd, if you would --

CONSENSUS STATEMENT AND RECOMMENDATIONS REVIEW

DR. CURTIS: Thanks, and so I've got the Google Doc, the shared document, up on the screen, so that you all have access to make your comments, or make recommended edits to the text that we have here, and I think this has worked pretty well. I've incorporated the edits that people sent Tuesday evening, for the most part, and I think there's a couple points maybe still that need to be smoothed over, and then you'll see likely some additions and comments on the side, and so continue adding, or making recommended suggestions, as we move through this document.

The first topic was just the fishery management plan amendments and the council actions, and so we've got some text there, courtesy of some of the members. I don't know if we want to read through these, or people can scroll through on their laptops.

DR. REICHERT: I think -- Since that was receiving an update, I don't think there's major recommendations that we formulated for the council, and so we can scroll through that.

DR. CURTIS: All right, and next up was the briefing on the SEDAR process modifications, and so this is broken down. We've got some SSC feedback here. The SSC will have expanded input during model development, and some bullet points here contributed by the committee, and then, lower down, we have some of the recommendations, specifically specific language recommendations from the committee.

DR. REICHERT: I think we had extensive discussions on that topic. I think the SSC check-in was an important point. Today, we talked a little bit more about the technical team, and so we can either add some of those notes under that, or maybe Judd can move them to this agenda item. It may be more appropriate to do that, our thoughts on that technical team, and also, you know, the uncertainty about the workload, and I think, for the SSC, it is important that we basically said, you know, at some point, let's reevaluate and see how that workload fell out, but Judd made a note on that working group, and so we can move that into this agenda item.

Also, and I forgot who made that recommendation, and I think that's a really good one, is to ask if, during our SSC meetings, we can get an update of the ongoing assessments, because that may be an opportunity for us to potentially identify some issues, or for the assessment team to come to the SSC with some questions they have, and, again, that either -- That can then be punted to a technical team, or maybe we can provide the feedback they needed.

DR. CURTIS: Some of the recommendations specifically drafted for the SEDAR approach, right, are the SSC requested that we receive at least one check-in for every designated assessment or assessment defined by the TORs. This idea of a kickoff meeting with the assessment technical team and fishery experts to identify useful data and approaches.

A comment here about the need for flexibility during the review phase, through a more iterative feedback loop, similar to what has been proposed towards the beginning, with the assessment technical team and the check-ins, as opposed to a single final review. I added some language there that it's still a little unclear how that request process may unfold, and that's still TBD, but we'll have a note of that there.

A comment here that the teams, if they are formed, should be updated and consulted during the process, and that stakeholder representation needs to be sincere, to ensure that buy-in, and avoid further eroding of the public trust.

Here's that statement about reviewing the process after a period of time, five-ish years, and was there another suggestion? Is five years sufficient to review the successes, efficiencies, and recommended improvements, and to review the efficacy of that check-in step after a couple years of implementation of this new process?

DR. REICHERT: Judd, I remember Jennifer mentioned that, for the trust, for the stakeholder trust, to not have just one meeting, but have a meeting at the end, or a follow-up meeting, and so, Jennifer, I'm not sure if you saw that in the notes, but I remember you mentioned that, and I think that's a very important point, if we want to address that trust issue. If you -- When you get the draft of the report, Jennifer, perhaps you can -- If that's not in there, or it's not clear, maybe you can add -- Where is that?

DR. SWEENEY-TOOKES: I thought it was in there, but I'll go back and verify. Thanks, Marcel, for remembering that.

DR. REICHERT: Okay. Thanks. Chris.

DR. DUMAS: I just have a question of clarification. Maybe I just didn't catch this, but is a pre-review different from an SSC check-in, and, if so, how are they different? I understand how a technical team review is different from SSC check-in, but I don't understand how a pre-review is different.

DR. REICHERT: Yes, and that was a specific -- Wasn't that a specific language that you mentioned, Julie?

DR. NEER: "Pre-decisional" is the word we were using, which is the same thing as the SSC check-in. The pre-decisional presentation is the same as the SSC check-in. Pre-decisional just seems like it just -- That's a long word, and SSC check-in is the slang we're using.

DR. CURTIS: Yes, and I think that's different though than kickoff meeting concept, right, that was introduced during this meeting, and so Julie talked about, right, the SSC check-in and the pre-decisional meeting, and those are synonymous, but this kickoff meeting would be a little bit different, right? That would occur more towards the beginning, or before the start of the assessment and the assessment review.

DR. DUMAS: The kickoff meeting is a subset of technical team review?

DR. NEER: Well, we do what we call a data -- A scoping call at the beginning of -- If there's going to be a topical working group, or if it's a data workshop, we have a data scoping call, and I think the conversation was that we thought it would be helpful to invite the technical team to attend that meeting if they were available.

DR. REICHERT: I think this kickoff meeting -- Generally, the data scoping call is very focused on the potentially available data, and so I think this kickoff meeting is a little broader than that, in terms of -- Go ahead, Julie.

DR. NEER: I was going to say I think there's two pieces. I think there's the way Jim was initially talking about it, and he said it was great, because it would be helpful for the data, and so, when there's a data component that SEDAR is managing, we can hold a -- We can invite the technical team to participate in that data scoping call, but I think the other piece that you guys had mentioned, when later you were talking about this technical team specifically should meet at least once, as an opening salvo, like, hey, and, again, a wrap up, whether you're called on or not, and those were your recommendations, and so I think there's two things.

I think there is a -- There is a sort of scoping call that SEDAR will manage if there's a data piece, and then there -- The suggestion was, separately, that there should be at least two technical team sort of chats, which could be a we're kicking off the assessment, and these are the people who are on it, and whatever else they need to talk about, and then a wrap-up of the technical team participation, because they were appointed. I think that was an SSC recommendation.

DR. REICHERT: Yes, and I think that also addresses Jennifer's point that, you know, there's a follow-up, and it's not like, okay, thanks for your input, and then they don't hear anything at all. Jennifer, go ahead.

DR. SWEENEY-TOOKES: Yes. Absolutely. Thanks, Julie and Marcel, and I have a bit of a follow-up question, mainly for Jim, I think. It seems like we're talking about two different things a little bit. Like Julie is saying we already have our plans in place, and we have that initial kickoff meeting, but I'm wondering -- My understanding, when Jim first explained it, is that kickoff meeting also serves as a space for perhaps stakeholders to raise other issues that are not even on the radar yet, or that people don't realize are an issue.

If we hold that kickoff meeting after those decisions have been made, then, effectively, what we're doing is saying is here's what we've decided to do, and, okay, that's nice that you've said that, but this was already our plan, and so am I misunderstanding, or you already have this in mind, Julie, it looks like.

