SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

SCIENTIFIC AND STATISTICAL COMMITTEE

Webinar

February 25, 2019

SUMMARY MINUTES

SSC Committee

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Dr. Scott Crosson
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Dr. Churchill Grimes
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Christina Wiegand
Mike Errigo

Other observers and participants attached.

The Scientific and Statistical Committee of the South Atlantic Fishery Management Council convened via webinar on February 25, 2019, and was called to order by Dr. George Sedberry.

INTRODUCTION

DR. SEDBERRY: Thanks, everyone, for being here, and thank you, Mike and council staff, for the preparation for this, particularly Attachment 3, the MRIP data comparisons and decisions. I can see a lot of work went into this, and so I appreciate everything that everybody has done to get ready for this.

As you recall, during our October SSC meeting, we had requested, after Erik had presented the MRIP revision assessments, we had requested some additional detail, and we had scheduled a webinar to hear the additional detail on some of the work that went into the assessment report, and so that's the purpose of this webinar, is to have the additional details of analysis and model outputs that the SSC had requested back in October. You should have received the attachments that included the report that we had previously received back in October plus the Attachment 3, Mike's comparison document, and let's see. What else was there, Mike?

DR. ERRIGO: There should have been a presentation from the Science Center that went through some more of the detailed inputs of the model.

DR. SEDBERRY: That's right. That's a PDF of a PowerPoint, I guess, that has the details of the model outputs, and so I believe there were four attachments that went out in the briefing book for this webinar, and that briefing book went out back in January, when we originally had scheduled this, and I don't think anything has changed since then, and so I guess the first thing we need to do is approve the agenda. Mike, do you think we need to go through introductions? I'm not sure who all is on the webinar, and I can't see who is on it.

DR. ERRIGO: I have everyone listed here, but I suppose, just real quick -- No, I don't think we need to, unless there is anyone on the webinar who is with somebody else, and either just say now who is on, or you can send me an email telling me who else is on, like with -- Like if you're on the same computer with someone else, just so I know who is attending. Otherwise, I have a list of all the people who are registered and online.

DR. SEDBERRY: Okay. I think that will work. Just for the recording, and for the record, if anybody speaks, just mention your name, so that we know what voice goes with what person. Unless there is any objections, I think we can approve the agenda that had been sent out. The agenda does say January 25, and I don't know if we need to change that, but, other than that, it's a pretty straightforward agenda. Mike, I don't know if we need to take public comment on this webinar, or ask for public comment.

DR. ERRIGO: What we were going to do is do it the same way we've done at the SSC meeting, and that is we will do the -- We will go through the presentation first, then take clarifying questions on things, and then we can do public comment then, is how we were going to do it.

DR. SEDBERRY: Okay. Yes, I see it on the agenda now. Sorry about that.

DR. ERRIGO: That's okay. Then we will have the discussion.

DR. SEDBERRY: Okay. Great. The agenda item is to review the revision assessments for blueline tilefish, red grouper, black sea bass, vermilion snapper, and provide a recommendation on the best scientific information available. Again, the report was sent out, and you have the presentation, and are we going to get a presentation on this webinar, Mike?

DR. ERRIGO: Yes, I believe that someone from the Science Center, I think Erik, is going to go through the Science Center presentation. Then, if you guys like, I can walk you through the document that I put together, just real quick, so you guys know what's going on there, and then you can have your discussion. Then we can do it either way. You can either do it by species, like by assessment, or we can do all of them together. That's up to you how you want to do that.

DR. SEDBERRY: Why don't we hear Erik's presentation and maybe stop after the first assessment and just see if there's any questions or discussions and see how that goes?

DR. ERRIGO: Okay. That sounds good.

DR. SEDBERRY: So the first revision assessment was blueline tilefish, and then there is some introductory material as well, and maybe we can stop after the blueline tilefish for questions and discussion.

DR. ERRIGO: Okay. That sounds good to me.

REVIEW OF THE MRIP REVISION ASSESSMENTS

DR. WILLIAMS: I was hoping to make this rather quick, and I will be glad to go into more detail if people think, but, honestly, the presentation here was really more or less a data dump. It's basically just a complete dump of all the diagnostic output, which is what you guys requested, and it's also in the report, and so, really, I don't want to go -- I don't think we need to go through every slide of that presentation, especially since it's 138 slides, and hopefully people have looked through it, and, if they saw issues or anything popped up to them, that then we can bring that up and get into the details and discussion on that.

For the most part, what you should see, if you sat down and compared the model fit diagnostics to the original assessment report, you will probably notice that the fits did not change very much at all. I know there was some concern that they might have in some cases, but I think, when you look at it, you will largely come to, probably, the same conclusion that we did in the Science Center, which was that the fits were very similar to the original assessment, and it really was more or less a scaling issue that went on in the results.

I think, with that, there's really not much more for me to say, other than to basically be here to help answer questions, and Mike didn't mention this, but I will mention that I have Kyle Shertzer in the room, and Nikolai Klibansky is here as well, and so, hopefully between the three of us, we can answer any questions about any specific assessment questions that the SSC might have.

DR. SEDBERRY: Okay.

DR. ERRIGO: That's good, and so I guess does anyone have any specific questions? I can go over, just real quick, briefly, what I did, also. Then we can go from there.

DR. SEDBERRY: That sounds good, Mike.

DR. ERRIGO: Okay. Does anyone have any questions for Erik before I jump and just quickly, briefly, go over what I put together? I don't see any hands raised or anything, but feel free to jump in. I should have unmuted everyone, I think, at this point. I don't see anyone.

This is the document that I put together, and it mostly has to do with the MRIP -- The data decisions that were made in each of the assessments, and I also had gotten the actual MRIP landings and discards, and so there is a comparison of the differences between the two. I started with blueline tilefish, and the only data decision that was made for the MRIP data in there actually had to do with charter boat. In Wave 4 of 2007, there was a huge estimate of releases, discards, B2s, and it was determined to be not realistic, and so that point was smoothed out, and I think I have a graphic. Anyway, they smoothed out this huge point here so that -- They used the years around it, the years before and after that point, to come up with an average discard for that. That's what they did there.

Then these graphs here just show the differences between the MRIP landings south of Hatteras and north of Hatteras and the percent differences between the two. In actuality, the magnitude of the differences is actually pretty small comparatively, and it actually makes up the MRIP -- It's just private rec, for the most part, that makes up, mostly, a small amount of the landings. A lot of it comes from charter boats and headboats.

Then the same thing north of Hatteras. It's very spotty, kind of all over the place, and so there are differences. Some of the years, the differences are big, comparatively, to each other, like over 100 percent difference kind of thing, but the magnitude of the difference, like the actual magnitude, is small compared to the total landings, and so it doesn't really make much of a difference.

