

SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL
JOINT SAFMC-GMFC SCIENTIFIC AND STATISTICAL COMMITTEE SUB-
GROUP
REVIEW OF SCAMP RESEARCH TRACK PLANNING DOCUMENTATION

Webinar

November 27, 2018

Summary Minutes

SSC Members

Dr. George Sedberry
Dr. Marcel Reichert
Anne Lange
Dr. Robert Ahrens

Council Members

Steve Poland

Council Staff

John Carmichael
Dr. Mike Errigo
Dr. Julie Neer
Julie Byrd

Other observers and participants attached.

The Joint SAFMC-GMFMC Scientific and Statistical Committee Sub-Group for the Review of Scamp Research Track Planning Documentation of the South Atlantic Fishery Management Council convened via webinar on November 27, 2018, and was called to order by Dr. George Sedberry.

INTRODUCTION

MR. CARMICHAEL: I have got one o'clock, and everyone that I expected to be on is on, and so I'm going to say let's go ahead and get started with this, which means that I will hand it over to George. George Sedberry, I made you an organizer. It might change your display a little bit, but, if you open up the attendees box, it will help you see whose hands are raised.

I know, in doing these in the past, when like Marcel was chairing, he always appreciated seeing people who have their hands raised, and so just to -- We have a pretty small group, and it will probably work okay, but, in case it gets to a number of people trying to talk at one time, it might help to have folks just hit their "hand raise" button on the webinar, just to make sure we call on everybody, but I've got the agenda up on the screen.

Really, it's just one thing to address, is go over the terms of reference and the schedule for the scamp research track. Comments made of this group will then be provided to the councils for them to approve, and, because this is a Gulf and South Atlantic situation, we are doing this with a joint SSC sub-group meeting, so that we don't end up with two different slightly, ever so slightly, different takes on the terms of reference. With that, George, I will turn it over to you.

DR. SEDBERRY: Thank you, and I will try to keep an eye on the hands raised, but, if I seem to be ignoring you, just speak up, because I've got a very confusing screen that I'm looking at here, but, anyway, thanks for joining us, everybody. As John mentioned, we're here to review the scamp research track terms of reference and schedule. I guess the first thing we need to do is just -- I think everybody has kind of introduced themselves when we did the sound check. Is that right? Is there anybody that we missed that might be in the room with other people? Okay. I think we've had a few people join us since we did the sound check. I see Alexei is on.

MR. CARMICHAEL: Yes, we did, and, George, I think we've gone through everybody who was a designee to be the representatives. If we pause along the way, if others have a comment, other SSC members, just feel free to raise your hands, and we'll get you in.

DR. SEDBERRY: Okay. Very good. Again, as John mentioned, we have representatives from the Gulf and South Atlantic Council here to review the terms of reference and schedules. Those were sent out as attachments, Attachment 1 and 2, along with the agenda and the overview document.

The overview kind of gives an overview of what we're going to cover today. We have a couple of action items. One is to review the terms of reference and make changes and additions, as appropriate, and so, up on the screen right now, we have the agenda, but you should have the terms of reference in front you, and I guess the idea here, John, was just to go through them one-by-one and see if anybody had any changes or suggestions for them, and is that right?

MR. CARMICHAEL: Exactly. I have this version as a Word file, and, if there are changes, we can make it right here on the screen for everybody to see.

REVIEW OF THE SCAMP RESEARCH TRACK TORS AND SCHEDULE

DR. SEDBERRY: That would be great. They're organized by workshop, and so we have the stock ID workshop, data workshop, assessment workshop, and the review workshop. The first one that's up here is the stock ID workshop, and there are five, I see, terms of reference for that, although there may be some off the screen.

MR. CARMICHAEL: Yes, and we have Julia Byrd on here too, who will be the coordinator, and so, if you want to see if Julia has anything to say just about the general stock ID process, and I think what we're doing here is similar to what the Gulf has done more than the South Atlantic. Julia, jump in here if you have something to add.

MS. BYRD: For the stock ID process, the plan is to hold it via a series of three webinars that would start in the spring, and we will look over the schedule then. I know it's a little different than the stock ID workshops that have been held in the South Atlantic, but I think Gulf gray snapper was done in this process, and so that's the plan here, just to kind of get the stock ID TORs addressed on this three kind of webinars, and, if folks have questions about the process or anything like that, feel free to speak up.

DR. SEDBERRY: Okay. I don't hear anything. Everybody is happy with the stock ID workshop terms of reference?

MR. RINDONE: We had sent the terms of reference out to our SSC members, and we had one comment back on the first point, on the first term of reference, which was to add a bullet under TOR Number 1 saying to evaluate differences in growth or otolith microchemistry to elucidate possible misidentifications of yellowmouth grouper with scamp. There is some acknowledgement that this information may not actually exist, but at least asking and checking, as part of the due diligence, and we might get lucky. John, I think I had sent out the Gulf SSC edited version to you guys yesterday.

MR. CARMICHAEL: Yes.

MR. RINDONE: All the Gulf changes are detailed in that.

DR. SEDBERRY: That's a great suggestion. I wonder if we should add a similar suggestion for the genetic work as well. I mean, it would certainly show up if there are any misidentifications in DNA samples.

MR. RINDONE: We have one more, if no one has any issue with the one that we just proffered.

MR. CARMICHAEL: Ryan, one question about this. Was this just getting at the idea of making sure that, when you're looking at stock information, you're really looking at scamp and not confusing it with yellowmouth grouper?

MR. RINDONE: Yes, because we've had some discussions about the possibility that we could be looking at a black grouper situation, where the proportion of one species being misidentified as the other could result in issues when you try to remove or when you try to separate those species apart from one another. For those that didn't follow black grouper as closely, in the Gulf, an issue that we dealt with, and I'm sure it's in the Atlantic too, was misidentification between black grouper and gag, and the proportion of black grouper misidentified as gag -- When you remove those out, the effect on the gag model wasn't -- It wasn't nearly as much of a problem as it was the other way around, when you removed all the gag that were possibly misidentified as black grouper, when you take those away from black grouper, and it caused some issues with the black grouper assessment. Seeing as especially the juvenile sizes of scamp and yellowmouth look quite similar to one another, and presumably that would affect the recreational indices the most, being that those juveniles are, typically anyway, found closer to shore, we felt that this might be useful.

MR. CARMICHAEL: I was just asking because I was thinking this is actually something that carries over into the catch statistics as well, and it's probably potentially even more relevant.

MR. RINDONE: That's probably true, and, if we can hit the ground floor running with it, or at least have it at the forefront, that would help, and, again, this is also acknowledging that, of all the species that we manage, yellowmouth and scamp don't exactly hit the top five of the list, but maybe there is something out there that would be useful to looking at this.

MR. CARMICHAEL: Okay.

MS. LANGE: I am wondering -- This is more generic relative to the stock ID that will follow through, but what happens when it's decided that there were two separate stocks, one in the Gulf, or somewhere, wherever the divider line is? Will there be two separate groups doing the assessment on each stock, or will -- I mean, how will the two assessments be done?

MR. CARMICHAEL: There's been some talk of that. I know that Julia and Kyle have talked about that, and Kyle and Skyler, and I don't know who wants to take the first shot at that, but I would say that, yes, if ends up there is two stocks, it's likely we'll kind of go down this divided path and work on -- Each group work on the stock, but we're still kind of part of an overall group, to provide consistency between the assessments.

MS. LANGE: Okay, and I guess that was my question, where do you draw the line, and I know we want to make sure that this first research track assessment is done consistently between the two councils, and, if there is a division between the split stock, or two stocks, how does what we're doing today kind of fit together? I guess it wasn't clear to me that that was being addressed, and so, anyway, I just wanted to comment about that.

MS. BYRD: John, I can add to that a little bit, and, Kyle and Skyler, please jump in if I get any of this incorrect, but I know, on the planning team webinar, or one of our kind of earlier webinars to develop these, we talked about this a little bit, and so, if there ends up being kind of two assessments that are done, one thing that we would like to see is the kind of decision-making body

for research tracks, we're calling them, the Assessment Development Team, we would want that group of decision-makers to kind of be the same between a Gulf and an Atlantic assessment, or wherever that line is drawn.

However, there may be kind of sub-groups working on kind of the Gulf and the South Atlantic assessments, kind of separately, but then coming together to make decisions, if that makes sense, and that's to try to kind of make sure that decisions are made kind of consistently, although there may be reasons for different decisions to be made on various issues between a Gulf and an Atlantic, or South Atlantic, model. We just want kind of the same group of decision-makers working on those, and so that's just a little more kind of information as we have kind of talked our way through this first research track.