DR. NEER: Well, I think that piece, which is a good piece -- I think that piece will come in potentially at this very early stage, when a species gets put on the schedule, and it comes to the SSC for you guys to provide information on what components and pieces you think should be included in the process, and it would be a time when you can talk about we think there's, you know, this new dataset, and this new dataset, that might be available, and someone else might go, oh, but, you know what, and I've got a grad student, who is also working on this, that we didn't even know about, and so that's when we come to you guys, when you're the very first --

After the species gets identified to be on the schedule, we would come to you guys to talk about what components and pieces, and do we need a TWG, and do we need a data workshop, and do we need -- You know, I think that's where we could get that kind of feedback, because we should come to you guys, and hopefully you can provide us feedback, and then I guess we could go potentially to the APs too, and I'm looking to Chip.

DR. REICHERT: Well, because that -- Because what you're describing is purely scientific, the graduate students. I think what Jennifer is trying -- Well, I don't want to mean with words in your mouth, but I think what Jennifer is getting at is the stakeholders, because that's a group that you then only get feedback from during the technical team meetings, and so maybe what you said, that if you go to the APs, that may provide an option there. Jim, I saw your hand up, and then Chris.

DR. GARTLAND: I guess my comment about, you know, the early kickoffs, and the industry involvement, is -- Just to give an example, for the longfin squid assessment, we had a kickoff meeting, and I think it was in 2024, and two big things that came out of it were a new source of size comp information, and that came directly from the industry, as well as information on their recommendation, or their thought, is the catchability in March and April is effectively zero with a bottom trawl, and so things like that, that we wouldn't have from our work, or a grad student, things like that.

DR. REICHERT: Thank you, Jim. Chris.

DR. DUMAS: Thanks everyone. That's all helpful. My question is really just about trying to make sure we have mutually exclusive names for these different types of meetings, so that it's

clear, and, also, we have a list of who is supposed to attend each of these different types of meetings, and so maybe a table that gives, in the first column, the name of each meeting type, and then, in the second column, who is supposed to attend.

Who is organizing, and who is supposed to attend that meeting just so everyone -- Just to reduce misunderstandings among all of us about which meeting we're talking about, and who is supposed to attend, and I think everybody is working towards that, and I know we had a discussion of a lot of different things at this meeting, and so I'm sure that's all being worked through, but that would be great. Then my last question is, for the SSC check-in in particular, is that a meeting that we're expecting the whole SSC to attend, or just a subset?

DR. NEER: No, and that -- The thought process is that will be held at a regular SSC meeting, whether it's a half-an-hour, ten or fifteen minutes to a half-an-hour, discussion, or it's four hours, because we've had a lot of stuff come up, but that -- the goal of that meeting is to get the expertise of everyone on the SSC, and not just those five or six folks that were on the technical team that have been part of the conversation, and so it's to bring in everybody, in case we miss something, and how do we fix it before we wrap it up?

DR. REICHERT: Thank you, Julie, because now, typically, we don't see anything until the full final assessment report is coming to the SSC, and so I think that will help a lot, but that's -- To your point, Chris, I think that would be really helpful, and, when I'm going through the report, I may actually work with Wally and Judd, to see if we can at least get a draft of that table together that is relevant for the SSC. Thank you, and we'll, obviously, involve Julie also, but thanks. Fred.

DR. SCHARF: This is probably already in here, but just to -- I think to make it clear that the point of the SSC check-in is to allow us to make contributions during the model development stage, and so it's not necessarily after all the technical team input, and it's probably before most of that, and it's guiding how the technical team is going to help implement that, and so the timing of the SSC check-in is a critical piece, to allow us to have that input at the front-end.

DR. NEER: Yes, and we've talked a lot about the timing of that, because you want to have it where there's enough work done that you can provide feedback, and enough decisions were made that they can weigh-in on whether you think those decisions are valid, but you don't want to do it too early, because then they might -- You guys might make a recommendation, and they tried it, and it doesn't work out, and then like there's not -- There's not multiple check-ins across the process. We're not shifting to suddenly having the whole SSC weighing-in on the assessment development the whole time. We're just trying to give you a little bit of -- A little preview, a little peek behind the curtain, before we finish it.

Just one other comment about this, this other sort of kickoff, to me, it sounds like that might be something that really that's not currently part of the SEDAR process, but I know, when we have an assessment coming up, usually Kim would send something out to all the Constant Contact folks saying, hey, we've got this new assessment under species X coming up, and do you have any information, and do you have any interest in participating.

That might be a venue, or a mechanism, to get a broader broadcast to people and figure that out, because that piece of the puzzle, doing it before we've actually set everything out, is not something

that we had considered, but it might be something to work with council staff, to find out if there's a way to make something like that happen, and so thanks for that.

DR. REICHERT: Or perhaps make that -- Broaden the scope of the data call, but anyway. Steve.

DR. TURNER: Chris's table might include a new column for the different types of assessment, basically SEFSC, or cooperator assessment, versus more robust assessment, which might be a SEDAR assessment, or whatever you're going to call it.

DR. REICHERT: Thanks. Some clarification, and maybe a new point. Thanks for you all's feedback. Jennifer.

DR. SWEENEY-TOOKES: Just a technical check in, and are these comments that all of us are adding to the report, Judd, you go along -- Are they popping up in a manageable way, or is this a hot mess for you to be dealing with down there?

DR. CURTIS: A little of both, but your comments are being integrated into the Google Doc. There's yours right there, and so thank you for that.

DR. SWEENEY-TOOKES: Wait. Why am I the only one showing up?

DR. CURTIS: Well, you're the only one for that particular comment there, but there's -- Well, I did see some others in there, but, yes, those will get integrated into the report before it gets circulated as well.

DR. REICHERT: The alternative hot mess is a plethora of emails and texts, and so --

DR. CURTIS: Okay. Then, the other recommendations, I think we covered it. Staff to provide updates of the ongoing assessments during our quarterly meetings, and I'm happy to do that. One idea, or maybe not quite a full request, but was to consider holding one or two additional short SSC meetings, to allow for this more iterative process in the assessment development and review., and that's something that we'll bring up to the council, as a possibility for increasing that throughput, but that's something that there's, obviously, other considerations, like cost, time, and scheduling. As we know, it's real busy to get additional meetings in there, but I'll provide some feedback to the SSC on some discussions at the council level.

DR. REICHERT: Judd, one question, and I'm trying to remember our discussion. SSC requests staff, and that's you guys, council staff, correct, to provide an update. I thought, when we discussed this, that it would be an opportunity for us to provide some feedback, and so that feedback may not be very useful for council staff, but it -- So, anyway, just -- I tried to remember whether -- I mean, that's our -- Isn't that same as a regular check-ins?

DR. CURTIS: Yes, and, well, my interpretation of this request was that I would just put it together similar to kind of the update of the fishery management plan amendments that I go briefly through, and highlight some of the important ones, and this would just bring the SSC into the fold on what has been going on in the assessment realm, and this would include any SSC check-ins that have happened, or kickoff meetings, et cetera, that have happened since the previous meeting.