Here is the total, and these are total removals. This is the golden tilefish and snowy grouper, which were used as proxies for blueline, and then here is blueline, and so you can see these are the total removals compared between the original MRIP numbers and the newly-calibrated numbers. The newly-calibrated are in orange, and the original numbers are in blue, and so you'll see that there's not a huge difference in most years.

A couple of years, there is a big difference, usually in the ones where there is a big spike, like here, or in golden tilefish here, but, for the most part, there is not a huge difference, which is why, when the conversion factor was calculated using golden tilefish and snowy grouper, it actually didn't come out to be that terribly different, as if you were to calculate it using the blueline numbers, because the differences between the two datasets, the old and the new numbers is not huge for any of these, because they are rare-event, offshore species in the private rec, and so the pattern is very similar.

That's why there wasn't a huge difference. Here it is. This is the charter boat point that was smoothed, and so there is the adjusted point. That was blueline, and then there are the same types of graphics for the other three, but, if you would like to stop and just discuss blueline, we can stop there, just so you don't get everything confused.

DR. SEDBERRY: Yes, I think that's probably the best way to do this, Mike, and so thanks for that. Are there any questions or discussion about the blueline tilefish comparison?

MR. POLAND: I've got a quick question, or it's more of a clarifying question. Just remind me why golden and snowy were used to calculate the conversion factor. Was it just to up the sample size to a sufficient number, or what was the thought process behind that?

DR. ERRIGO: I actually can probably answer that, and, Erik, feel free to jump in if I misstate something. What the Science Center did was they used -- if you go to the MRIP website, there is a comparison tool that compares the original MRIP to the APAIS-calibrated MRIP and then the fully calibrated FES MRIP, which has APAIS and FES calibrations, and so there is three different datasets in there, and they are compared to each other, but it's only done for a certain set of species. It's not done for everything.

Unfortunately, blueline tilefish was not one of them, and what the Science Center was looking for is they needed to look at the difference between the APAIS-calibrated and the fully-calibrated FES, because, in SEDAR 50, they used APAIS-calibrated numbers. They looked for which species that did have that comparison in the comparison tool were most similar to blueline tilefish, so that they could use them as a proxy to come up with their conversion factors to go from APAIS-calibrated to FES-calibrated, and so both golden tilefish and snowy grouper are deepwater, offshore species, similar to blueline tilefish, and so I believe that's why those were chosen, and, Erik, if there's something else that I missed, or, if that's not 100 percent correct, please feel free to jump in.

DR. WILLIAMS: No, that was 100 percent correct.

MR. POLAND: Thanks, and that makes sense. I appreciate it.

DR. SCHARF: It just goes back to this question of what happened in 2007, where you had this inflated discard number, and then, during the data workshop, it was smoothed over using the average of some of the surrounding years, and it seemed like it was an issue, because this is sort of a rare-event fishery, and I'm just wondering, looking at the blueline data that Mike just presented in his presentation, and I'm looking at that file that Mike has, that document on page 7, where he has the blueline and then the golden underneath it and then the snowy, and so the blueline -- You see that spike in 2007, and then you see spikes again in 2013 and 2017, and so is there any concern that those more recent spikes are also a result of a really small number of intercepts, like the 2007 spike was?

DR. ERRIGO: Actually, the 2013 spike, I'm pretty sure that is the result of a small number of intercepts, and I looked into that one very closely, and I don't remember about the 2017 spike, that increase there, and that one -- I don't think I've looked into that one as closely, but I know for sure that the 2013 spike is a small number of intercepts, and that happens in southern Florida, and I think it comes from Monroe County, in particular.

This just looks at blueline tilefish as a whole, across the entire South Atlantic region, and most of these recreational landings that you're seeing are coming from Florida, and the spikes, the weird spikes, a lot of them are private rec, the odd private rec, intercepts that just happen to expand to

huge numbers, or, actually, not all private rec. Occasionally, there are charter boats that expand to huge numbers. It depends on where they were.

A lot of them are Monroe County or somewhere in southern Florida, and I know that's what 2013 was. That one was a big concern for me, because there was a huge amount of B1s here that translated into a large number of -- I was concerned that that didn't look right, and why were they so many B1s there, and I actually spoke to the person who did the intercept, and they weren't discards. What they were was -- It was a very busy boat landing, and they just -- The people had all the fish in the cooler, and they said, yes, they have blueline tilefish, and there is this many in there, as they were walking to their car, that kind of thing, and so that's why they were categorized as B1, and so, yes, they are small intercepts, almost always, for these types of species.

DR. SEDBERRY: The spike that occurs at the same time, or I guess it's a year earlier, for snowy grouper, is that also from Monroe County? Is it a similar kind of thing?

DR. ERRIGO: I think it is. I remember looking at snowy grouper and finding a spike there, and it was probably Monroe County, and I can't remember if I was looking at 2012, and I probably was, because this was several years ago, and that's the only spike in the recent time series, but, yes, that was Monroe County, yes.

DR. SERCHUK: My concern is a little bit more elemental, and maybe that reflects my elemental thinking. I am concerned about two issues that are not transparent to me from any of the graphs, but clearly the amount of the number and representativeness of the samples hasn't changed between the original MRIP data and the revised MRIP data, because there were no changes whatsoever to those two issues, but I am concerned about the examination of whether the samples that were taken were sufficient in number, and this gets back to the percent standard error across years, so that the estimators are of equal validity, and then I'm also concerned about whether the samples taken across years are representative of where the fishery occurred rather than, in some cases, perhaps the sample being taken from one area of the fishery, or several samples taken from one area of the fishery that are not representative of other areas.

It doesn't surprise me that the patterns are generally similar, because they are being raised using the same sample base, but they differ only in relationship to the change in effort and the changes that we're seeing in the intercept survey as corrections, and so I have concern that, for example, if there is only two samples taken in a number of years, and those might be probably -- I don't know whether they are maybe representative of the area fished, but they may not be sufficient to characterize even the discards or other attributes of the population of the fishery, and I can't get that out of these graphs.

Maybe you might say, well, you have to go back to the original SEDAR reports, but I feel, when I see very low levels among years, that we didn't either have a great number of samples, or we had a lot of zeroes, and those are the questions that really plagued me, because the sufficiency of sampling is critical, in most cases, to the adequacy and representativeness of the assessment. Thank you.

DR. SEDBERRY: Thanks, Fred. You know, the calibration, the recalibration, of the MRIP data is still going to suffer from these sampling problems that the original data had, and so that's a good point.

DR. NESSLAGE: I just wanted to agree with Fred's comments and echo them a bit. I am particularly concerned about this 2013 point. I know it was an issue, and it looks like it was a potential issue in the last assessment, original assessment, but now it's been magnified, and I'm just looking at Slide 51, and it sure looks like it might be way more influential with the revision than before, and, if we're not sure that we think a species like blueline has recreational landings on the level of three or four-times that of the commercial, I don't know, but it make me very, very uncertain about the stock status in the end, and I know I raised that concern at the October meeting, but I just wanted to reiterate it for today. Thanks.