MS. LANGE: Again, that was part of my concern, or not my concern, but just, as part of the terms of reference, I think it should be addressed, that there is some general plan of what will happen if it's determined that two separate assessments have to be done.

MR. CARMICHAEL: It could be -- I guess I'm feeling a little stuck in thinking of how to word that, given that we don't know how it's going to play out. I think we were leaning more towards the lines of, once we get the stock ID and we start doing some of the initial planning for how the models are going to be put together, that we let those who are appointed and on the assessment panel have some discussion about how they think it's best to proceed.

MS. LANGE: That makes perfect sense. Again, I just didn't want to ignore it in the terms of reference if there is a potential that there be two separate tracks.

MR. CARMICHAEL: I think we can probably try to get that in somewhere in the report of this group or something, a recognition that, if there is two stocks, we may go down the path of doing it with two teams, as part of an overall whole, and they may proceed in the development of their models at a different pace, and I think that's recognized, too.

DR. SEDBERRY: Okay. Thanks, Anne. Marcel, did you have a question?

DR. REICHERT: First of all, my apologies. I had some technical issues, and so I joined a little late today, and so sorry about that. Relative to the yellowmouth, it would be good to see if there is any information as to where the juveniles of yellowmouth are, and I think that's generally a deeper-water species, and I am not sure if we have a lot of information about where those juveniles are, and so, if there is no overlap between the juveniles, the smaller size, then that misidentification may be less of an issue than when there is a great deal of overlap.

MR. CARMICHAEL: Kyle, you've had your hand up for a while too, and I think it might be about the models?

DR. SHERTZER: Well, I guess I was going to comment on that. I think there's maybe a priori assumption that there will be an Atlantic and a Gulf of Mexico assessment, and that's why I am on this call and Skyler is on this call, but I guess that's yet to be seen, and the stock ID workshop will, I guess, provide the information that we need to make that decision, or at least that's the intent.

I was actually raising my hand to comment on this new letter a under Number 1, which I think it's a good idea to elucidate misidentification between the species. It's not clear to me how we would use growth information, and possibly otolith microchemistry. It's clear how the genetics might be used, but, if we find differences in growth across areas, I'm not sure how we conclude anything about species ID versus just variation in growth within a species.

DR. SEDBERRY: Is that something that would come out --

DR. SHERTZER: I wonder about making that point a little more general, rather than listing specific things to elucidate the misidentification issue. We have also talked about this in the context of whether the assessment itself should be species-specific or, if there is misidentification issues, if we just lump the two species together. Maybe the stock ID workshop could address that topic.

DR. SEDBERRY: I think the lumping together needs a sub-bullet, or maybe even its own bullet, rather than being part of a. I think we're dealing with two different issues there. One is trying to sort out data, assigning it to different species, and the other is then determining that, well, if we can't do that, then should we just lump the two species together.

DR. SHERTZER: Maybe that's a data workshop call. I guess I'm not really sure.

DR. SEDBERRY: Yes, me either. Julia, what do you think?

MS. BYRD: One thing I was going to say is that I know that appointments are still being made to the stock ID process, but, based on previous SEDAR stock ID processes, not all of the data providers who will be providing data to the data workshop typically are involved in the stock ID phase, and so all the landings providers and people like that are kind of involved in this stage, and so it may be hard to make that decision here, because we won't know how all the data can be -- How the data can be separated.

Some of the landings data may be the most difficult to try to separate by species, and so it seems like that final decision may not be able to be made at the stock ID stage, just due to the folks who may participate in this stage as opposed to there will probably be a larger group of people who are participating in the data workshop phase, but, if others have different thoughts on that, please speak up.

DR. SEDBERRY: Ryan has his hand raised. Go ahead.

MR. RINDONE: Folks have more or less touched on it, but the decision to combine them is probably something that's going to end up at the data workshop phase, just based on the amount of information that we've seen come through so far, and there are a couple of datasets that are still outstanding that might help a little bit, but I think the decision to combine them should probably be in front of the data workshop, based on how SEDAR has done things in the past.

DR. SHERTZER: I guess I'm still trying to figure out how the species ID issue plays into the stock ID workshop.

DR. SEDBERRY: I guess it's just that some of the same data that would answer the stock ID question might be useful for the species ID question as well, but the data part of it really is part of the data workshop.

MR. RINDONE: Also, on its face, if we were treating both of these stocks as if we knew a lot about them, the stock ID process might reveal that they have different stock boundaries between the Gulf and the Atlantic, or one might have a boundary and one might not, and so, again, I'm not saying that we have the information to suggest any of that, but trying to parse out any misidentification issues on the front-end certainly could be useful, if we do have the information to explore that.

MR. CARMICHAEL: My thought is I'm wondering if getting into this species ID needs to be something that gets done more up here than it has in the past, if we've already got the bulk of the data that would reflect on that, if we're having to look at it here for Number 1. Is it efficient to have this as a little bit of a sidebar of the stock ID upfront process?

MS. NEER: When we did SEDAR 49, the Gulf of Mexico data-limited species assessment, yellowmouth grouper was one of the species that we looked at, and it was ultimately put aside during that assessment process, because of this stock ID issue with the landings as well as some of the other information, and so, from the Gulf side, we looked at it and said this is an issue already.

Again, it was because yellowmouth is such a smaller component compared to scamp, and it may not be an issue on the other side, but there is some information that was already triaged and put together on the Gulf side looking at yellowmouth landings, such that they are in the Gulf, in relation to scamp, and so it may or may not be a big issue, but it is something that was recommended during SEDAR 49, to look at this ID when we did scamp.

MS. BYRD: I guess I want to follow-up on what John was saying about whether or not it would be helpful to have kind of a sidebar of this stock ID and kind of look at the species identification issue, and, again, I think we know it's going to be an issue for this assessment. I think the earlier we start to address it is good, but, again, we're probably going to have to pull in some separate people who typically wouldn't be involved in this stock ID if we want to try to make the decision kind of during the stock ID phase of things, or people could begin to work on it here and the final decision could be made at the data stage, but, again, I just want to -- Some of the people who may need to be involved in those kind of species identification issues aren't on the kind of suggested appointee list for this phase right now.

MR. CARMICHAEL: Again, it's a webinar, and so it's no cost.

DR. SAGARESE: I just wanted to reiterate what Julia said. I think the sooner we can start digging into these issues, the better. I don't think we can have a final answer, but the more investigation we start doing earlier on. Initially, we really didn't put this yellowmouth grouper issue in the stock ID workshop, because we figured it would just get completely derailed, and we figured much of the data workshop is going to be all of the data providers at the table with all of the information they have for scamp and yellowmouth.

I think it's good to get started here, but I do think it's going to be quite a challenge. As you mentioned earlier, we're not just picking -- We're looking at the stock ID of scamp, but then

looking at how they relate to yellowmouth and how big of an issue is it. At least in the Gulf, yellowmouth seems to be the minority of the two when they're landed, and so it may not necessarily be as bad as the black grouper situation, but it is going to be an issue, and we do have an inventory of data available from the data-limited assessment that Julie mentioned, but I do think, the sooner we can maybe start looking into the growth and some of the information that we will be looking at for stock ID, we at least will have some of that stuff under our belt before we get to the data workshop, where then we're going through all of our indices and all the landings and the discards, and it's just going to get very, very, very overwhelming very fast.

DR. SEDBERRY: I think we all kind of agree that we need to get a handle on this as early as possible. I am wondering if the group agrees that this Term of Reference Number 1, with its Sub-Term a, covers that, that anything that comes out of the review of the genetic and otolith and growth data, looking at stock identification, will also be useful for species identification and that that information can be passed along to the data workshop to address any issues that may come up in the data relative to the species identification, and so I guess my question is does this Term of Reference 1, as it's written now, lay that out and cover it for us, so that it will be addressed in all the future workshops?

To me, it seems like we have worded it so that it will be addressed and that it will be addressed early in the stock identification workshop and then passed along to the subsequent workshops as an issue that needs to be dealt with at every step.

DR. SHERTZER: Maybe just make Point a a little bit more general and just say evaluate data sources to elucidate possible misidentification.

DR. SEDBERRY: Yes, and I think you had made that suggestion earlier, and --

MR. CARMICHAEL: Get rid of that parenthetical --

DR. SHERTZER: I think it follows from Point 1. We have listed several data sources.

MR. CARMICHAEL: Agreed?