DR. REICHERT: So this is more kind of schedule related than actually providing technical feedback. Okay. Thanks. Appreciate that.

DR. CURTIS: Okay. Moving down, this is where I did include some of the text from this morning's discussion on the SEDAR assessment technical team, and so there is an avenue for incorporating that biological expertise, but, typically, we do have the topical working groups, or full data workshops, as the assessment mechanism to integrate that new and updated biological information. That's not saying that new biological information cannot be incorporated through the assessment technical team, and, if there are particular studies and updated information that would be relevant, we can consult those particular experts, and get those included.

DR. REICHERT: Thanks, Judd. Steve, I saw your hand up.

DR. TURNER: On the previous topic of council staff providing updates, I had envisioned that that would come from the cooperator, and say one person, and let's say the center has -- Not council staff, but the cooperator, and like the center or Florida. You know, the center report on the status of the three assessments they're doing at this point, and where they are in the process, and then Florida doing the same thing, you know, and so they have one person report to the meeting on what's going on with their assessments, rather than council staff doing it.

DR. REICHERT: That was the question, the issue behind my question, but that's a different -- That's the check-in. I completely agree with you, but I thought that was covered somewhere else, and so then I agree with you, Steve. If the SSC gets an update on what's going on with the assessment, and not simply what's on the schedule, and what's been completed, but what's going on within the assessment, then that should work.

DR. CURTIS: Well, to me, that's the function of the assessment technical team, right, is that they're going to be kept in the loop on the development of the assessment and help move -- Help troubleshoot some of the assessment questions, and provide that guidance to the assessment staff, and that would be the Southeast Fisheries Science Center or the Florida analysts doing the assessments.

DR. TURNER: But there may not be a technical team for every assessment. There may be some assessments that this center is doing that doesn't require a technical team, and so my perspective was have the cooperator who is doing assessments tell us briefly what's going on.

DR. REICHERT: I have Kai, and then Julie. Go ahead.

DR. LORENZEN: I don't know if I'm sort of opening a can of worms, but I'm wondering sort of what that is really for. I mean, so either, you know, we're getting it, and we're just saying, okay, thank you, or, if we are meant to engage, then it has to have more information, and more of a role, and I don't think it's useful to spend time to just listen to a description of where the center is at, and then that's it, and so I don't understand why.

DR. REICHERT: Okay, and I can certainly see that, and so perhaps an alternative is to see how this current process works, and if we feel, at the end, that maybe those updates would have been really helpful earlier, we can say let's see if we can change that procedure, where the SSC is being informed on what's going on within the technical realm of the assessment, and, again, maybe it's

not needed, and the comment I had relative to Steve, or maybe Steve's comment is also -- Yes, the technical team can chime-in, but only if the assessment team requests that feedback, and so it's not that the technical team is being updated on what's going on through the process and then then can provide comment. Julie, and then Judd. Judd, go ahead.

DR. CURTIS: I was just going to say, you know, so potentially not every assessment will go through that ATT process, but at least council staff are always pretty well briefed on what's happening from some of those assessments, and I can integrate that information into the council staff updates, as part of this bullet point here, where there's maybe not a scheduled SSC precheck, and now we're talking about so many different levels of them having a check-in, which kind of defeats the purpose of increasing that throughput.

DR. REICHERT: Thank you, and as I said, I --

DR. TURNER: Thank you.

DR. REICHERT: Any -- Julie.

DR. NEER: That's what I was going to say as well, is that the SSC -- The way the system is set up, it is not supposed to have the SSC weighing-in as the assessments being developed, every three months or whatever. I mean, that -- We don't even do that now. The use of the technical team, and the SSC check-in, is acknowledging that we're getting rid of those regular webinars, where people could chime-in, and we still want to have some feedback loop, but it's not shifting to where, every time you guys meet, you're going to get an update of where we are in each assessment, and ask for your feedback, because that's not how the process is designed.

That is why we have SSC reps, who serve currently on an assessment panel who speak up, and then, in this new process, on the technical team, and at the SSC check-in report. That SSC check-in is -- I actually think it's going to be a much -- A really good addition, because it's going to let you guys, like I said, peek behind the curtain before you get it when it's final, which has been an issue.

DR. REICHERT: Thank you. Wally.

DR. BUBLEY: The way I envision this is, I mean, basically how Julie was talking about this, and, with these updates, I think of it more as a this is just coming down the pipe, and so be ready, and this is going on.

For some of this, obviously, seven or eight of you have volunteered to be on those technical teams, but the other folks that aren't on there don't necessarily know a technical team is even being utilized at that point, and so this would be, I think, an opportunity to say, look, we have a technical -- They've had a couple of meetings, and they have a technical team in place, and then just to expect that. I can't imagine it's going to take that long, and so, even if it's a two-minute update, that's -- I mean, I think that would be useful for the SSC as a whole, just to know kind of where we stand with things.

DR. REICHERT: Thank you. Thank you, Wally, and I -- Again, we can see how this works, and then come back to it in a year, or a year-and-a-half, or two, to see if things worked out the way we

had expected, and I think that's actually a recommendation we have in in our notes, to internally evaluate whether we are happy with -- If there is a need to suggest adjustments. Thank you.

DR. CURTIS: Back to the comments on the SEDAR assessment technical team, and so I had drafted down two composition options. It sounds like the discussion favored this appointment of seven to eight members as a pool of the ATT members, and then specifying four to five members for a particular assessment as they come up, depending on availability, expertise, and scheduling in there as well.

We're going to plan to revisit and reevaluate the composition, workload, and other concerns after a period of time, and it seems uncertain exactly what would what that benchmark would be, either one or two years, or maybe two -- Two to three assessments or something, if that seems feasible.

DR. REICHERT: Yes, and I think that's --

DR. CURTIS: As necessary.

DR. REICHERT: Yes, and I think that's mostly dependent on how many assessments we will get in the next couple of years.

DR. CURTIS: So far, the list of volunteers -- Make sure I got everybody there, and is there anybody that I left off the list of the volunteers for the assessment technical team? Okay. Moving on, and this is -- I'll flesh this out a little bit better, because we've got the members populated on that spreadsheet that I brought up earlier, and we'll add those selections to our report, but I think we've filled out everything. I did want to note that Jeff Buckel had some webinar issues, but he texted me, and he volunteered to serve as that third member for the Spanish mackerel data workshop, and so thank you, Jeff.

Next up, we had the terms of reference reviews for a number of species, and, similarly, I've made the edits within the documents themselves, and so I'll make note of some of the suggested changes under these bullets in our report, and somebody made a comment here that we've reviewed them. Excellent. All right.

I have a point here -- I don't know if this -- If you want to retain this in the report or not, and there was some discussion over developing separate templates for terms of reference for the center-led only assessments and the SEDAR participation type of assessments, and I can't remember where that discussion exactly went from there, if that was favored or that was rejected.

DR. REICHERT: Fred.