DR. SEDBERRY: Thank you.

DR. BARBIERI: Mine are going to go very much in line with what the other speakers, the other folks, just said, especially Genny's comments about the appropriateness of us having these data updates include blueline tilefish, given the fact that it's already a species that is very poorly sampled by the standard MRIP program, for all different reasons, and that some of these spikes and anomalies -- That the data already seem to now be actually magnified and that this generates a level of uncertainty that I am not sure we can properly account for in our control rule or in any way that we can, in terms of stock status determination and in catch advice.

I don't want to get ahead of the game, Mr. Chairman, in terms of where we are in the process, but I just have serious concerns about these assessment data updates, and I don't feel that it is appropriate for us to consider this one for catch advice and for stock status determination. Thank you.

DR. SEDBERRY: Thank you, Luiz. I do not see any additional hands raised. Are there any additional questions or discussion on the blueline tilefish comparison?

DR. DUMAS: Since we're talking about blueline, the first thing -- I've got a specific question and then a sort of general question or comment. Specifically, I had a commercial fisherman contact me who fishes north of Hatteras, and he had a question about blueline tilefish and whether the locations of the MRIP sampling for blueline were representative of the fishing north of Hatteras, and he was concerned they might not be, one.

Two, his other question was about the discard estimates, and he said that, since there is no size limit on blueline tilefish, why would fishermen discard, and discard a large amount, and so he thought that the discards especially might be overestimated, for that reason. I am not familiar specifically with the size limit on blueline, and so I'm just passing that along, but, if that's true, then that might be an issue, and so those are sort of two specific questions.

In general, looking at the 2013 number and the other spikes for golden tilefish and snowy grouper, when you've got those large differences between models, do we feel like those are actual differences in population sizes that are out there, fish population sizes, to be caught, or are they reflecting something about the modeling, where there is some key non-linearity that is either being assumed, and shouldn't be, or vice versa, that is present that we're not capturing, because it seems like, in those high and low -- The spike events, that the differences between the models are really large, relatively, and so it seems like there might be some non-linearity that changed between the old and new MRIP that could be causing those differences, and what is that, in terms of the

analysis? What is that non-linearity that is causing those big differences between the models in those big years?

Also, the last general comment is, in terms of analyzing low-frequency events and survey data, for these situations where we've got the low-frequency, species that are called low-frequency, that we're using the modeling techniques that are appropriate for those types of events, that have a lot of zeroes, like Poisson models, negative binomial, zero-inflated Poisson, especially like zero-inflated models, for count data, and I'm not sure whether that's occurring, but that might help. If we're not doing that, something like that might help in situations where you have these low-frequency catches. Thanks.

DR. SEDBERRY: Thanks, Chris. Yes, I think the fisherman you mentioned -- Dewey had sent his concerns in an email to the entire SSC, and that again brings up the question that we talked about earlier with the data going -- The MRIP data going into these revision assessments and some specific localities, whether it be Monroe County, causing spikes, or places in North Carolina not being fully sampled according to their contribution to the fishery, and these are problems with the data.

DR. REICHERT: George, I have a question. I wanted to echo some of the remarks that Genny and Fred and Luiz had earlier, but my question was more one of procedure. Are we going to discuss -- Have the full discussion, species-by-species, or are we going to go through our recommendations and assessment of the uncertainties later, because I think Luiz started down that path, and so I was just wondering if we are going to complete the discussion, or do you want to pick that up after we have gone through each of the species?

DR. SEDBERRY: Well, I don't have any objection to us continuing the way we started, and I think, particularly, since the blueline tilefish was the first species that we discussed, there is kind of some clarifying questions in the process that have come up, and so I would suggest that we continue on with the other species and see what questions that come up. I think the short answer is, yes, let's continue on the way we're going, if that makes sense to everybody else.

DR. REICHERT: Okay. Then I will hold off on my other comments until we are discussing our recommendations and uncertainties. Thanks.

DR. SEDBERRY: Thank you.

DR. AHRENS: I guess this is a comment, and I don't know if Erik wants to jump in, and maybe Genny might want to jump in on this too, but I think, given the sampling nature of the MRIP program and the hit-and-miss for some of these species, in theory, some of those spikes should have large PSEs surrounding them, and I think one of -- If an assessment procedure is taking into account those PSEs, it's less of a concern than if they are going into an assessment procedure that doesn't account for those PSEs, and so I think it's interesting to keep in mind the nature of the assessments that are being used on these stocks, and certainly, if they're going into data-limited assessments, then the question is -- Those PSEs, by year, really aren't being taken into account, and I don't know if Erik wants to jump in and talk a little bit about that, in terms of the assessment.

DR. WILLIAMS: Rob, I will take this opportunity to jump in on a couple of notes, but, yes, you're right. I mean, when we look at the MRIP data, we pretty much take it on face value, and then we

try to use the PSEs sort of in our uncertainty calculations and the MCD process. We will resample the catch and use it that way, and so we do sort of account for the uncertainty, but I did want to make some comments, in general, about MRIP data.

I know there's a lot of discussion about spikes and limited sampling. Something to keep in mind is that the sampling is pretty consistent across years, so that the zeroes are just as valid as the positive intercepts, and so the sampling design itself doesn't really change too much from year-to-year, and so, if we are concerned about spikes, we should equally be concerned about troughs, i.e., zeroes.

Really, the question is, is this truly a rare-event species and we're imposing a sample design that seems to be -- It works for some species, but, for whatever reason, it may not be working for deepwater species or, quote, rare-event species, and that gets to Fred Serchuk's question earlier, which is how do we actually determine whether the survey is adequate for a given species, and I don't know the answer to that at all. I don't know if you can ever even actually get to that question. All you can do is impose a survey design over the surface of your fishing effort, and you hope that you are capturing what you want to be capturing, and I don't know how to fully evaluate that.

I don't know if MRIP staff have even started to evaluate that in any way, shape, or form, but the only comment I would say is that, when we go into a data workshop, like we did with the original blueline tilefish assessment, that one spike in 2007 -- Certainly the fact that it was a spike raised suspicion, and we looked into it, and certainly, in that case, there was a particular sample intercept that just did not make sense, and, in fact, there was like a rather heated discussion during the data workshop about that, where MRIP basically admitted that that data made no sense to them either, but then wasn't willing to sort of drop the data, so to speak, which then that gets to a larger question of what is the QA/QC process that MRIP uses, in terms of culling out what might be anomalous samples.

Again, these are much larger issues than we're going to be able to address here. In some ways, the data is the data, and this is what we have to work with, and, in theory, these estimates should be unbiased, and I think, for some of the data-rich species, they have been shown to be unbiased, but it's just what happens when we get these rare-event species in this sort of survey design, and I don't know enough of the details to be able to answer that.

Again, just be careful about the justification for where you guys might be going with either accepting or rejecting the results of this assessment, and make sure it's on firm ground of what you do know and what you don't know, and that's my concern. Don't impose things on the survey that may not be true, and that would be my only caution.