DR. SEDBERRY: Yes.

MR. CARMICHAEL: I am hearing yes.

DR. SEDBERRY: Any no?

MR. RINDONE: John, you just highlighted the other proposed change from the Gulf SSC right there, which is in addition to TOR Number 2 for the stock ID, the deviation from the status quo as recommended. An accompanying recommendation on spatial considerations for management should also be recommended.

The spirit behind this is that, ultimately, the products that are going to result from this process are going to be used for management, or at least we intend for them to be used for management, and so having some consideration of how that process might look going forward would be helpful, and

this might be touching on more of like a management strategy evaluation approach, and this was something that one of the SSC members proposed.

DR. SEDBERRY: You can see that that wording has been added to the Terms of Reference 2 in italics. Any discussion on that?

MR. CARMICHAEL: I was just noticing that it has two recommendations, and maybe the last word should be “provided”.

DR. SEDBERRY: Very good, yes.

DR. REICHERT: I like that. The question I have is, for the stock ID workshop, the people that are participating generally in those workshops are the people who do the research on the stock ID, whether it's genetic or life history or otherwise, and so this goes into potential management ramifications, and I am not entirely clear if that would be the group who could best provide recommendations in that area, and so, anyway, that's just a thought.

MR. CARMICHAEL: Marcel, I had that thought some, too. I think what I see as important is that it is a recommendation, and I know, from in the past, when we've been in these situations, when this gets kicked up to the higher levels and the managers, as it probably will if we deviate from council boundaries, the first thing they tend to ask is what else can we do and what else do you have data for dividing it up spatially, and so I think this being a recommendation is probably a step in the right direction for something that may get more complicated if it significantly changes boundaries.

DR. REICHERT: John, I agree, and it's just I want to make sure that there are -- If this is going to be the case, there is probably going to be different levels of discussions, and the outcome may be slightly different than the researchers that do the work on the genetics, et cetera, may comment on, but thanks.

DR. SHERTZER: In line with Marcel's comments, in between the stock ID workshop and any management is going to be a long stock assessment process, and so presumably the management would rely on the assessment, and so we might be getting ahead of ourselves here by making management recommendations before the assessments are started.

MR. RINDONE: To Kyle's point, there will be somebody from the South Atlantic and the Gulf that will be around throughout this process, to provide any input on both to the stock assessment process and then back to management, status updates about how the assessments are progressing, and so we should have a good communication loop going with respect to providing some input on recommendations that might come from what we're trying to add here in Point Number 2, but, kind of like approaching the species ID portion of the issues that we know we're going to face, this is another one that we may face if the known hypothesis is ultimately refuted, that being that the current council division of the stocks is correct. Having that feedback between the management side of things and the science side of things, to keep everybody abreast and make these recommendations as useful as possible, certainly it isn't going to hurt anything.

DR. SEDBERRY: I would just add that the wording here is to make recommendations on spatial considerations for management, and so it's pretty narrow, and the workgroup, the stock ID

workgroup, most of the people that are on this group, they are researchers, but they are not researchers to populations genetics, per se. They are looking at stock identification questions for management, and, at least all the folks that I'm familiar with that would be potentially in this workgroup, they have done this kind of thing before, and they know what the questions are, in terms of management, that it's not strictly a population genetics question, and it's a management question, and so I think they're capable of making those kinds of spatial recommendations for management that can go forward, and, again, they're just recommendations.

DR. ERRIGO: Just to interject very quickly, perhaps you might want to make it a little less prescriptive that they would have to, in case they're unable to make a recommendation, due to something like they're unable to resolve the issue between yellowmouth and scamp. Therefore that ties their hands to what they can recommend for management, spatial considerations for management, until that can be resolved, let's say at the data workshop, unless you would consider that a recommendation, to wait until this issue is resolved in some way at the data workshop and go from there, because there seems to be a lot of issues here with scamp and yellowmouth. That's just a suggestion, something like "if possible".

MR. CARMICHAEL: It does say "should be provided", and so it's "should", but it may not be.

DR. ERRIGO: Okay. That's all I was looking at, just to make sure we give -- In case they were unable to provide that.

MR. CARMICHAEL: Yes, and that's always a possibility, that they may not be able to deal with something, and that happens. I think it does sort of make them think about the end game of this. If we get into it, what do they consider reliable spatially that might lead them to say, well, here is some way to address it, here is some way that management could deal with this stock as it exists. Of course, it wouldn't be binding. It would, as we said, kick this up to a whole other level.

MR. RINDONE: Just to add more to what John said, by saying it should be provided, if for some reason an accompanying recommendation can't be provided, then there would clearly be some short justification as to why.

DR. SEDBERRY: Yes. Any other comments or edits regarding Term of Reference Number 2? I don't see any hands raised, and so I think we're ready to move on to Number 3.

MR. CARMICHAEL: George, just to let you know, there were no other comments provided from the Gulf on the next three.

DR. SEDBERRY: Okay. Thank you. I don't see any hands raised for Terms of Reference Number 3. How about Number 4? How about Number 5? I think we are done with the stock ID terms of reference. Any final comments before moving on to the data workshop?

MR. CARMICHAEL: I have a Gulf comment that I will paste in when we get to Number 7, but we're clear on these first few.

DR. SEDBERRY: Okay. I think there are nine terms of reference for the data workshop. You had no comments, John, from the --

MR. CARMICHAEL: That's right. No comments until Number 7 from the Gulf.

DR. SEDBERRY: Does anybody have anything they would like to discuss on let's say the first three that we see on the screen here? Any additional edits, changes, or recommendations?

MS. LANGE: I just had a question on Number 3, where it starts off with fishery-dependent and independent data sources. Then, on the third bullet, it says maps of fishery and survey coverage, and I'm assuming that's the same thing. I was just wondering about the change in language, instead of fishery-dependent and independent, and it's nothing serious.

MR. CARMICHAEL: This is a little more general language, but, yes, it would cover the same data sources.

DR. REICHERT: I think that is -- In the past, when we talk about survey, that assumes the fishery-independent, but it would be good to clarify some language there.

DR. SEDBERRY: Just put "provide maps of fishery-dependent and --" There you go. Any other suggestions for TORs 1 to 3?

MS. LANGE: Part of 3 isn't showing. It's the one about categorizing the available indices. I was looking at the categorize available indices, and I had thought that maybe putting something in there about documenting briefly the reasons for the chosen categories, so that the subsequent workshops will understand why, whether it's suitable and recommended, suitable and not recommended, or not suitable, but there should be some description or discussion of why they were categorized that way. Does that make sense?

DR. SEDBERRY: Right, and so they're not just classified that way. They are categorized that way for a reason.

MS. LANGE: Right, but that's not spelled out here to describe what those reasons are, I don't think.

MR. CARMICHAEL: I think they normally do. Julia, do you want to -- I mean, I don't think they just give the values, right? Isn't it more that this is the culmination of their evaluation of the indices?

MS. BYRD: That's right, and it's these three kind of categories, for the three categories that came up when SEDAR did data best practices, and so, when they put these different indices into these three different categories, they will have to provide kind of justifications on why they are making the decision to put that into that particular tier. I know that's typically done. If folks want to kind of spell that out more in the terms of reference, I don't know that that will be a problem, but that is typically something that is done in the write-up in the kind of data workshop report.

DR. SEDBERRY: So just to say something like categorize with justification the available indices?

MS. LANGE: Again, to me, just having something in there to clarify that so that it's spelled out, at least very briefly.

DR. SEDBERRY: Okay. That seems reasonable.

DR. REICHERT: I was thinking of Number 5, the sub-bullet under the -- Sub-Bullet under Number 3, Number 5. I think part of that is now addressed in the species ID workshop, but I still think that it should stay in there, if any issues arise. I initially thought that maybe we could remove that, but I reconsider that.

DR. SEDBERRY: Yes, I think you're right there, Marcel. This is where the findings from the stock ID and any species ID results out of the stock ID workshop would be carried on into the data workshop to address any data issues that may come up as a result of that, and so I think it's important to keep it in there.

DR. REICHERT: Exactly, and so that's why I withdrew my hand.

DR. SEDBERRY: Okay. Any other -- I don't see any other hands raised. Do we have any other comments on TORs 1 to 3? Then I think we can scroll on down to 4, or the next page. I think John said there were no comments submitted on 4 through 6. Does anybody in the group have anything to say about these, any edits or wordsmithing or clarifications?

MS. LANGE: Just an edit. On the Number 4, the third bullet, which is provide maps of fishery effort and harvest, and it says, "and fishery sector or gear", and I think it should be "effort and harvest by fishery sector and gear".