DR. SCHARF: Chip, that that was -- I brought that up, and then Chip said that he was working on that, and so the idea was to have sort of a common template, and then, if certain components weren't going to be included, they would just be left blank, and with a rationale for why they weren't going to be included, so we wouldn't have -- He said he was working on that.

DR. REICHERT: It may be good to add that staff is working on something. Thanks, Judd.

DR. CURTIS: Okay. Moving down to the SEDAR revised, which is the South Atlantic tilefish, Chip went through the presentation provided by the Science Center staff, and the SSC reviewed the changes made to the assessment, which included the revised commercial landing stream, and then changing of the initial F parameter, and if you see -- You see the comments here provided by the SSC, and so is the assessment consistent with BSIA guidance and practices? There's a sentence talking about appreciate the corrections made.

DR. REICHERT: Steve.

DR. TURNER: I think Chip indicated that that last sentence had been done, and so I think that could be removed. Basically, council staff did comparisons, and there didn't seem to be a problem.

DR. REICHERT: Thank you, Steve.

DR. CURTIS: Okay. The SSC considered this revised assessment consistent with BSIA guidance and principles. Does the assessment provide a reliable quantitative estimate of current stock status? Yes, given the uncertainties of the SSC discussed since initial review, and given this current discussion.

Does it provide predictions, reliable predictions, of future conditions and projections? There's a couple notes here considering the assumptions and the projections are likely reliable. A comment that the terminal year the assessment was 2022, and so that extra year added on, because of the revised assessment, the more uncertain the projections become, and a comment that the next assessment on the stock is scheduled for 2029, but there is concern that this might be too long of a span between assessments, given the uncertainties, and, if there is a possibility to get that onto the SEDAR schedule sooner, that they should look into this.

Okay. Moving forward, and I don't see any hands, summarize and discuss the revised assessment of certain uncertainties, and this was primarily the change in the initial F value. The SSC supported that change to the F_{init} value. It likely affected the outputs in earlier years of the assessment, but had less of an impact in more recent years.

DR. REICHERT: Genny.

DR. NESSLAGE: I think we might have ended that discussion with -- But it could impact. It doesn't look like it impacts the early years that much. Otherwise, I would have been concerned about the MSY estimation and SPR, et cetera. That would impact that. It's just the way it's phrased. I can do some wordsmithing.

DR. REICHERT: Thanks, Genny. Yes, and I remember you mentioning that during our discussions. Steve.

DR. TURNER: With the previous statement where we talked about uncertainties in the assessment, is it sensible to mention that we look forward to the inclusion of the fishery-independent SADL survey?

UNIDENTIFIED: (The comment is not audible on the recording.)

DR. TURNER: That's in -- Okay.

DR. REICHERT: Thanks, Steve.

DR. CURTIS: Yes, and that's included later on the report. I think I added a section on recommendations for monitoring the stock until the next assessment. The second bullet was discussing the factors of the assessment that affect the reliability of stock status and fishing level recommendations.

There is still some concern over the direct estimate of MSY, and the stock-recruit relationship, due to the poor fit of the Beverton-Holt spawner-recruit curve, and limited observed points along the curve for low spawning stock size, and significant uncertainty in the distribution of steepness, and these were all expressed in the initial review and as well as in the revised version.

DR. REICHERT: Can we make it specific? We can add that language, but make that specific that that was discussed in the previous one too, and we can add some language to that. I think it's good to indicate in this report that those were not new issues that came up during this meeting. Thanks.

DR. CURTIS: Okay. Some additional uncertainties regarding the dome-shaped selectivity, and the selectively block changes in 2020 still remain a concern, especially with the lack of index. Suggestions that it's imperative the next assessment include that SADL survey data as an index, and consider any new fishery-independent index. In this case, this comment was related to not necessarily a new index, but maybe a continuation of an old index that might have had a break in it, a fishery-dependent index, and so maybe -- I don't know if that language covers that, or that might be something we need to wordsmith. Yeah.

DR. REICHERT: My only comment is if we consider -- If we recommend to consider a new fishery-dependent index, it would be good to identify what index we are alluding to. Genny.

DR. NESSLAGE: So the longline index was used previously, but then there were changes in regs that resulted in it not tracking population abundance, and so I don't know if there's been a long enough time period since those changes. I'm not as into the regs as others are. At some point, there, in theory, will be and it could be regenerated as a more recent index, and so I think that's where we were going, right, Steve, because that was your idea.

DR. REICHERT: Thank you, Genny, and so Judd added that. I think that's very important that we just not -- That we make that specific, rather than you all find out if there is a new fishery-dependent index available somewhere. Genny.

DR. NESSLAGE: Maybe replace "new" with a "recent time period CL index", something like that?

DR. REICHERT: Thank you.

DR. CURTIS: Excellent. I was having a heartburn with the "new" as well, because it's not exactly new. Additional uncertainties identified, given the increasing cost of the fishery-dependent data and fishery-dependent data and use of the dome-shaped selectivity in terminal block in this assessment, recommend regular monitoring of other sources of information on stock health,

including SADL, time series, age-length structure, recent trends in CPUE, and if the fishery has been able to meet their ACL.

I think some of that language is duplicated down here in some of these bullets under the recommendations for monitoring the stock until the next assessment. Those all look similar. Okay. Any questions on the list of uncertainties and recommendations for monitoring? Okay, great.

Moving on into providing OFL and ABC catch level recommendations, some comments here are the committee went through the ABC control rule, or was briefed that the ABC control rule did not change with the revised assessment. The stock risk rating still remains at high, and the current biomass status at moderate, making it a P* of 30 percent. The revised data streams and F_{init} parameter did not result in any changes to this application. There was a comment there that there was a slight increase, right, in the relative stock status, but it didn't get across that threshold from moderate to high, and so that did not change the P value determination.

DR. REICHERT: Should we move that likelihood profile to earlier, to the uncertainties, rather than have it here? You can do that later.

DR. CURTIS: Yes, and let's do it right now.

DR. REICHERT: That's, again, something we discussed previously, but it was again mentioned in the committee here.

DR. CURTIS: Okay, and moving on to Table 2, and so, courtesy of Chris Dumas, we've got a brand-new, shiny formatted table that has -- It's not quite as beautiful.

DR. REICHERT: We'll make it even more beautiful.

DR. CURTIS: Yes, and we'll make it even more beautiful, but there were some comments, right, that is a little confusing, with the interim years that actually represent the observed landings in numbers and pounds, and then teasing those apart from the projected OFL and the projected ABC, and so we've got individual columns, and I'll have to format this table accordingly, but so here now you lose -- You lose the redundancy across all the columns here, and hopefully it makes it more clear.

DR. REICHERT: Can I make -- The projected OFL, or projected ABC -- Those are our ABC recommendations, and I think that maybe that language matters, if people look at the table, because that's kind of what people are kind of focusing on.