DR. SEDBERRY: Excellent point, Erik. Thank you. Any additional questions or discussion of blueline tilefish before we move on?

DR. SERCHUK: I have just one other point, if I could, Mr. Chairman. When I see low sampling numbers, and that may occur in a number of years for let's say blueline, one simple approach that an analyst might look at it is saying, well, what if I combined the -- What if I assumed the samples are unbiased, but I'm concerned about small sample sizes, and so, instead of looking at annual changes, to try to increase the sample size for a period, I will make my estimates in five-year blocks, because then I can lump samples which I believe are unbiased, but are small in number, to

perhaps get a more representative nature for a longer time period. Instead of using two samples a year over five years, I'm using ten samples for the period, to try to gain a more representative nature of how those samples apply to the fishery.

I am just wondering -- I am not recommending that technique be used here, but I'm wondering whether those types of exercises, at the analytical level, would be useful at comparing the subsequent estimates to those estimates that are done on a year-by-year basis, where sample sizes are really quite small, or perhaps, in any one particular year, may not be representative, and that's the sort of exercise that analysts might undertake, and it might be more helpful than trying to look at either very low sample sizes that are near the origin, in some cases, in terms of their estimates, their subsequent estimates, or may not be representative in one or two or three or four particular years, and that's just a suggestion. Thank you.

DR. WILLIAMS: If I could jump in on that, Fred is right on-point. The problem is that we, as assessment folks, don't have the capability to do sort of a multi-year domain estimation. I mean, certainly, we could do like an averaging across years, but that doesn't follow the design of the survey, necessarily, but I can tell you, because I am on the working group that MRIP has right now working on rare-event species, we are actually in the process of developing methods to actually do that, to do the sort of multi-year increased domain estimation. We're working on actually several things on how to address these rare-event species. The problem is the methodology just hasn't been worked out yet and what's going to be best for the survey design, and so that's sort of yet to come.

DR. SEDBERRY: Thanks, Erik. It sounds like there might be some promise for the future for looking at these rare-event species then.

DR. DUMAS: What prompted my earlier comments was the fact that, for the blueline tilefish, there was sort of ex-post smoothing, sort of after we had the data, and we said, oh, this data point doesn't look appropriate, and so we're going to smooth it ex-post, and so the comments that Erik was making earlier about, okay, if we take the data at face value and hope that they are unbiased, or that they're being analyzed in an unbiased way, then we shouldn't need to do any sort of ad hoc, ex-post smoothing, because the question becomes, okay, if we do ex-post smoothing for one species in one case, do we do it in other cases, and sort of what's the decision rule about when do we do that?

There probably needs to be some policy about how that occurs, and I think someone mentioned the QA/QC, and it would be a QA/QC question, and that's all, and so my concern is the fact that we did the ex-post smoothing argues against the point that we believe that the data are unbiased and representative and that, if we do ex-post smoothing, there should be some procedures and process along the lines that Fred was suggesting and that Erik said might be under development. Thanks.

DR. SEDBERRY: Erik, do you have any response to that?

DR. WILLIAMS: No, I agree with everything Chris said.

DR. SEDBERRY: Okay. Great.

DR. AHRENS: I just wanted to jump in. I mean, this is a stats mini kind of thing, but both the catch rate and the effort are measured with error, and I think it was Walters and Hilborn, back in 2003, that talked about linear optimizers and smoothers for that kind of data as kind of par for the course. In some instances, they won't change it, when the sampling is good, but, in these instances, it would make a profound difference, to the timing trajectory at least.

DR. ERRIGO: I just wanted to talk a little bit about that smoothed point. It was very odd, and that's why -- We very, very rarely, anymore, do anything to any of the data points. We don't smooth anymore, and that's something that was done in the past more often, but we very rarely do that anymore.

This point was extremely odd, and, for the charter boat intercept, there were six anglers on it, and each angler reported discarding live blueline tilefish. Here is the data here for the six anglers, and they reported discarding six, five, eight, six, six, and seven blueline tilefish alive, because they were B2s, and they reported that they did not catch any other species, and they didn't land any fish, and so it was very -- There wasn't a lot of trust in the intercept or in what was going on there or that it was representative of how the fishery actually operates. I think that's why it was decided that it should be smoothed.

Then, of course, how to deal with it was a huge issue, which finally came to a resolution, but this is not a common practice anymore to post-hoc smooth points, data points. In fact, I haven't seen this happen for quite some time, just as an FYI for those who are not intimately familiar with the SEDAR process. That's all.

DR. SEDBERRY: Thanks for that clarification, Mike.

DR. SERCHUK: Can I make one more point, George? If the analysts saw that in a particular year there were no samples, the question would then -- The analysts would then have to say, well, okay, I have a missing cell, and what is the appropriate way to fill in a missing cell? Well, there are a number of ways you could do that. You could interpolate between the adjacent cells, or you could take a longer time period average and so on and so forth.

Why an aberrant point is admittedly drawn the analysts' attention is because it's unlike the points around it, or at least unlike the estimate around it, but, if the samples around it are also not representative, the smoothing doesn't do anything, or investigating those points doesn't help either, and so I know I'm speaking to the choir here, but the analyst, who works at the cell level, in most cases, has a significant responsibility to, one, determine whether the number of samples taken in a particular year is sufficient to characterize whatever is being estimated from those samples, and, second of all, whether the samples themselves are unbiased, and that's a large responsibility, but, since all assessments are based from the building blocks of the sampling data, it's really an extremely critical step to examine the information coming in to say whether they are sufficient, in terms of the quantity of samples taken and whether they are representative of the thing that they are supposed to estimate. Again, I know I'm speaking to the choir, but it's a huge responsibility, and we need to be very explicit, when the analyst finds problems, in examining how they attempted to resolve these issues of the representative nature of the samples and the number of samples. Thanks again.

DR. SEDBERRY: Thanks, Fred, and it sounds like Erik's comments that the Center is working on -- I don't see any additional hands raised.

DR. ERRIGO: George, I suggest that, if we're going species-by-species, maybe you might want to take public comment species-by-species.

DR. SEDBERRY: I think that's a good suggestion. Why don't we go ahead and do that now? If there are any members of the public online, if you could raise your hand, or you can type your question into the question box.

MR. HEMILRIGHT: This is Dewey Hemilright. I apologize for not sending my comments in earlier. I didn't have an opportunity, and I've been busy, to get them together, and so that's why I sent them to all of the SSC members on Sunday night, I think it was, or Saturday night. My focus is on north of Cape Hatteras. When you look at the 2007 spike in discard, that was brought up at SEDAR 32, but I didn't follow it through with that, because it should have been addressed there.

I talked to some charter boats here over the weekend, and they all kind of laughed at me when I said the numbers and told them about it. They do remember one charter vessel that had six people that they all talked about on the radio, because they didn't want to keep no fish, and so they threw them all back.