DR. SEDBERRY: Yes.

MS. LANGE: That's just a little wordsmithing.

DR. SEDBERRY: No hands raised. Anything else for 4 through 6? Moving down to 7, I think, John, you said you had some edits for that one?

MR. CARMICHAEL: Yes. Let me paste these in for you. The italicized parts are the recommendations from the Gulf.

MR. RINDONE: The first part here, where it says "and/or episodic events (including red tide)", red tide and grouper is something that has received a lot of attention over the last several years amongst the Gulf SEDAR stock assessments, and so just continuing that trend, also in light of some of the heavier red tides we've had recently. If there are any effects on scamp and/or yellowmouth, we would certainly like to see those at least acknowledged, to the extent they can be.

As far as the second part in italics for that sentence, that would reasonably be expected to affect scamp population dynamics and the effectiveness of biological reference points that might ensue, Dr. Powers is the one who headed that one, and so I will let him speak to that.

DR. POWERS: Thank you. Basically, my attitude was that this is a research track assessment, and so you want to think broadly, but, more than anything else, I would like the terms of reference to raise flags to kind of have people think about the connections to the management process, and

the connections effectively being biological reference points. There isn't any great expectation coming out of this, but I wanted to put in those words to guide the discussion. Thank you.

DR. SEDBERRY: Thanks, Joe.

DR. REICHERT: I had a similar comment on the last italics, the effectiveness of biological reference points, and, in the South Atlantic, the issue of upwelling events have been discussed quite a bit, and so including red tides and upwelling events may be good, because I think that is kind of a hot topic in the South Atlantic, especially off of Florida.

DR. SEDBERRY: Thanks, Marcel. Any additional edits to Number 7?

MR. RINDONE: The bullets that were added under Point 7 are all designed to get at some of the trending that we're trying to do towards ecosystem-based fisheries management, and with acknowledgment that we may or may not have information to fully characterize some of these or all of these, just depending on the species, but this is kind of a broader approach for, when we do a research track assessment, to try to look at some of these things, and so reviewing the available predation studies and summarizing diet composition. That one is pretty straightforward and will help lend itself towards the third bullet, to some degree, at least tangentially.

The second one, on the Gulf Council portal, we may actually have some information to help with satisfying this second bullet under Number 7, providing species envelopes for the minimum and maximum values for environmental boundaries, based on observations of currents. Is John Froeschke still on?

MR. CARMICHAEL: Yes, he's still on.

MR. RINDONE: Okay. John, are you there? Well, anyway, John knows more about what's on the portal and how to access those data, and he can certainly speak to the analysts a little bit more about that, at a more convenient time, and then, lastly, using the available survey datasets to determine species that frequently co-occur or are associated with scamp, that's just a way to help better identify which trips might have scamp as the primary, secondary, or tertiary species that's being targeted and just to better identify the universe of effort and also which species might be affected by changes in regulations on scamp. If we know which species co-occur, then we know which species to look out for. If a change in the regulations affects one, it could affect fishing effort that affects another species.

DR. SEDBERRY: I think these are good suggestions, Ryan. Skyler, did you have your hand raised?

DR. SAGARESE: Yes, and so, looking at -- I actually like the additions there. It's sort of getting us more ecosystem focused, but one thing, from the modeling perspective, that can be a challenge is when we talk about all these different processes -- In the modeling platforms, we need to identify the mechanism, and so what is being affected? Red tide is simple. We have an idea, from dead fish, that's mortality, and so, in addition to this comment describing all of the various ecosystem considerations we should be doing, could we add something such as "and document hypotheses" or "and propose hypotheses", to sort of link what is happening with how it would be modeled, because this is one of those areas in the past where the analysts -- This is a research track, and so

I think this is a place for it, but it would just help guide us, instead of just throwing in a bunch of things and saying we need to include it, to sort of give the linkage, in terms of how we're going to incorporate it. Even if it's not a known, maybe just -- This is where, I think, the research track will be really helpful.

MR. RINDONE: I like where Skyler is going on this. I think, for the first bullet, that would definitely be one where you would be recommending hypotheses for linking -- Establishing linkages between those ecosystem effects and a mechanism that can actually be measured in the model, and I don't know that we'll actually get there with this particular one, but providing the species envelopes will have -- Providing the species envelopes and also using the survey datasets to determine co-occurrence of particular species will both help with establishing the universe of effort for the different fleets that will be considered for the model, and so I think your mechanism for how these things are affecting the model for Points 2 and 3 is going to be more related to the effort universe. Would you agree?

DR. SAGARESE: Yes, I see where you're going with that, and I actually really like Bullet Point 3, because that's something we run into with just trying to develop our recreational indices, where the approach we're using for trip selection may not hold up, and so that's one of those -- Trying to identify trips with similar species, I think, is going to be really critical moving forward, not just for scamp, but for our other assessments that we model, where we're doing recreational indices and commercial indices.

MR. CARMICHAEL: Skyler, does that fourth bullet get at the idea?

DR. SAGARESE: Yes, and I would just maybe just say "recommend hypotheses", or maybe make it "hypothesis/hypotheses", to highlight that it doesn't have to just be one. I think that's going to be really helpful, because that's sort of where we need the guidance, instead of going back and saying, well, is it affecting catchability, is it affecting mortality, is it affecting growth or recruitment, and I think that would be really helpful.

MR. RINDONE: Well, and we may not have the opportunity to actually test all of these hypotheses that might be proffered during this process, and so perhaps we should say -- Instead of "recommend hypotheses", but "develop hypotheses".

DR. SAGARESE: Yes, that's a great idea, Ryan.

MR. RINDONE: Actually testing those hypotheses, in and of itself, could be a ton of research projects.

MS. BYRD: I guess this is -- In relationship to this term of reference and kind of the next stage on making appointments, and I know that's not the task of this group, but I know there are a lot of -- There are some council folks on the call, and we'll be developing kind of suggested participants lists with planning team members, and some of those folks are on the call, but we really need to be cognizant of some of these terms of reference and make sure we have the right people participating in this process to help address some of these terms of reference which are kind of a little bit more involved than kind of an ecosystem term of reference that's been in a benchmark assessment, and so I just want to note that now, so it's something that is on people's minds as we start to make appointments to the data workshop stages and beyond.

DR. SEDBERRY: Thanks, Julia. Julie, did you have a comment?

MS. NEER: I was just going to second what Julia said, and, additionally, just also think -- I know it's not the main task of today, but to also think about being cognizant of not just how we're going to populate the participants, but how we're going to organize discussions. This term of reference might require a whole new working group of people, and so just, as we go down this path for this assessment and the assessments in the future, we need to be thinking about that in the big picture as well, to follow up on what Julia said. Thanks.

DR. SEDBERRY: Thank you.

MR. CARMICHAEL: Those are good points, and I think we also keep in mind that the research track is new and different, and we may convene groups to come in and do a particular job and then move on. We don't have to think of it as we do now, that someone is part of the process -- That they're part of the process of the data workshop the entire time or the assessment workshop, but we may have sub-groups that come in and address a particular term of reference topical area and make their recommendations for that larger decision-making group of the assessment, the data panel, and then they're done and they're not encumbered by this.

They just come in and do their work, and I know that's how -- We looked at some of what happens up in the Northeast, in the SARC, and that's one of the ways that they handle this sometimes, is they may convene a meeting just to dig into great detail on one particular aspect of the assessment, and I can see us doing something like that, maybe through webinars and such, where groups of people would dig into these better-defined topics that aren't just the general ones.

MR. RINDONE: If the idea is the bullet point under TOR Number 7 is to try and make a concerted effort to consider these things not just in this research track, but all research tracks, then perhaps the inclusion of an additional working group -- Like we used to have an integrated ecosystem assessment working group that participated in SEDAR 33 for gag and amberjack, and I think also in SEDAR 42. Julie can correct me if I'm wrong on that, but we used to have that group, and they were an ad hoc group, and they became kind of a regular thing, and I think there might have been a funding shift or something like that, but, if it's possible to recreate that and bring that back as a function of doing a research track assessment, maybe that would be appropriate.