DR. CURTIS: Yes, and I think Chris actually had recommendations in there, and they didn't fit nicely in my table, and so I moved them.

DR. REICHERT: We'll -- As we said, we'll make the table even more beautiful.

DR. DUMAS: In case you were worried, I sent that table with a Creative Commons open use license, and so you're welcome to do that. Share and share alike.

DR. REICHERT: Thank you. Yes, and I think it's important for us, especially for this agenda item, to go through our recommendations, and make sure that we have the right language there, because, obviously, that's important for my report to the council, but also for the council. Thank you, Judd.

DR. CURTIS: Okay. Moving on to the recorded presentation from the MRIP-FES survey that we received, and, again, I apologize to those online for not getting the audio working. We do have -- I believe we posted a link for that presentation, so you can review it. I don't -- Mr. Chair, I don't think we had any particular recommendations on this topic. I think it was just SSC comments, and so please review those and add anything that you recall from your notes.

DR. REICHERT: Yes, and this was the action that it was basically received that update, and a timeline, and so thanks.

DR. CURTIS: There were a couple of requests, down below, specific to, when OST has finalized the incorporation of the peer review study, or the peer review, into this updated design, to get an updated presentation on that revised survey and design, the new calibration methodology and various components contributing to uncertainty, specific for the South Atlantic region, as it is identified that different regions across the country might experience different changes with the adjusted survey.

DR. REICHERT: Judd, wordsmithing, and I would make that "SSC request", so it's clear to everyone who reads the report that this is a question the SSC made, and then, under the last bullet point, and I forgot who made that comment, but it would be good to add a little bit of language to explore incentive programs to improve data quality, and what exactly were --

DR. DUMAS: That was me. Mechanism, incentive mechanism, design, a set of incentive programs.

DR. REICHERT: But that's to increase participation or --

DR. DUMAS: To improve data quality.

DR. REICHERT: Yes, but, I mean, an incentive to who, or what, is what I'm asking. Do you know what I'm trying to say here? Is it an incentive for --

DR. DUMAS: For survey respondents to provide better --

DR. REICHERT: Thank you. I think that's important that we clarify that. Thank you.

DR. DUMAS: Also, I think we requested an estimate of what was the increase in precision from these changes they made and the estimates. That might become out in the report, but just so that that's clear, that we would be interested to know what they estimated increase in precision was from the changes that they made, which they probably have, and probably are going to be in the report, but --

DR. CURTIS: Yes, and I think that's captured up in the discussion somewhere of the potential biases. The revised survey is more accurate, but we can include that down here as well.

DR. DUMAS: So that would be what reduction in PSEs they see from this.

DR. REICHERT: Steve.

DR. TURNER: I don't think the change in the survey would necessarily result in a reduction in the PSEs, and so I think we probably need to say the impact on the PSEs of the revised structure.

DR. REICHERT: Yes, and, Chris, are you meaning to say that we would like an update from the team, or in the report, because --

DR. DUMAS: (Dr. Dumas' comment is not audible on the recording.)

DR. REICHERT: Okay. Thank you. That will help. Okay. Yes, and thank you. That's good. I like that. Thanks, Judd.

DR. DUMAS: Also, in that, in the request for items to be included in a presentation, we also had mentioned maybe some additional explanation of the impact on the Florida shore mode estimates, because that was something that was controversial in the new revised MRIP numbers.

DR. REICHERT: Luiz.

DR. BARBIERI: Chris, this is true, right, because I remember the same thing, and, when we were reviewing those estimates fishing effort for the east coast of Florida, they were disproportionately higher, right, and you know, when you think about the high level of fishing effort that we've got for shore mode for Spanish mackerel, right, you can see the impact of that now.

Now, there is a -- In the background, there is a recent -- There's a project study, right, that is going on now. Now I don't know what MRIP's capacity will be. The problem there is that the FES, right, is a mail survey that estimates the entire, right, effort for the entire state of Florida, and then the -- The specific, species specific and site specific, effort are apportioned to different areas based on the dockside survey, right, but, because Florida is the only state that has two coasts, right, you still have to make some decisions on how to apportion that effort to the Gulf versus the Atlantic coast, and that is generating some problems there that we cannot really put our finger on.

The statistical consultants basically said the only way to get this resolved is to do a study where you evaluate this in more detail, and so I don't think they're going to be able to provide -- I think it's a very good point that you brought up, because that issue has been a problem for us. I don't think they're going to be able to provide an answer, right, that's meaningful until they get that study completed.

DR. REICHERT: So it may be good to add that, you know, our SSC recommends, or looks forward, or at least mentions this study that may increase the quality of that data, correct, and so it may be good to add that. If you guys -- Chris, if you and Luiz are -- If you can tweak that language, when you see the draft report, that would be really helpful. Thank you.

DR. DUMAS: I think the study that Luiz is mentioning -- That's something separate from MRIP, right?

DR. BARBIERI: No, and so they -- There's all sorts of things that going on in the background as part of the transition plans, right, and so they have identified -- Put together some committees that identified a list of projects to try to address some of the things that, within the general survey, you cannot really resolve without doing those studies, and so this this study would be conducted by MRIP, in collaboration with their statistical consultants and other participants.

DR. REICHERT: Thank you.

DR. CURTIS: Okay. We had to postpone the dolphinfish management strategy evaluation update, although I did provide a quick snapshot on the timeline, and I just wanted to update the SSC on some recent information that we received this morning, courtesy of Julie, in that the dolphinfish MSE -- I think I initially had suggested that the SSC would be able to review the CIE's review and comments at the April meeting, and that's no longer going to fit the timeline, as the CIE review has been postponed until likely summer of next year, and so we'll keep the SSC in the loop, as available, but, right now, that won't be on our agenda for the April meeting.

We can -- Actually, one thing to add here is that the SSC will be charged with reviewing the terms of reference for the dolphinfish review, and so that is something that we might tackle, if it's available at our April meeting, and, at that time, then potentially have this discussion on whether it would be appropriate or not for the South Atlantic SSC to have a member on the CIE review panel.

DR. REICHERT: (Dr. Reichert's comment is not audible on the recording.)

DR. CURTIS: Okay. Moving on to Agenda Topic 10, the MSY proxies, we were unable to hear from Dr. Erik Williams, unfortunately, and his presentation, although it is posted. I presented the draft workplan and schedule for the proxies joint workgroup, and we've got members populated to that workgroup, and so I think we're all set there.

The next topic we had was the black sea bass genetics summary report provided by Rich and Tracey, and so we've got quite a few comments here. There was some concern on the influence of a priori selecting location priors for the Structure analysis, and it may be having a significant result, but the authors indicated that, right, this analysis was run, and it did not have an effect overall, and I'll note, also, that I spoke with Rich and Tanya after the presentation too, and they've got some language to potentially contribute to answer some of the questions that the SSC had that we can include. Just make sure you review it and approve it for your report.

DR. REICHERT: We actually reviewed this yesterday.