MRIP is not the avenue for this blueline tilefish, because it has such a limited area, and there is only so many participants. You know, it's almost like, with MRIP here, with blueline north of Cape Hatteras, you have turned the funnel upside down, and you used the part that used to spit out the little bit, and it's taking in a little bit, and it's spitting out a lot.

When you look at the spikes in landings in 2013 and 2017, that is predominantly down in south Florida. The low parts, the valleys, of 2011 is the closure of 17B, the forty fathoms and out, and, in 2015, I believe where the quota -- Where there was some quota changes, and there was very limited quota available, but something that would behoove, in the future -- If separating out, when you're doing north of Cape Hatteras, between the charter boats and the private recreational angler, because it would even show further the disparity in what MRIP is doing.

To Erik's point, they are working on this, but, heck, it could be two or three more years before anything gets done, and that's the frustration here, as a commercial fisherman that knows this area and the amount of fish being caught. The highest year in North Carolina, by looking out on the -- Just a guesstimation from us fishers, and it would probably be, in North Carolina, it would be 2007, of people fishing, but it ain't nowhere near these numbers that are being spit out today, and it's not even plausible, because you don't have the vessels that have to go thirty-some miles offshore to do it.

My intention in bringing this to the SSC was I didn't want you all to continue to get bamboozled by a survey that is nowhere close in a particular area to representative of what you all are being told or shown that it is, and, until somebody says, hey, we can't use this or do this, then it's just a continuation of kicking the can down the road, which, as a fisherman and participant in this, is very frustrating, but I do appreciate you all's time, and, anything that I can answer questions or provide in the future, I would be more than happy to, but I would separate this out so that it gives you a clearer picture of what happens north of Cape Hatteras, since it seems like that's the area

where nobody can figure out how to do an assessment on, or you don't have the data for. Thank you.

DR. SEDBERRY: Thank you, Dewey. Are there any additional public comments? Thank you. Mike, I think we're ready to move on to the next species in your comparison document.

DR. ERRIGO: Okay. We will just keep in mind that Erik is there to answer any questions that anyone might have on the assessment outputs, if anyone has any for him. Next was red grouper. For red grouper, there was the decision made to smooth the MRFSS data, actually, and so this was made a while back, and that decision was simply carried through. They used a smoothing spline in R to smooth the landings and discards that came from MRIP for red grouper, and so that's what they did, and that's the only decision affecting the recreational data in red grouper.

This is a comparison of the actual landings to the revision landings done in SEDAR 53, and so the orange is the new MRIP landings, the purple is the revision, the landings that were used in the revision, and so there are some differences in some of the years, and then the blue is what was used in SEDAR 53, and that's the smoothed landings, and that's the percent difference. Then these are the raw discards.

Again, orange is always the new MRIP, and purple is always the revision, and so there are some good differences in the years. The thing is that, when you -- These are the conversion factors, because, for red grouper, red grouper includes Monroe County, but, unfortunately, the tool that's used on the MRIP website does not include Monroe County for the species that we include, and so the conversion factor was calculated without using Monroe County, and so these -- The orange is calculating conversion factors with Monroe County, and the purple is what was used in the revision and not using Monroe County.

Then the blue is the percent difference. Actually, it turns out that there's not a huge difference. The pattern actually follows pretty closely. There is some difference in these years and then in the last few years, and then these are the conversion factors from discards, and the bottom is for discards. There is bigger differences for discards than there was for landings.

Here is what happens when you smooth, when they smooth the data, and so this is what the original smoothing looks like. The lighter colors, that was the original data. Then the dark line is the smoothed, and that's landings and discards. I attempted to smooth the landings and discards and then compare to what was in the revision, because what the revision assessment did was it took the conversion factors and converted the smoothed landings, and so I attempted to smooth the new MRIP landings, using the same code that was used before, and so the -- There are a couple of different ways to do it, unfortunately.

There is the orange and the green are two slightly different ways of smoothing the new MRIP landings, but they actually come a lot closer to what was used in the revision assessment after smoothing, except for these couple of years right here for landings. They are kind of different, and I'm not exactly sure why.

Then, for discards, there is a lot more variability in them, but some years are higher, and some years are lower. The pattern is the same, but individual years tend to be different. That's it for red grouper. It was a little more difficult to compare those landings, because of the smoothing that

went on, but I did my best to try to get as close of a comparison as I could, and so that's what I came up with. If anyone has any questions, I would be happy to try and answer them, although I think they are very similar. The landings come out very similar after smoothing, like I said, except for like these three years.

DR. SEDBERRY: Any questions for Mike regarding the data and comparisons for red grouper? I don't see any, Mike.

DR. ERRIGO: Okay. Like I said, the smoothing, that was a decision I believe that was made in SEDAR -- I don't know if it was 24 or -- Whatever the one was before 53, the original benchmark, the benchmark before the standard. The decision was made to smooth, and so that was carried through. That decision may not have been made to -- We probably wouldn't have smoothed if there was a new benchmark done, if I had to guess, because we don't typically smooth landings anymore, but, since it was done in the last benchmark, that carried through.

DR. SEDBERRY: Okay. Still no questions, Mike, and so I think you can move on.

DR. ERRIGO: Do we want to ask if there is any public comment on this one?

DR. SEDBERRY: Thank you. Any public comment? You can raise your hand or use the question box. I don't see any questions, Mike.

DR. ERRIGO: Perfect. Moving right along to vermilion snapper. The only decisions that were made to do any kind of changes to the data here were there were a few years in the early part of the time series, and I have them here, 1981, 1983, and then 1985 to 1987, where the discards were zero or very close to zero, and it was thought that those were not realistic numbers, and so an average was taken of the surrounding years of the discards, and then those zeroes were replaced by the average discards for those years, and that's the only changes made to the recreational data.

There is a lot of information, and so I tried to get it into the graphs here, and the yellow bars are the absolute percent difference between the actual calibrated MRIP landings and discards and what was used in the revision, and then that percentage is here on the right. Then on the left are the actual numbers, and so the landings and discards in numbers, that correspond to the lines. They actually match up fairly well for a lot of the years, and you will see here, for vermilion, for the landings, it's these years here in the early 2000s that there is a good difference.

Oftentimes, in the early years, there is some big differences, and there are some years here in the middle 2000s where there is some differences, but then they line up very, very well for landings, and the blue is what was originally used in the original assessment, and then there is the discards, and the discards do not match up nearly as well as the landings do, and that actually happens to be the case in most of the assessments that I looked at, and I think that just happens to be because there is more variability in the discards than there is in the landings, and so there is more uncertainty, and so there tends to be more of a difference in the discards.