DR. SAGARESE: I just wanted to follow-up with Julia and Ryan. I was going to also suggest this kind of term -- This specific term of reference will definitely require some working group at the workshop. Speaking to what Ryan said, with the gag grouper and red grouper, part of the reason the red tide was modeled as thoroughly as it was there was because we actually had a post doc, and that was me at the time, working on all those issues, and so I'm just thinking of all the work that will need to be done on top of -- I am very excited to see this in there, but, just knowing all of the other stuff that's going to have to happen at that workshop, I think really doing a thorough job of trying to do some of this ecosystem work is really going to require a more official sort of IEA working group, just to make sure it goes along and is structured for incorporation in the model, instead of just being handed a report with tons of different considerations and then feeling the pressure to incorporate them when we're still trying to just figure out the other aspects we'll be dealing with.

DR. SEDBERRY: Is this something that should be taken up by the SEDAR Committee, or is this something that --

MS. BYRD: For the research track, we have a planning team that kind of helped develop these terms of reference and the schedule and will help try to kind of identify potential participants. I have added, on my list, stuff they also need to talk about is kind of how to structure the data workshop and what working groups we need in order to address the terms of reference once they're finalized, and so I think maybe kind of bringing this to that planning team to figure out how best we can address these and what working groups we need and what kind of personnel we may need may be a good way to kind of approach this issue that folks have been talking about.

DR. SEDBERRY: Okay. Any further discussion of this ecosystem TOR? I don't see any hands raised. Number 8. Any comments on Terms of Reference Number 8?

DR. SAGARESE: Maybe this isn't appropriate for this call, but I thought I had heard rumors that in the past it was proposed maybe to have one day of a data workshop dedicated to the ecosystem type of work, and could this be one of those instances where we give that a try and we make sure that a full day is sort of spent on these types of issues, or I don't know if some of those folks that have been around a bit longer might have more insight into that, but it could be a good push to try to get more of the ecosystem considerations in an official capacity.

DR. SEDBERRY: Julia, what do you think?

MS. BYRD: That's kind of the first I have heard of that suggestion, but I think it's definitely something that we can discuss and figure out. I think, again, and I hate to kind of punt this, but I think that would be a good thing for the planning team to discuss. That group will be discussing who should be coming, and we can talk a little bit about the structure of the workshops and how we want to organize them and how we want to approach them. Skyler, I have written that suggestion down, and perhaps that is something that we can first start talking about a little bit more in that group. John and Julia, I don't know if you all have other thoughts on that.

MR. CARMICHAEL: I think that's a good idea, and I would say that, again, being the first research track, think out of the box. If Skyler or someone is charged with doing a lot of this work, and she thinks that's a good way, as Julia said, run it through the planning team, and maybe that's something that actually pays off in the long run and becomes a regular process. I will go back to -- George mentioned the Steering Committee, and we will keep them briefed on this as it goes, and they are recognizing this as a pilot, and so a lot of what we learn here about what works and maybe what didn't work will funnel into better guidance on how research tracks are done down the road, and so I think feel free to definitely get out of the box as we get through this first one.

MS. NEER: I would agree. I would also think that another option, as John had mentioned earlier, is we may need some of these ecosystem folks, but we only need them to drill down on this one particular topic, and perhaps that will be better handled via a couple of webinars, and then maybe they don't even come to the data workshop.

I think we're going to have to look and see, once we also get participants too and see what the make-up of the participants is and what the workload looks like, whether we can dedicate a full day for ecosystem, or we might need directed conversations, I agree, for that topic, but maybe it

will have to happen in a different forum, and I think the planning team is the right place to really drill down and figure out the best way to handle this approach.

DR. SEDBERRY: Thank you, Julie. Any final comments on the data workshop? The last term of reference there, Number 9, dealt with the report, and that's kind of standard boilerplate. Any additional recommendations for the data workshop terms of reference? Okay. I think we're ready to move on to the assessment terms.

MR. CARMICHAEL: George, I pasted in, in italics, the Gulf recommendation.

DR. SEDBERRY: Okay. Thanks, John. We have the first five up on the screen, with the Gulf recommendations, as John just mentioned, in italics. Any additional discussion or edits or changes or clarifications?

DR. SHERTZER: On the addition for Number 2 in italics, could you comment on that, John, and what exactly that is asking for?

MR. CARMICHAEL: I am going to turn to Ryan, since it came from the Gulf.

MR. RINDONE: Sure. Being considerate of how similar species are managed, like other species of grouper in the Gulf of Mexico, this is all getting back to that whole -- I am going to generalize this a lot, but the cooperators are, quote, unquote, buying the product of the stock assessment from SEDAR, and so just making sure that the product that they're getting is something that's going to be as useful to them as it can be, and so, to the degree that -- This is very general, and so, to the degree to which the models can be developed to be considerate of how the species either are or can be managed, it would be useful to what is technically the end user of this whole endeavor.

This is kind of, again, touching on the management strategy evaluation approach that the Science Center has been working on, especially for red grouper, and, if it's something that can be considered as part of research tracks in general, that would certainly benefit the council and the other cooperators. I think, for what ultimately results from research track efforts, and, for some species, there won't be a similar species, or there won't be enough things to tie it to, and so this is all where practicable.

DR. SHERTZER: Am I paraphrasing too much if I say this, that a translation is don't think outside the box?

DR. SEDBERRY: If it ain't broke, don't fix it.

DR. SHERTZER: Is it actually how species are managed or how species are assessed? Are they looking for consistency in the assessment models that management uses?

MR. RINDONE: I think considerate of -- We have talked about right-sizing assessments a lot in the last few months, at least at the Gulf Council, and so consistency in the modeling environment isn't necessarily what we would ask of the Science Center. It's more whichever modeling environment is appropriate is the one that should be used, but considerate of how the species are or can be managed.

We have a somewhat finite toolbox available to us as resource managers. With broad brush strokes, we can manage how much effort and where that effort occurs and on certain size and age classes of fish. Ultimately, what we're managing is fishing effort, and so either how or where it occurs, and so just being considerate of that toolbox that resource managers have available to them would be useful. Again, this is all reaching out to that MSE approach.

DR. REICHERT: I think I know what this is addressing. My concern is that, at least in the South Atlantic, we always try to separate management from the assessment and the research, and, unless I misunderstand, this kind of goes over into management procedures, and so I am not sure if that -
- If we as a group consider that appropriate or whether this is something that we should consider in the assessment process. Maybe someone else can comment on that, that potential moving into management, rather than the assessment, because there is a whole slew of management tools available, and I understand that management strategy evaluations can be very valuable, and should this be part of a research track, and I am just asking the question.

MR. CARMICHAEL: Marcel, I think a couple of things that I heard, and maybe we can get around this by maybe changing the wording, but, Ryan, you mentioned assessments that are right-sized, and certainly that's been talked about a lot. It's the old way of saying that not everybody is going to drive a Cadillac and not every assessment needs to be a Cadillac assessment, and I think that might be somewhere where this is going. The problem might be more in the getting similar species managed wording, as Marcel thought of, but it sounds like the intent might be to say that, along with the considerations of what is appropriate for data, what is the most parsimonious model that meets management's needs?

DR. REICHERT: John, sorry to interrupt, but this was my understanding that this did not address the assessment model rather than addressing management strategy evaluation and management tools, and so those are two separate issues, unless I misunderstood what the intent of Number 3 was.

MR. CARMICHAEL: I think we're on Number 2.

DR. SEDBERRY: We're on Number 2, and maybe we could get a clarification from someone in the Gulf.

DR. REICHERT: Sorry. Then I am way ahead of myself. Sorry about that.

DR. SEDBERRY: So do you still need a clarification on Number 2?

DR. SHERTZER: Back on Number 2, I appreciate that, ultimately, the assessments are intended to provide managers with what they need to manage, and I'm not sure if this italics actually adds anything, because, presumably, the full terms of reference are designed to do that. If the rest of the terms of reference don't guide the assessment in providing what managers need, then they're not complete.

DR. SEDBERRY: Anne, did you have a comment to this point?

MS. LANGE: Yes, I did, and I think I agreed with what Marcel was saying, even though he might have been talking about Point 3. To me, this is supposed to be about the assessment and using the

appropriate models for the available data. I am not sure -- How that advises management down the line is, I think, a separate issue. We have assessment tools, models, that are based on the data that are available, and I am not sure how modifying -- I am not sure that the italics should be in there, I guess is the --

DR. SEDBERRY: I would agree with that. I am not sure what is meant by “similar species”, and similar species, even if they are similar taxonomically, may have completely different datasets, and that bothers me a little bit, too. Joe, did you have a comment on this?

DR. POWERS: Yes, and I was more on 3, but it’s related to this as well. Actually, I was the one that put in the wording there for Number 3. It’s my view that an assessment is basically a mechanism to provide advice for management, to the managers, and, to me, separating whether you have -- What we now call management procedures, or management strategy evaluations, versus an assessment, to me, it’s all part and parcel of the same thing.