DR. CURTIS: Right. Yes, and we reviewed most of the language already yesterday after it, and so I think most of it has been seen already. I'm not going to read through each and every one of them. There was a suggestion to add in the conclusions slide bullet from the presentation, which I'll do once -- Before we issue the report to the committee for review. I think a few of them are echoed here in these other bullets.

DR. REICHERT: What's important here is our recommendations relative to the stock structure, because that is -- It's important for us to recommend, or to review the recommendation, for a stock

structure, because that's the part that has implications for the stock assessments, and so make sure you agree with our recommendations and language there. I see no comments.

DR. CURTIS: Anyone online? Sorry, and I not been monitoring the hands raised online. No SSC members online. Jeff, go ahead.

DR. BUCKEL: Judd, if you could scroll back to the first bullets, and so the implication for the next -- It sounds like you might -- I'm not sure when you add in the conclusion slide bullets from the presentation, but just having a strong statement here, right, the first -- Currently, the first data bullets, you know, supports weak genetic differentiation, and so I might read that and think, okay, well, for the next black sea bass stock assessment, or the management, we can -- You know, it's all one stock, and I think we need to have a strong statement that the -- That there is, you know, a U.S. South Atlantic black sea bass stock that's separate, and that that, you know, impacts how the assessment is done.

You know, the spatial domain of that assessment stays the same, and management, resulting management, should also use that boundary, and this is because, you know, there are folks here in North Carolina, right, stakeholders, that, if it was a movement of South Atlantic fish into the Mid-Atlantic, and it's just one stock, they -- You know, they know that it's very productive north of the North Carolina-Virginia line, and so they -- You know, if it's a productive stock, then they want to not have any impacts to the fishery, but we -- From this, it supports, you know, the approach that has been used, that it that it is a separate stock, and so we have to -- The productivity of the two are just completely opposite at the moment. North of the North Carolina-Virginia line, they're increasing dramatically, and we're seeing the opposite in the South Atlantic. Thank you.

DR. REICHERT: Thanks, Jeff. Excellent points, and I would even add there the contraction of the southern population, which I think was the third or fourth bullet point in there, and we can add that. Steve.

DR. TURNER: We might sort of weaken that second bullet that supports weak genetic differentiation. We might say the high genetic variability in both North and South Atlantic stocks results in weak genetic differentiation.

DR. REICHERT: Thank you, Steve. Good point. Jim.

DR. GARTLAND: Is it worth modifying that to “we get distinct”, just to kind of drive home the point that -- To prevent confusion as to whether the weak differentiation is meaning that it's actually one.

DR. REICHERT: Yes. Thank you. Kai.

DR. LORENZEN: I'm not sure whether this statement is really correct, but I'm not enough of a geneticist to judge. It seems --

DR. REICHERT: Anyone else? This is a consensus statement, and so we want to make sure that everyone agrees, or find some other language that people are comfortable with. Luiz.

DR. BARBIERI: I mean, we could try to do this now, right, this way, but we could also, as Tanya recommended yesterday, have us just go to their report and pull, right, and so, instead of having to paraphrase what they said, we can go and search for -- Just to make sure, right, that we're not putting words in their mouths and that. We can pull some of those.

DR. REICHERT: Thanks, Luiz. Excellent suggestion. Steve.

DR. TURNER: Another way to address Kai's concern is just start with the first part of the sentence, and drop the last part, and so there is high genetic variability in both the North and South Atlantic stocks, period, and that's it.

DR. LORENZEN: Well, I'm not -- But relative to what?

DR. TURNER: They said that the stock was -- Early on in their discussion, they said that these two stocks were -- This species was really remarkable in the number of genetic alleles for each of the nine sites. Normally, you have a few alleles, and a lot of these sites had twenty alleles.

DR. REICHERT: Anyone else? Thank you for that. Yes, and I think -- I agree that that was, you know, part of the -- If I remember correctly, it was part of the explanation why that -- Why the genetic differentiation was weak, but, Wally.

DR. BUBLEY: I agree with Marcel, in terms of that was part of the reason, and so there are other components than there as well. I think it had to do with potentially the effective migration, and some leakage coming from the other areas as well, and so I don't -- It wasn't just the high genetic variability, though that had a role in it, and so it might be best just to look in the report, if we can see some language from that, instead of just attributing it to one, when it was multiple things.

DR. REICHERT: So that's what Luiz suggested, and let's do that, but I also want to alert the committee to take a good look, because I want to make sure that that is reflective of our discussions, and so, when you get the report, take a take and see if we need to wordsmith this a little. Thank you.

DR. SERCHUK: I have a comment, Chair.

DR. REICHERT: Fred, go ahead and then I have Kai.

DR. SERCHUK: Okay. Correct me if I'm if my recollection is not right, but I thought the advice that we provided recently on black sea bass indicated that the stock was in very difficult trouble compared to what it had been in the past. If that is correct, you know, I think we need to make a statement that the genetics work in no way undermines the fact of our previous advice for the stock, okay, and that significant reductions need to take place. Would that -- Am I recalling that correctly?

DR. REICHERT: No, and I don't think we discussed that, and I also am not entirely sure if that would be a correct statement, because I think -- Because, if there's a genetic effect, and I think Tanya addressed that. If there's a genetic effect of the low current population size, they have not seen that yet, and that may be because it hasn't been taking place long enough, and so I don't think there's a direct link to those two, Fred.

DR. SERCHUK: Okay. I'm just wondering, and what does our previous advice mean in relationship to any of the work that has been done in terms of the genetics?

DR. REICHERT: I think there's very little, and, as I said, I think that's because that signal -- It hasn't been long enough. A, we do not know whether the population is low enough to see that effect, and then, B, that low population size hasn't been in effect long enough to see genetic and a genetic impact, but I'm not a geneticist, but I believe the work that we reviewed here is impacting the -- It's impacting any statements that we made relative to the population size. I think it solely is to determine whether or not the assessment is taking place, or should be taking place, in the way that we have currently done, one stock in the South and one stock in the North.

DR. SERCHUK: Okay. I may have a different impression from the advice that was provided last year when we went over the assessment. Okay. I accept it. Thank you.

DR. REICHERT: Okay. Thanks, Fred.

DR. CURTIS: One thing I don't see here is some discussion on -- There was statistically a difference between those north and south groupings, but there was some discussion of this transition zone that might be occurring right around that Cape Hatteras area. I think that's important to know, right, and there's not a stark contrast between those, but they do get a little bit blurred around that threshold right around Cape Hatteras.

DR. REICHERT: Jim.

DR. GARTLAND: Yes, and I was thinking about that. It makes it interesting, right, like where that mixing area is, because, if there is a mixing area, depending on whether it's in the Mid-Atlantic or the South Atlantic zone, whoever is doing that assessment should probably leave that out, because you don't know how much of what is for who. I'm not saying we should put that in here. I'm just saying it was a thought that I had, right? That mixing zone, where it is, is actually pretty important.