There is this big point here, and I'm not sure what happened over there, and that's the largest difference there, and then the same in the early 2000s, and there is a bigger difference. Otherwise, the pattern stays the same, for the most part, all the way through, and then, in the later years, they are very, very close. The last year tends to be more different than the ones previous to it, and that's

also a pattern, and I think there's just more uncertainty in that last year. Overall, not too bad, and landings are pretty good. Discards, like I said, are different, and so that's all I have for vermilion, if anyone has questions.

DR. SEDBERRY: Are there questions or comments from the committee? I do not see any questions or comments from the committee. Any questions or public comment? I don't see any, Mike, and so you can proceed.

DR. ERRIGO: Okay. Last is black sea bass. I did a little extra looking for -- The SSC was interested in looking at the trend in the discards for black sea bass, and so that was this here, where the discards went way up compared to the original discard trend, and it turns out that it seems to be that that is due to the cellphone change in the new data, in the calibrated data. That seems to be making a lot of that change.

There is also the proportion of -- The wireless effect is having a huge effect in the discards there, and, also, the shore mode catches. There are more shore mode catches later on in the time series, and they are inflating the discards dramatically, especially because the size limit changes, and so that's why discards jump up a lot, because we have increases in size limits which are causing a lot more discards, especially closer to shore, and so you're seeing effects from all those things, which are causing the discards to go way up.

That is what is causing that. It's not a shift between charter and private or anything like that. It has to do with the increase in shore mode, which happens across-the-board for FES, and the cellphone usage going up and the changes in the minimum size all working together to cause that, but there were no actual data decisions made during the SEDAR process for black sea bass. I forgot to mention that before I went into the discards. That is what is causing this huge change here.

When comparing the actual calibrated MRIP landings and discards to what was used in the revision, they're actually pretty close. Again, some years there is bigger differences than others. The trend in the landings and discards is very, very similar in both data series. The earlier years, they tend to be more different, and they are more similar in the later years, but they are very similar.

The revision assessment, for black sea bass in particular, tended to overestimate the landings and discards as a trend, as a pattern, and the revision assessment had higher landings and higher discards, when they were different, but they weren't that terribly off. Here is just some more of what I was looking at there, and so there's actually an increase in the proportion of charter and a decrease in the proportion of private and shore modes as you go towards the end of the time series, which is opposite of what you would expect to see, given the trend in the discards, because charter boat is not affected by the new FES calibration, and so this had nothing to do with that change in trend, and I also looked at it by state, to see what was going on in each of the states. In each of the states, they each saw a huge increase, based on the new calibrated numbers. That increase -- They only really saw that big jump in the second-half of the time series, which is most likely due to the cellular effect. That's all I have for black sea bass, if anyone has any questions.

DR. SEDBERRY: Any questions or comments from the committee on the black sea bass comparison?

DR. BARBIERI: I mean, I don't really have any questions about black sea bass. Again, my comment is more general in nature, and this is something that I wanted to discuss with the committee, and this is why I sent those summary graphs for the committee to take a look at, which has the total number of MRIP angler trips in the private and shore modes for east and west Florida, and it shows what those numbers of trips are for the old MRIP and the new MRIP.

Although we would expect, and this had been predicted by the design and review, and the MRIP team had been discussing this with all of this for quite a while, that we would expect an increase in the number of trips, that this is a trend between two and four-times, on average, that this was happening, but something weird is happening in east Florida that, at this point, we cannot really quite understand.

If you look at those graphs that I sent, and hopefully Mike distributed to everybody on the call, you can see that the east Florida angler trips have increased to a very large degree, high above the angler trips for private recreational angler and rental boats. If you look at the pattern for west Florida, and you can see that there was an increase, of course, and that the increase is now really equal between the beginning and the end of the time series, and there is the cellphone effect and a number of other factors that can explain that increase, but the increases are more comparable, and they generate numbers of trips, of angler trips, that are within what would be expected, given what we have seen for a long time. When you look at the east Florida, that difference jumps much, much higher for the shore mode, which is about seven-times higher, in terms of angler trips, than you would see for the private boat.

When you look at the data comparison, the bottom of page 17, Mike -- By the way, thank you for putting this together. This is really, really helpful to go through this and kind of refresh our memories on a number of these decisions, and so we can see, in the data comparison, trends in discards for black sea bass, and we are seeing an eightfold increase in the shore mode catches.

Your comments here are this is seen, to some extent, in Georgia, but mostly in Florida, and Florida has much more discards of black sea bass from shore than other states do, and then we discuss a baseline shift from the original to the newly-calibrated MRIP data, and so, again, it's hard to understand, at this point, really what's going on. There are folks looking into this, and we are working, try to work, closely with the MRIP folks and the NMFS Office of Science and Technology in trying to look at some of these differences.

We have a working group put together for the Gulf that is looking at the differences between the new MRIP results, the FES-calibrated results, from the general MRIP to the MRIP supplemental surveys that the states have been conducting and that were developed in collaboration with the MRIP folks and their consultants to see if we can treat reef fisheries as its own specific stratum that gets a dedicated survey for both effort and catch.

I can't explain. I cannot say that this is not real at this time, but I can say that, as a scientist, that really makes me scratch my head, considering everything that we have seen in Florida in differences in fishing effort and number of angler trips between the southeast Florida coast and the Gulf coast and that this definitely turns into something that doesn't seem to fit an expected pattern and that we cannot explain at this point, and I am bringing this up particularly for black sea bass, basically because I saw that comment there in the data comparison reports, and that's something that is really unexpected, to have short mode be so large for something like black sea bass.

To me, it reinforces the notion that there are some issues here that cannot be properly accounted for and that are unknown to us and may be influencing the outcome of this stock status determination and catch advice and that we can't really account for. Mike and George, that's it. I just wanted to bring up these concerns and help you see some of the issues that I've been looking at and concerns that I have had regarding some of these results. Thank you.

DR. SEDBERRY: Thank you, Luiz, and, the graphics that you sent out, everybody should be able to download those from the handouts window in the webinar, and they are certainly eye-opening. The differences are obvious and of concern. Any additional questions or comments from the committee regarding the black sea bass comparison? Is there any public comment? Fred Serchuk.

DR. SERCHUK: I have a question about vermilion snapper, if we can go back to that, once we're finished with black sea bass.

DR. SEDBERRY: Let's see if there's any public comment on black sea bass. If not, we can go back to vermilion snapper for Fred's question and then talk about the general uncertainties and the other issues that Marcel and others want to talk about. Go ahead, Fred.

DR. SERCHUK: I am not familiar with the vermilion snapper fishery, but, looking at the figure, and also looking at the table that was provided in September, it's clear to me that this fishery has many more discards than it has landings, and the estimates of discards have always exceeded the landings, often by a considerable amount, in the most recent decade, but what surprised me was, in 2013, the landings -- This was the MRIP data, revised.

In 2013, the landings, for the only time in the decade, were five-times higher than the discards, and I am just wondering whether that anomaly was picked up in the assessment, because that's quite unlike the behavior of the fishery to have higher landings than discards. According to the MRIP data, there was 185,000 fish landed and only 35,000 fish discarded. The previous year, there were 250,000 fish discarded and only 76,000 landed, and that pattern, generally, where discards considerably exceed the landings, happens in almost all the years.