As Ryan says, there are certain things you do to keep things at the right size and to use approximations via management procedures and so on, but I sort of look at the long-term view that, for virtually all assessments, we’re going to have to start moving toward, quote, unquote, right-sizing or management strategy evaluations or management procedures, and so what we’re asking, the reason I put these words in there, is asking the group to start thinking about that and to move in that sort of direction, and so that was the motivation. Thank you.

DR. SEDBERRY: Thanks for the clarification.

DR. REICHERT: My confusion with 2 and 3 was that I was looking at my notes, and I had a suggestion to move the italics from 2 to 3, and so, anyway.

DR. CARMICHAEL: The italics in 2, stay or go?

MR. RINDONE: I am just providing the information and the rationale, and I’m not voting, and I just wanted that to be clear.

DR. REICHERT: If they stay, I think they are more appropriate under 3 than under 2, because I think 2 is about the models and not the management. Management comes into play in Number 3.

DR. SEDBERRY: I agree with that.

MR. CARMICHAEL: Is there a concern that we’re getting models that are appropriate for the data, but aren’t meeting management needs, as expressed in the rest of the terms of reference, as Kyle noted, or are creating problems with other species?

DR. REICHERT: I agree, and I would be comfortable adding language to that effect in there, but that still doesn’t address the consideration of how similar species are managed. That is modeling approaches of similar species and whether the modeling approach accomplishes the goal to provide useful management recommendations.

MR. CARMICHAEL: Should we say population models considered that are appropriate for the available data best meet the terms of reference and considerate of how similar species are assessed, or is that a whole other direction?

MR. RINDONE: I think that's a whole other direction. I think that would ultimately contradict the effort to right-size assessments, because I don't think that anyone thinks, honestly, that we're going to get a statistical catch-at-age model for scamp and yellowmouth like we might have for other grouper species, and so we may be looking at something very different for either of these, depending on how it shakes out, and so I think right-sizing needs to be first and foremost our goal, to make sure that we're not trying to assume more than is reasonable to assume.

The rationale behind this, again, was more geared towards the management strategy evaluation effort, and so, if you guys think it's appropriate to integrate that into TOR Number 3, then, by all means. If it's just not appropriate all for Number 2, then, by all means, remove it.

MR. CARMICHAEL: George, what do you think?

DR. SEDBERRY: I can always just say what's the pleasure of the group, but I don't know -- Alexei, did you have a comment?

DR. SHAROV: I think I'm supposed to just listen and not ask questions, but I couldn't resist. I think John's suggestion on Number 2 was a great one. I have a strong feeling about this, that this is about selecting the most appropriate model for the assessment purposes, which would allow to estimate the status of the stock and basic characteristics, be it just biomass or numbers of age or whatever the data will allow, and so mixing it with management and the management of a similar species is probably not the best in this particular TOR, and, in my mind, they should be clearly separated.

Then my second comment on Number 3 is that it's certainly a very good idea to develop mechanisms or tools to account for ecosystem changes or specific trophic interactions, although I doubt that there will be much information of that sort that we practically could develop to make adjustments, but I am not familiar with the species, and likely there are some burning issues that need to be formalized into a specific model, but I think that it would not be necessarily within the reference points themselves, but more like within the control rule, and that's not exactly the same as reference points, and so we might consider, when we're talking about developing tools, the mechanisms that would allow to account for those changes, red tides, changes in environment, that would be counted in specific control rules that would adjust maybe fishing mortality or seasons or things of that nature, and so that Number 3 probably could be -- Those are my comments. Thank you.

DR. SEDBERRY: Thanks, Alexei. John, I think what I'm hearing is that the italics from Terms of Reference Number 2 need to be removed. I think we're agreed on that.

MR. CARMICHAEL: Okay.

DR. SEDBERRY: For Number 3 --

MR. CARMICHAEL: George, as we get into Number 3, one thing I do want to point out, and it's the language of recommending possible management procedures to achieve reference points, that gives me pause, and it's because SEDAR has been -- It's explicitly designed not to deal with management recommendations, and that's one of the founding principles, is that SEDAR doesn't provide management recommendations.

DR. SEDBERRY: Right, and I think that was Marcel's --

MR. CARMICHAEL: I like the management strategy evaluations, and I think that's something that it would be good for us to get more into, but we have to be careful to tiptoe around that of not saying here is some recommended management procedures, because I suspect that councils may just strike that as being in opposition to the SEDAR policies.

DR. REICHERT: That was exactly the point I was trying to make earlier.

DR. SEDBERRY: I agree with that as well.

DR. AHRENS: I think maybe a rephrasing to include maybe future scenarios in the assessment runs that try and capture some of those possible kind of ecosystem or climate variability scenarios that are more severe than just the regular random noise might be more to the spirit of the purpose of this assessment.

DR. SEDBERRY: Yes, that sounds good to me, and remove that management procedure part of it.

MR. CARMICHAEL: Joe, is that getting at where you were headed?

DR. POWERS: No, but I can go along with it.

MR. CARMICHAEL: Understood.

DR. SEDBERRY: Thanks, Joe. Anne, did you have something?

MS. LANGE: Yes, and removing that from Number 2 was -- I think I completely agree with that. With Number 3, I am leaning towards what Alexei said. I think, toward the end of his comment, where I believe he was suggesting splitting 3, the italics part of 3, that talks about ecosystem and climate as a separate bullet for investigation and not to be part of recommendations, necessarily, for the biological reference points, but to initiate some discussion about setting up a process to include some more ecosystem information, if it's available, but I don't see it being part of the reference points that we traditionally do, and I'm not sure how clear I am on that, but, again, I'm a little concerned about having all that ecosystem stuff into the biological reference points, when we really aren't there yet.

DR. SEDBERRY: Would everybody feel comfortable making that a separate bullet, starting with a --

MR. CARMICHAEL: A sub-bullet, maybe?

DR. SEDBERRY: A sub-bullet.

MR. CARMICHAEL: We know this has to be done, and maybe “projection” isn’t the right word, since I was just noticing that we don’t actually get into projection details, I suppose, in this, because it’s a research track. That will come in the operational assessment, and so I’m not fully sold on this wording either. Alternative states of nature? Is there a better wording for that, Rob or Joe?

DR. SEDBERRY: Possible model outputs or --

MR. CARMICHAEL: Just scenarios? Is there some other way that gets at the management procedures without saying that?

DR. REICHERT: Are those model scenarios, or are they -- I like leaving this, right now, somewhat broad and leave it at scenarios. Since this is the first research track, we can discuss and see how we can fill this in later, but I also don’t want to make it too broad, so we get into these endless discussions about what-all should be included.

DR. SHERTZER: I’m not really sure how to interpret that. What does that mean, the possible scenarios to achieve reference points?

MR. CARMICHAEL: Yes.

DR. SHERTZER: Is the idea here that the biological reference points should be appropriate for any of these ecosystem or climate or species interactions that are on the list here? Is that the intent? I think we wouldn’t want to recommend some equilibrium reference point that doesn’t allow for red tide episodic events.

DR. AHRENS: I kind of pictured this as kind of how do the reference points change as the severity of various impacts changes, and so you can imagine reference point versus intensity of red tides, or frequency of red tides, or something like that, and kind providing that sort of output out of the model, or various cold kills or something like that. It’s kind of how does that -- What you’re calling your MSY reference points, how are they changing as those climatic conditions are varying?

MR. CARMICHAEL: Not just achieving them, but how do they change, given ecosystem and climate and species interactions, et cetera.

DR. AHRENS: Yes, because, I mean, currently, you have the P* process in place to determine that kind of management procedure, and so I see this as adding to the uncertainty, or characterization of uncertainty, that exists within the assessment model and how that may be taken into consideration as you deal with uncertainty in the biology of the system and then uncertainty in the implementation and the management, and so you’re making aspects of that more explicit and relevant to kind of those environmental conditions that we know can have profound impacts on the stocks.

DR. LORENZEN: This whole point started with Joe’s point about looking at management procedures, and now we’re kind of re-working this into something about reference points. I am wondering whether we can keep the focus on management procedures, but, instead of saying

recommend reference points and management procedures, say something along the lines of explore how well alternative management procedures might -- What was the original wording there? Might achieve those reference points or might perform -- Because then we're not overstepping our limit, but I think exploring those procedures would be really valuable.