DR. REICHERT: Yes, and so, C.J., go ahead.

DR. SCHLICK: I was going to say there's a sentence from the report that I think will actually help kind of multiple of these points, and it says, "Project results provide support for two genetic stocks of black sea bass, with weak genetic differentiation between the southern and northern populations, with a transition occurring around the North Carolina-Virginia border."

DR. CURTIS: We'll be sure to put that verbatim in the report.

DR. REICHERT: Yes, and, also, we need -- Some of these decisions, given the information available, probably, at some point, need to be made by the assessment team, but we should certainly point that that may be something they need to take into consideration.

DR. CURTIS: Okay. Moving forward, there was a few comments on just the magnitude of new studies in the more northern regions indicating that black sea bass there is an emerging fishery,

going from data-limited to data-rich, where we've been experiencing black sea bass in the South Atlantic for a much longer time, and we have much older studies.

A little bit of information on the population genetics, life history, and movement studies considered during previous stock ID workshops, and this is -- This combination of evidence was what led to the decision to support two separate stocks, and so this will be done in -- Well, if there's no stock ID workshop for the next assessment, it will not be done, but this was the information that was used to support the stock separation into a South Atlantic and a northern stock. Any other comments on the black sea bass genetics study?

DR. REICHERT: Okay. Seeing none, next up is -- C.J.

DR. SCHLICK: Actually, there was a comment that I think Jim made on this that might be kind of interesting to add in, that, in the Northeast, they did the VAST indices, and they're seeing that kind of change in the center of gravity of their indices, but they're not seeing it fill in in the southern portion, which would further lend to there is not a migration from the southern stock to the northern stock, and so I think having some of that in here as well helps with this.

DR. REICHERT: Thank you so much for reminding us. Jim.

DR. GARTLAND: I think the language for that would be the VAST analysis showed northward shift in the center of gravity in the southern component of the northern stock. It was real specific.

DR. REICHERT: Again, I'm thinking about my report, and so okay, and this is a statement, and so what's -- Why are we making the statement relative to the southern stock? C.J., and Jim. Jim, go ahead.

DR. GARTLAND: Just the initial thought on that was, if the southern stock was coming around Hatteras, and filling in into the northern region, and so the southern component of the northern stock, you probably wouldn't see that northern shift in the center of gravity, and so this is what -- These VAST findings are consistent with the idea that we're dealing with two separate stocks, a southern and a northern, that mix a little, but not much.

DR. REICHERT: Okay, and so then perhaps you can add "which is consistent with the conclusion of two separate stocks", and that will help me when I present my report. Thank you. Steve.

DR. TURNER: It seems to me what you're saying is the shift in the geographic center of that southern area suggests that leakage from the South Atlantic stock is not substantial.

DR. REICHERT: Yes, and, again, when you guys review -- Thank you, and, when you guys review this, I mean, please -- That goes to some of the other statements, too. Sometimes we have statements, and then when I review, or I prepare my report to the council, I'm trying to figure out why we are making that statement, and so it would be really helpful to explain that in our -- Explain those statements in our report. Thank you all so much. That's very helpful. That's why sometimes, when I send a report out, I make some comments on the sideline asking for you guys to use your recollection, or your notes, to clarify some of that. but thanks.

DR. CURTIS: All right. The next agenda topic we looked at was the wreckfish management procedure, and so we had a presentation on the preliminary data inputs for the operating model and the proposed assessment methodology. Alexei had a comment if the project team had considered a DBSRA modeling approach. There was some discussion on that, although I didn't really capture the discussion very well there, including temperature as a covariate in the GAM model.

DR. REICHERT: Alexei.

DR. SHAROV: A small correction. Variability in size at age, rather than age at size, right, and low variability.

DR. REICHERT: Thanks, Alexei. Genny.

DR. NESSLAGE: I don't even think it was at age. I think it was just size. They don't even have ages, as I recall, for -- That was just the length comps, right, and so there was low variability in length comps.

DR. SHAROV: Yes, and you're right. What I was talking about is that you have about eighty age groups, from age-twenty to age-100, and that they are -- They generally have the same size, right? Yes, they don't have age information for the assessment, and what I was talking about is different, that the information on size that we have could not be easily translated into age, because fish could be anywhere from twenty to 100.

DR. REICHERT: Thanks, Alexei. Wally.

DR. BUBLEY: Yes, and I think that's the key part to touch on with this. It's not that there wasn't variability in size at age. Like there was variability around that line, and it just was -- That line, once it asymptotes, and it asymptotes at a relatively young age, and so you had relatively -- Like sixty or so years, potentially, of having relatively flat size. There was variability around that line, but, the asymptote itself, the data fit.

DR. REICHERT: Yes, and I said to Judd that a picture is worth a thousand words, and so maybe add that growth curve to the report, so people can see what we're talking about. Okay. Thank you.

DR. CURTIS: Some of the other observations by the committee are the limited age-length composition data available from fishery-dependent data, and also limited through time. There was a comment that there's potential age comp data available from the SC DNR TIP data collection, since the 1980s, and this is kind of more for Jeremy and his team to look into exploring.

I had a kind of an open-ended question here, and I didn’t follow the discussion. There's a question if there's availability of any data to inform selectivity. I think we had some comments on that down a little further. Some commentary on the length composition data, and the distribution of the older fish is primarily what we see in those figures and datasets.

DR. REICHERT: Genny.

DR. NESSLAGE: I think that I would -- Maybe to avoid other people having the same brain fart that I did, if we could pull that bullet up, because, if you're looking at his report, and his information, the very first thing you see are the length comps, and he's proposing a length-based assessment approach, and so I think the first thing we need to say is this probably won't work, and I think he was intimating that as well, but start with that, because it's not -- Then, if you're going to go to other approaches than what they have already considered as their top ideal approach, then you might run into other problems, if you're making assumptions about size at age, and then you go to the variability comment that Alexei had, and I think we need to start with that.

DR. CURTIS: Excellent. Yes, and I like that suggestion, and I'll synthesize some more of those ideas and put them up top.

DR. REICHERT: Thanks, Genny. Thanks, Judd.

DR. CURTIS: We had a comment on the differing patterns in the CPUE indices between the previous assessment and the current estimate using the GAM modeling approach, and that was kind of an open-ended question. I don't think there was any resolution with that.

DR. REICHERT: Judd, maybe the -- The management actions, isn't that like a separate bullet, because I remember I was asking that question relative to whether or not you can actually use that fishery-dependent index as an index of relative abundance. It's not necessarily between the previous assessment and this assessment. It's a much more broad question about the usefulness of that fishery-independent index, and I don't know the answer, but that's why there's a couple of open-ended questions there. Thanks. Genny.

DR. NESSLAGE: I didn't want to put them on the spot, but I recognize that they got the contract, and maybe -- I don't know whether they even bothered, or even considered, reaching out to Doug and Rebecca, but I think they might be open to a quick query about how they generated that CPUE index. They're very supportive of this wreckfish project, and so I think -- They're good people, and so I think they might actually respond positively.