I am just wondering, but is that a flag that the analysts should have seen, or was there something peculiar that happened in 2013 that there were more landings than discards? I know it's a very specific question, but we're talking about anomalous data and how we handle that, and when I see an estimate that doesn't seem to make sense, the behavior of the landings versus discards, it makes me suspect. Perhaps it can't be answered now, but it should be passed along. Thank you.

DR. SEDBERRY: I think Mike had mentioned, when he went through this, that the 2013 had anomalously-low discards.

DR. ERRIGO: I will be honest that I don't know why, for vermilion, that happened. I did not get into it. I'm sorry. I don't know for vermilion.

DR. SERCHUK: Okay. I am not blaming anyone here, but that's -- There's a pattern that happened that's different from what we would expect, and I'm just wondering if that's a sampling issue there or if there is some other reason to explain why the discards are so much lower than the landings, even though the landings typically have been much higher in most years than the 185,000

fish that were landed. They were 467 in 2014, 314, and so on and so forth. Okay. I don't mean to belabor the issue, but it's just unusual to see a fishery where discards are much higher than the landings, but, in this particular case, what drew my attention was, that particular year, the landings were higher than the discards, estimated landings and estimated discards. Thank you.

DR. SEDBERRY: Thank you, Fred. I think now, Mike, we need to have kind of a general discussion of uncertainties and other issues that had been raised, particularly back when we were covering blueline tilefish, and so I will open it up to the committee for discussion and questions.

DR. REICHERT: George, do you want to do that by species?

DR. ERRIGO: That's how I have the report set up, if that helps.

DR. SEDBERRY: Okay. That does help then, yes. If you look at the screen, if you look at Mike's screen, which is displayed now, he's got our action items that we need to complete on this call, and so the first action items deal with blueline tilefish. Is the revised assessment recommended as best scientific information available?

DR. ERRIGO: It's under here that I think that you would discuss uncertainties and what impacts the revised data have on the assessment uncertainties, and then, if you do recommend it for fishing level recommendations, what projections do you need?

DR. SEDBERRY: Thanks, Mike.

DR. BARBIERI: My comments, and I don't know if they're in line with Marcel's or not, but they are really not on a species-by-species basis, and, I mean, I don't mind repeating them for each one of the species or if you would consider that I would provide them now and you assume that I will say the same thing for the other species, but I do find that the revision assessments were very well done. Obviously, the analytical team followed standard assessment methodologies and practices, and I feel that the decisions made by the analytical team were logical and were reasonable, and I considered these assessments informative and helpful.

However, having said that, I personally do not consider them to represent the best scientific information available. My concerns are multifaceted. I feel that, in some situations, there are three to four years of additional data that exist that are theoretically available out there that were not included in these revisions, and I understand why, and I understand that the assessment team was constrained by the conditions they had to operate under for this, and I respect that, but, in terms of being an SSC member and providing a recommendation to the council, in terms of stock status determination and catch advice, I don't feel that this would be appropriate for these revision assessments.

In the case of blueline tilefish, I feel that it's -- We discussed this extensively, and several members brought up a number of very good points about blueline tilefish and why -- There's a lot more to be understood that we don't and cannot account for, and that makes using this revision assessment much more difficult, but for the other species as well, and I think that, in general, my understanding of how the agency itself wanted to handle the incorporation of FES-based recreational fisheries estimates into assessments was primarily through a process that allows full incorporation of all the data available and has enough freedom, similar to what we used to call a benchmark assessment,

where the model is actually being looked at and worked on and adjusted, because all of us know that, as you change one data source going into a stock assessment model, you're going to change a whole lot of things associated with the model outputs and results that are going to be difficult to understand when you handle them pretty much as simply an update-type assessment.

I would say, in terms of data being somewhat stale, so to speak, and not being necessarily representative of the most current conditions, I don't know if the council thought about that when they requested these revisions to be conducted, because everybody thought that the results of FES would come out earlier than they did, and now here we are three or four years of data behind schedule, and so my fear is that stock status determination would not align with the perceptions of industry and the public out there, and they would not represent the most current conditions.

We already suffer with that in some situations, and, in this case, I think we bring it to kind of like an extreme, and I think this would generate more problems for the council than solutions. Data being stale is one, and the other is the issue of really the assessment team and a great, herculean effort here that they did, and I think that what they provided is unbelievably solid, in terms of analysis, but still there are a few things here that concern me, one of which being we know that, in some of these situations, if not all of them, we are dealing with fixed steepness and ability of the model to estimate steepness, and so we are really already handling stock productivity in a limited way, and so, if we think about the fact that we have a fixed natural mortality and fixed steepness, and I see, in some of the outputs, that the model, of course, adjusted R zero, and that addressed some of the productivity issue and scaled up population size to account for some of these landings, but you see that that could only go to a certain extent, to a certain degree, and that the most recent recruitments couldn't be adjusted to the degree that perhaps would be warranted, or better informed by observed calibrated, tuned, by observed recruitments, but that is another concern that I feel.

Then I do think, and I don't state this lightly, but I do feel that there are some issues still to be understood about how implementation of the FES is turning out, and I think that the MRIP team, working with the consultants, did a phenomenal job putting together and trying to groundtruth, benchmark, for three years between the old and the new and that design, obviously, was reviewed by the National Academy's panel and considered a significant improvement and unbiased.

However, discussions that we're having here in the Gulf, since we have the supplementary MRIP surveys being conducted in collaboration with the states, and so, because of those, we have ways to compare, for reef fisheries specifically, what the results are between these surveys that were developed independent with the MRIP staff and their consultants and that are generating very different estimates for reef fisheries between the supplementary surveys and the FES-based general MRIP.

MRIP staff and the NMFS Office of Science and Technology have been very helpful, and they have engaged their full team of consultants, and there is a white paper that is being developed right now that is going to be released sometime this spring, and I guess the government shutdown has slowed things down a bit, and it might be summer by the time that white paper comes out, but there are a number of things that are being looked at, and consultants are evaluating the possibility of non-response bias, and it could be hidden biases that have to do with different components of the fishery having different probabilities of responding to the effort survey that could not be predicted when you review the actual design itself, which is statistically sound.

When I saw the results that came out of comparing the east Florida and west Florida, the number of angler trips, and we have a history and we know the number of saltwater fishing licenses that we sell, and we have the number of intercepts that are conducted and the number of access points, and we have the entire process, the directory of access points that were used for conducting the MRIP survey between the east and west coast, and, I mean, these results are really mindboggling.

To me, they don't say anything definitive yet, but, as a scientist, it makes me question where we are with this and our ability to provide advice to the council that we consider to be scientifically sound, and so, for those reasons, I have concerns that I would feel much more comfortable having this further explored and discussed in more detail before I change the advice that we have provided on stock status determination and catch advice for these species, and I am sorry, Mr. Chairman, that this was long, but I thought I would do it once, and then you will have it for all the four species. Thank you.