DR. SEDBERRY: That might be better. We're not addressing specific management procedures, but just modeling the alternatives to see how the reference points come out.

DR. AHRENS: I think there's two issues here. One is how are those reference points impacted by ecosystem changes and climate change or episodic events, and then there is also what is the best management procedure to deal with that potential variability in what is a shifting target.

DR. SEDBERRY: We have just made them separate sub-bullets. Does that keep them as separate issues now, or does that address what you were getting at, Rob?

DR. AHRENS: Yes, and, I mean, I think -- I mean, one is an MSE, and the other is really characterizing how reference points change as a function of changes in the environment. I am good with either one, but, I mean, I think, once you add MSE in, you're asking -- You're potentially asking a lot of the assessment team, because MSEs can be pretty endless if you're not pretty careful in what you ask we explore in them.

DR. SHAROV: It seems to me, at least the way you have it now, from the -- Change the a and b in different places, and that is because the first thing is we are saying recommend reference points. The second thing that logically flows from it is consider how a reference point could be affected by the changes in ecosystem, et cetera. Then, after the next one, it would be the exploration of the alternative management, even though, to me, it seems like this is one of the reference points, because the reference point -- You may want to keep it here, but that would be a third element, rather than the second, and so, first, you bring reference points, and second is reference point adjustments, and third is -- Based on ecosystem considerations and climate, ecosystem or predators or whatever, and third is management options and alternatives, et cetera, to achieve those reference points.

DR. SEDBERRY: Thanks, Alexei, and so the way it's been reformatted here is what you were suggesting.

DR. SAGARESE: I just had a comment on the MSE and trying to consider MSE within a SEDAR. For SEDAR 49, we ended up doing a data-limited assessment, where we had eight stocks, and, at the data workshop, we not only had to collect data for running the assessment models, but we also had to collect all the data for parameterizing the operating models in the simulations, and so I'm not quite sure -- I wasn't under the impression that this research track would include an MSE and testing different management procedures, because I am not sure we planned for getting the data for those sorts of issues.

I mean, you can talk to people in the Gulf that participated in that SEDAR, and they said it was the most data-intensive SEDAR they had ever been a part of, and so I would just be careful about the expectations here, and so not only trying to incorporate some more of the ecosystem components, but also trying to -- If we are going down that every research track has to have an accompanying simulation model with it, that's an enormous task.

DR. SEDBERRY: So how do we feel now about the biological reference points terms of reference?

MS. LANGE: I am not sure if I understood correctly, but I think I agree with the last comments. This is our first research track assessment, and trying to incorporate a lot of the ecosystem analyses into that, at this point, when we're still working with the ecosystem group to figure out what all that means, at least in the South Atlantic, and we're looking to have a presentation by them in January or so, I guess -- I am not sure if we're at the point now where we should start incorporating all of these things into the very first research track that we're doing.

That sounds counterintuitive, in that a research track is supposed to start looking at additional things, but I'm not sure just how far afield from the actual management recommendations, based on the assessments, we should be going, but, again, I am probably sounding confused here, but I am, I guess.

DR. SEDBERRY: Well, we are a little confused in the Southeast about the ecosystem-based management and how it fits with actual assessments and examples from the Southeast, and so beginning to incorporate it into assessments, and particularly this research assessment, I think is a good idea. I just don't know about when it should be evaluated. Certainly not as part of the initial assessment. Again, I am kind of confused about the whole thing too, but, when I look at what we have here for the biological reference points, incorporating the ecosystem management components, I feel comfortable with the way this is worded now. I don't think there is anything undoable here.

MS. LANGE: Again, are we looking at actually doing additional analyses or in a general -- Are the analysts going to run the model in a variety of ways? Are they going to come up with the standard reference points that we use to provide to management? Are they then, based on a and b here, to run additional models, or would they comment? If we assume that the temperatures are rising and the species are moving, this may be -- We might have these generic effects, or are they actually going to be doing additional analyses, and, if so, based on what?

MR. CARMICHAEL: These hypotheses, if they are developed? Otherwise, I don't know.

MR. RINDONE: I think this is a really important distinction, in terms of how Skyler and Kyle are going to be spending their time and the time of their team, if this is going to be a generally addressed TOR or if you guys are looking for explicit advice.

DR. AHRENS: I kind of envision -- Let's say they end up doing a Bayesian states space model for it, where you kind of run one assessment, and then kind of maybe you're forcing your mortality anomalies with some time series of red tide, and therefore you're kind of getting another scenario, and then you can explore, given the -- Kind of chunking up those time series into full time series or recent years, look at how those may be affecting the reference points, and so that's kind of the impression that I got that people were interested in exploring.

It's less clear to me in terms of where you're going with the alternative management procedures, because I think that's -- Then are you generating a reference model to develop these scenarios and then running the assessment and kind of doing that whole kind of closed-loop exploration, or is it

-- Are you exploring just variance on kind of the P* process or what? It's not clear what is being asked in the Point b below, to me.

DR. POWERS: b is very far from what I originally proposed. What I originally proposed was basically to have a discussion to kind of look at the issue, whereas, the way b reads now, it's you're going to do a bunch of MSE analysis, and I think that's what Skyler is a little worried about, understandably, and so, I mean, seeing as how we only have fifteen more minutes, I would just take away b altogether. I'm not going to fight about it.

DR. SEDBERRY: Is that agreeable to everyone? Any objection to that?

DR. AHRENS: I don't.

DR. SEDBERRY: Okay.

MS. LANGE: Sorry to keep doing this, but, when it says "consider how reference points", for Part a, again, is that going to be an additional analyses, or is that going to be sort of a generic discussion, as far as -- Again, Kyle and Skyler need to know.

DR. POWERS: The word says "consider". To me, that opens it up to the analysts themselves have to look at it and see what they can and can't do, and all you're asking them to do is consider it.

MR. RINDONE: I don't consider it as being overly prescriptive.

DR. SHAROV: Although I recommended to keep the reference points separate from that Item b of alternative management options, and I felt that clearly reference points should be separated from management options, which in my view evolve to doing exactly this, but, at the same time, now with this being gone completely, I just wanted to give you an example to think of where it might be important, and I think that's what the original intent was.

I will give you an example of recent discussion in the North Atlantic, where the group of the stock assessment committee considered its use of standard reference points, for example SPR reference points, and I just wanted to throw in the example of 40 percent SPR is a possible target for a corresponding -- To which I replied that, concerning where the stock is now and the fact that it's a recreational fishery, which is obviously also important in most of the species in the South Atlantic and in the Gulf, where they're recreational, the SPR 40 percent, for example, would not -- Even though it sounds like a good idea, and it's being used in many other stock assessments as the proxy, particularly in federal fisheries management used as a proxy to the FMSY, it's practically unachievable, in some cases, because of the level of the discards.

If your current fishing mortality overall is half of this, and if you want to reduce it further, because a further reduction would encounter more and more dead discards, your goal becomes counterproductive, where you -- You would end up with a fishery that is -- That is exactly the problem, that you encounter, for particular reference points, that it seems to be -- Because they are not related to the actual context of the fishery, or how the fishery is being performed, and so, for that reason, the selection of reference points and the discussion of reference points has to be related to the structure of the fishery and the principal sources of mortality, and particularly if the changes

are expected that the alternative management, or the management actions out of those, would be unable really to achieve those reference points that are being selected.

Unfortunately, in most cases, these two elements are not connected. They are not being considered together. This is a research track, and this is an opportunity to sort of design them together, and so my suggestion would be to have this maybe not right there in the reference points, but move it somewhere else, but I think it is important to consider reference points in the context of possible management actions that would be required to achieve reference points, which is essentially what was the original request of this sub-section, and so I personally see a lot of value in it. Thank you.

DR. LORENZEN: I very much agree, and I think that was the original intent, and I was say that I wasn't intending to add a huge workload. What I was trying to do, actually, was to say -- The original suggestion was to consider management procedures, but not to say that we would recommend one, which would sort of overstep the limit of the assessment.

DR. SEDBERRY: By adding management procedures to the list of things we're going to consider here, does that address it?

MR. CARMICHAEL: I am hesitant to write "procedures", because, to me, procedures is different than say management actions or choices.

DR. SEDBERRY: Right.

MR. CARMICHAEL: Joe, did you all choose "procedures" for a specific reason?

DR. POWERS: Perhaps it's because I have a very broad view of what a management procedure is, and so just put in some other word there, like affected by management.

MR. CARMICHAEL: Yes, maybe just management.

DR. POWERS: I would just leave it at that, yes.

DR. SEDBERRY: That's the way it's worded now.