It would be good to figure out what assumptions they were making, or what data had might have changed, and I think that's really critical, because all the assumptions, if we go DBSRA, or we go with any sort of data-limited approach, if that index -- If we don't see that depletion when the stock starts, or when the fishery begins, at the beginning of that time series, I think that they're going to have a hard time with any method, but, if there is something that they're missing this time around, or something that may have changed in the data that we need to be aware of that's causing the lack of that decline in the CPUE index, I think that's really critical, and it's worth reaching out to Doug and Rebecca. I guess she was the first author. Sorry.

DR. REICHERT: Thanks, Genny. I think that's a good suggestion. That's just the language I was going to suggest. All right. Thank you so much.

DR. CURTIS: I think more of these are just capturing some of the discussion that the SSC had with Dr. Collie on some of the data inputs, and the modeling approach, and those are captured here. I don't think there's any particular recommendations.

DR. REICHERT: Obviously, we'll see this MSE again in one of our future meetings.

DR. CURTIS: Correct, yes, and this will be an iterative approach, and so we should be able to see another iteration of this in April, and I think that it looks we like drafted everything to that first bullet, and we have nothing for the second, but we'll --

DR. REICHERT: We can even delete that bullet point, and then leave the rest of the text intact, but we'll do that. Steve.

DR. TURNER: We have a bullet on vessel effects. I'm wondering if you can actually translate vessel effects into captain effects. You're much better off with captain effects, if possible.

DR. REICHERT: Vessel or captain effects? Jim.

DR. GARTLAND: This is a longline, right, and so it's probably only captain effects. The boat doesn't matter, right?

DR. REICHERT: No, and it's not a longline. It's an individual --

DR. GARTLAND: Gotcha, but, still, boat shouldn't matter much.

DR. REICHERT: Yes, and crew skill is probably more important than vessel.

DR. CURTIS: Okay. Moving on to the Snapper Grouper MSE update, Chip provided the latest updates to the development of the snapper grouper MSE, and we got some feedback from the committee.

DR. REICHERT: Yes, and I think we had an opportunity to review this yesterday, and so, when I looked at the notes, I thought they were in pretty good shape.

DR. CURTIS: Okay. Moving down to aggregate bag limit information. Okay, and someone has added some elaborating text. Thank you very much.

DR. REICHERT: It would be good to, under aggregated bag limits, to make a note, and I can add that, that that is meant for clarification of people who --

DR. CURTIS: Okay, and I don't think there -- There was not. I think some of the SEP member studies and angular response could probably be attributed here to compliance and behavior modeling, and so we can add them there.

DR. REICHERT: Okay.

DR. CURTIS: All right, and I think that concludes all the text consensus statements review thus far.

DR. REICHERT: Thank you, Judd, and, again, thank you for your note taking. It's always difficult to follow the discussions taking notes, and so thank you for that. Any last minute additions, or comments, to the report? Seeing none, what we have left is our next meetings, and, also, I briefly

want to ask Judd to give us an idea of the timing of the report, so I can let the committee know when we like to get feedback.

The next Scientific and Statistical Committee meeting will be a webinar early next year, to be determined, and then we have our April SSC, as well as the SEP meeting, from the 13th to the 16th, again here in Charleston, and then, again, our usual webinar in July or August. Also, dates and times are unknown at this point, and then, next year, we'll meet again here in Charleston, October 20th to 22nd. These dates are pretty much fixed relative to -- I'm thinking about Fred's comment, and so perhaps we can take a look at that, but I think these are pretty solid dates right now, aren't they?

DR. CURTIS: Yes, and certainly the April meeting is fixed. The October meeting, we may have some flexibility still to adjust as needed, but, yes, there's a lot of other considerations in scheduling that need to be accounted for before we can just start shifting meetings, and so I, on Fred's recommendation, will follow up with New England, and other council staff leads, to look at a schedule of these meetings, to try to avoid any conflicts, but just keep in mind there's also a lot of other meetings in the South Atlantic alone that would represent an additional potential conflicts, if we had shifted it.

DR. REICHERT: Thank you, Judd, and then the December meeting is where I will present the report of this meeting. Judd, can you remind me, or remind the committee, when the briefing book is due, or someone else?

DR. CURTIS: Ideally, we would like to get the final SSC report to provide to the council by noon on Friday, November 14th, which is three weeks from tomorrow, and this will be included in the briefing book materials for the December 2025 council meeting in Kitty Hawk, North Carolina.

DR. REICHERT: With that, Judd, when do you think you can -- Let's see if we can -- Well, I'm thinking, and so give me a week, and so I plan to get the first draft, the first full draft, and I think we're pretty close, and so I think I don't need more than a week, and I will work with Judd on that, and so that means that, hopefully by the end of next week, I can send the first draft out, and that's the 31st, and so I'm going to ask the committee to provide feedback by November 7, and that will give me and Judd a week to do some final edits.

That also gives me a little bit of time, if there are conflicting comments from the members, to get back with you, and then I can provide that final report to Judd on the 14th, and so it's basically Friday the 31st to you, November 7th back to me, and then, on the 14th, the report goes to Judd. Okay.

With that, I would like to thank everyone for your contributions, and I'm happy to let you guys know that we are out half-an-hour early, and so, again, Judd, thank you for all your work. Thanks to staff for their work behind the scenes, and we'll see everyone back on the webinar in January or February, and here back in Charleston in April. Thank you so much. Safe travels home.

(Whereupon, the meeting adjourned on October 23, 2025.)

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Transcribed By
Amanda Thomas
November 24, 2025

SSC Tue 10/21/25

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Barile	Peter
Barrows	Katline
Bianchi	Alan
Bradshaw	Christopher
Buckel	Jeff
Byrd	Julia
Carmichael	John
Coffill-Rivera	Manuel
Darden	Tanya
Dukes	Amy
Evans	Joseph
Finch	Margaret
Guyas	Martha
Hadley	John
Harrington	Richard
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Iberle	Allie
Johnson	Brad
Klibansky	Lara
Lorenzen	Kai
Marhefka	Kerry
Markwith	Anne
McClair	Genine
Michaels	Benjamin
Moore	Jeff

Muffley	Brandon
Muller	Robert
Murphey	Trish
Newman	Thomas
OFarrell	Halie
Ott	Emily
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Ramsay	Chloe
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Serchuk	Fred
Seward	McLean
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Sweetman	CJ
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Turley	Brendan
Vecchio	Julie
Walsh	Jason
Wiegand	Christina
collier	chip
sinkus	Wiley
Bogdan	Jennifer
Collie	Jeremy
Degan	Jacqui
McGirl	Maria
Nesslage	Genny
Nowlis	Josh
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Sedberry	George
Withers	Meg

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Curtis	Judd
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