MR. CARMICHAEL: I think the points were good, and, Alexei, the point about -- I think this was what Joe was saying at the beginning, that you can't do biological reference points in a vacuum. It's something that maybe needs to come before the Steering Committee and maybe to recognize to maybe relax some on the discussion of management crossing over into the reference points at the workshops and at SEDAR more so -- The vision has been that all of this would just be addressed at the SSC level, but I think more has to be done here to do that in the assessment.

DR. SEDBERRY: Okay. Are we ready to move on? As Joe mentioned, we're running out of time here. Should we move on to Assessment Term of Reference 4? Any comments?

MR. CARMICHAEL: George, I have no further Gulf comments.

DR. SEDBERRY: Okay. Go ahead, John.

MR. CARMICHAEL: I said there was no other Gulf comments on this section, these next -- Until we get to the peer review, and so we're pretty good right here.

DR. SEDBERRY: Okay. Any additional edits or comments from the group for the remainder of the assessment? Okay. I guess we're ready to move on to the review.

DR. SHAROV: Just one simple suggestion. When it says to estimate abundance and biomass and stock recruitment, et cetera, not everything will be available, possibly, because it depends on which model will be used, and so maybe you should say "whenever possible", or "to the extent possible", something of that sort, so that you don't put the assessment scientists in a position that they have not addressed completely the term of reference.

MR. CARMICHAEL: That is generally applied with all of this stuff. We can state it explicitly if you all think that will help Kyle and Skyler. It's kind of general. It says, "and other parameters, as necessary".

DR. SEDBERRY: Yes.

MR. CARMICHAEL: So I don't think they're in too much of a bind if a model doesn't give a particular parameter.

DR. SEDBERRY: I think you're right, John. Right now, you're adding in comments from the Gulf?

MR. CARMICHAEL: Correct. Yes, they had one on Number 3.

DR. SEDBERRY: For the review workshop terms of reference?

MR. CARMICHAEL: Yes.

MS. LANGE: Just a quick -- On Item 1, where it says are data applied properly within the assessment model, would that be more appropriately does the assessment model properly use the data, because the model is applied to the data, isn't it, as opposed to the data being applied to the model?

DR. SEDBERRY: I think you're right about that.

MR. CARMICHAEL: Can you say that again, Anne?

MS. LANGE: It's the third bullet under Item 1. Is the assessment model applied properly for the available data, or to the available data, or something like that. Something like that, I guess, but it just didn't sound right to me.

DR. SEDBERRY: Meaning it's the appropriate model applied correctly to the available data.

MS. LANGE: Correct.

MR. CARMICHAEL: Do you want to say appropriate model?

DR. SEDBERRY: Yes.

MS. LANGE: Yes, that works.

MR. CARMICHAEL: Okay.

DR. SEDBERRY: There is some additions on Terms of Reference Number 3, and there is a second bullet, or a sub-bullet, added. Again, the ecosystem and climate factors.

DR. POWERS: Just a note. I used the word “variability” there purposefully, because I was thinking of it not only in terms of uncertainty in the estimation, but also process error, just the general variability of the system you’re dealing with, and so that’s why I used that word.

DR. SEDBERRY: Okay. Thanks. Any additional comments or clarifications or questions about Terms of Reference 1 through 4, or 1 through 3, I guess, and there is all of Number 4 now.

MS. LANGE: I would suggest maybe reversing the order of the bullets under 4, especially if you’re looking at the recommendations to improve the assessment, which is what the second bullet kind of addresses, and then the other is looking at data workshop recommendations.

DR. SEDBERRY: Okay, and so provide recommendations and consider them.

MS. LANGE: Yes, consider additional ones.

DR. SEDBERRY: That makes sense.

MR. CARMICHAEL: I think the idea was to make sure that that actually followed from, first, them looking at what the data and assessment workshops did in the context of the assessment. I think they want to make sure that these research recommendations that you already have are considered before you get into a whole bunch of new ones.

DR. SEDBERRY: So right now they are in chronological order, and so that does make sense?

MS. LANGE: Okay. That makes sense. When I read through it the first time, it seemed out of order, but that’s fine.

DR. SEDBERRY: Anything else on 1 through 4? Okay. Then 5 and 6. John didn’t make any additional edits to these, but are there any comments or corrections or clarifications from the group? Anything else to consider in the terms of reference? Okay. I think that’s the end of that action item. The second action item was to review the schedule.

MR. CARMICHAEL: Julia, do you want to just want to fill them in on the schedule as it is now a little bit and what’s to come later?

MS. BYRD: Sure, and I am happy to -- I am not planning to kind of walk through each section, but I will just give kind of a broad overview. We have kind of called this the milestone schedule, and so it kind of lays out what is going to occur kind of within each month. Again, stock ID will

start kind of in the spring of next year, and hopefully it will be complete by June, and then we'll get into the data workshop. The data workshop, the data stage, the data workshop stage, there will be a few webinars associated with that as well as an in-person workshop in late October or early November of 2019.

The assessment stage will take place over a series of webinars, starting around March of 2020 and going through July of 2020, and then, assuming everything goes along as planned, the tentative plan is for the review workshop to be held in October of 2020 and then for the assessment to go to the SSC for review in the spring of 2021.

I will note that we have kind of stop-off spot in June, at the beginning of June, where we need to decide -- The assessment development team will need to decide whether an October 2020 review will work or not, and we need to do that due to kind of timing of CIE reviewers and that sort of thing.

The other thing I will note on this too is that, once this kind of milestone schedule is approved, the idea is we will go in and assign specific weeks for webinars and things like that, and so I will be getting in touch, Ryan, probably with you at the Gulf Council to make sure we know when things, and John and Mike E. with the South Atlantic Council, so we know when council meetings and SSC meetings are, so we can try to avoid those as we start assigning webinar weeks to things.

DR. SEDBERRY: Anne has a question, Julia.

MS. BYRD: Sure.

MS. LANGE: It's me again, but I'm wondering how this might change if it's determined early on, after the stock ID workshop, that there are in fact to be two assessments. Will they be run parallel, with the same deadlines and all?

MS. BYRD: I think, ideally, that's what we would be shooting for. We would kind of be running them parallel, and, again, we would like to have the same kind of decision-making body making decisions between the two assessments. However, as John noted earlier, if that ends up happening, one assessment model may develop more quickly than the other, and so we'll just have to account for that once things get underway, but I think the general idea is to kind of have them run parallel tracks, although one may progress more quickly than the other.

DR. SEDBERRY: Then Marcel had a question, too.

DR. REICHERT: Yes, thank you. I saw, in January/February, there was an age workshop. That is coming up really quickly, and we are one of the age providers on our end, and so is that still the schedule?

MS. BYRD: I guess I'm not sure on that. Skyler, I don't know if you have more information on that. I know that folks at Panama City were kind of taking the lead to organize that, and so I think hurricane impacts have likely impacted their ability to work on this.

DR. REICHERT: Okay.

MS. BYRD: So I'm not sure on that. Skyler, I hate to put you on the spot, but I don't know if you have any additional information on that.

DR. SAGARESE: No, I don't. I am of the same mind as you, where I think Panama City is just trying to get back to normal, and so I'm not sure what the status of that workshop is. It was originally supposed to be in November, but the hurricane, obviously, pushed it back. I'm not sure if it will have to be pushed back yet again.

DR. REICHERT: Okay, and we can talk about that offline and see how we potentially can help with making it happen, because, obviously, that is probably important for the data workshop. If there are any issues in the ageing, then we need to resolve them before the data workshop, but we can possibly talk a little bit more offline on that.

MS. BYRD: Great. Thanks, Marcel. Do folks have any more questions about the schedule or any concerns or any edits?

DR. SEDBERRY: Okay. I think that takes care of all of our action items. Is there anything else we need to cover, John or Julia?

MR. RINDONE: There is a typo of June of 2020.

MS. BYRD: Good catch.

MR. RINDONE: It should be -- There we go. That's it.

MR. CARMICHAEL: That's it. Thanks, Ryan.

DR. SEDBERRY: Good eye.

MR. CARMICHAEL: That's all I had.

MS. BYRD: Me too.

DR. SEDBERRY: Great. Thanks, everybody, for your participation. Sorry we ran overtime, but I think we had a lot to cover, and I think we managed to get through it all, and so thanks, everybody, for participating and for your contributions.

MR. CARMICHAEL: Thanks, everybody. I appreciate your patience in getting through this.

(Whereupon, the meeting was adjourned on November 27, 2018.)

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