DR. SEDBERRY: Thank you, Luiz. I can tell you that I've given a lot of thought to this, particularly in light of different effort surveys in Florida and the Gulf, but I did just want to clarify that your comments and concerns here apply to all the species that we have discussed and the MRIP revision assessments in general and that you feel that the approach is generally good, and you said that the analysis is solid, but that the data being provided is the main issue, and is that kind of a quick summary?

DR. BARBIERI: That is correct. Right, and this is something that -- By the way, if any of us look into the MRIP certification process, the MRIP program, and NMFS Science and Technology has a process for certifying supplemental surveys nationwide, and so there's a whole variety of surveys that are either developed by MRIP with other partners or certified after the fact by the MRIP program to make them eligible for funding, federal funding, and for making them more legitimate for inclusion in the stock assessment process.

That certification process is very explicit about the fact that MRIP only certifies the design, and so there is a statistical design, and, of course, the formulation and the implementation plan for design, but with the understanding that when data comes in, after you implement the survey, there might be issues that were not envisioned by the design itself and cannot be properly accounted for in the design as provided that -- You know, MRIP says, well, that doesn't mean that this data is certified. We are certifying the design, and so, basically, this is what I am saying. I think that there is potential, and let me put it like this. There is potential, and there are things that are happening here that we do not understand, but they seem to indicate some level of bias, and that is being looked at, and hopefully we are going to come out the other end. Is that better, George?

DR. SEDBERRY: Yes, and thank, again, Luiz. I have Marcel next. Go ahead, Marcel.

DR. REICHERT: Thank you, George. One comment that we make, that we may want to add, is that the use of the snowy grouper and the golden tilefish data to adjust landings estimates adds to the already high uncertainty in the assessment, and so that's a comment that I wanted to make.

DR. SEDBERRY: Excuse me, Marcel, but your comment, that comment, is specific to the blueline tilefish?

DR. REICHERT: Yes, and all my comments are specific to blueline tilefish, mostly, although they may come back in some of the other species. I am struggling here a little bit, because, although I do agree with several of Luiz's comments, I think we need to be very careful in documenting those concerns and the recommendations, because we accepted the original assessment, and we knew the uncertainties in that assessment, and some of them are still there, and we based our recommendations on that assessment.

Luiz, unless I misunderstand you, are you recommending that the committee stays with the original recommendations for fishing level, and, if so, I am struggling with the fact whether they then are more appropriate than any based on this new update, and perhaps Erik has a comment to that too, and so I don't have a solution, but I am struggling a little bit with our previous recommendations, because a lot of the issues that we discussed were present, and we've had other assessments also, whereby, by the time we formulated our recommendations, we knew that there were additional years of data available, and I know that, in some instances, the number of years that we have now new data available for may be a little longer than usual, but that is not a very uncommon circumstance, due to the length of the process, and so I would like to hear from some of the other members and see what they think about, in particular, what our recommendations are going to be to the council. Thank you.

DR. SEDBERRY: Thank you, Marcel.

DR. SERCHUK: First off, I think it's important that we not include generic issues under specific stock concerns, and so that's the first question, and so some of the bullet points here are generic ones, and some are perfect for blueline. The generic ones need to be put in a section by itself.

DR. SEDBERRY: Yes, I would agree with that, and this will be the first draft of this report, and we will have an opportunity to look at that and rearrange things.

DR. SERCHUK: Okay. Second of all, Luiz's comment that the revised assessments didn't incorporate the most recent data, I think that's unfair. The revised assessments were simply to go back to the most recent assessment, whenever that was done, and, in the case of blueline, it was through 2015, as I understand it. It was to simply update those assessments for the MRIP revisions, and so of course they're not -- If the terminal year in the benchmark assessment for blueline was 2015, you can't castigate the people that applied the MRIP data series revisions to any beyond 2015, and that wasn't how the game worked. The game worked that we have the MRIP data, and we should just apply that to the years that we used in the last assessment.

That being said, I'm a little bit surprised that Luiz has now talked about a concern with, for example, the inability of the model to estimate steepness given a fixed M. If that applies to blueline, and, again, my understanding of the blueline, for the area south of Cape Hatteras, was an age production model, and is that an additional reservation about the benchmark assessment, or does that refer to a different stock assessment? I am not really quite sure, and my point is here that the reader of our document now will be confused about it, because, I mean, we're talking about a benchmark assessment that was done in 2015 for blueline.

I want to be very careful here that there shouldn't be any reservations about the model, other than to say, particularly if we have provided advice based on the model now that we didn't provide

then, and my other comment is relating to some of the other issues about not understanding implementation of the FES and potentials for bias, although I agree that those issues may exist.

It's important for us to provide guidance to those scheduled stock assessments that are going to be using the revised MRIP data and how those should be handled, because, quite frankly, I am willing to indicate that they should be considered when doing either an update assessment or a new benchmark assessment, but just saying that we're still understanding what the issues are doesn't help the analysts, because there are stock assessments that have been scheduled through SEDAR that will now be using the revised MRIP data, and they all should be from now on, and I don't know how they're going to handle issues about -- That there are still unresolved issues within FES, particularly other than pointing that out that that's a caveat.

I am trying to be helpful here, and I don't disagree with Luiz's comment that there may be still issues, but I am not really quite sure how they should be handled in the next stock assessment, and, without giving that direction, just pointing out that there are issues, without being very specific about how they might impact the assessment, I think it may be creating a little bit of an issue that may not be able to be handled, and so, again, to summarize, I think some issues need to be put in generic, and I can't see how the revised assessments can really change our status of what we said was best scientific information available, unless something quite radical is different in the revised assessments, and, as I understand, the revised assessments, all they did was add the MRIP data. Thank you.

DR. SEDBERRY: Thank you, Fred.

DR. BARBIERI: Fred, I hope I didn't sound like I was trying to castigate anybody for anything, because that wasn't the intent. I don't blame the assessment team for doing what they did in any way, and, as a matter of a fact, I think that they have done a very thorough, complete job here with these assessments. All I am saying is that constraints that were put before them created issues with these assessments, and I feel that my role as an SSC member is to discuss those issues with other committee members and to exercise judgment on how we advise the council to proceed in the use of this information for management purposes.

I understand that they were constrained, and I think they did a great job, but the reality is that my role, as defined in the National Standard Guidelines, is to play this role now and advise the council on whether I feel this represents something that they can use for management decisions or not, and so that's one comment, and so I hope you didn't feel like I was trying to castigate or be unfair, because, I mean, this wasn't a matter of fairness. The assessment team just did what they were supposed to do, one.

Two, the comment about steepness is really just to highlight, and, Fred, you know how that works from an analytical perspective and that steepness is a parameter that is associated with stock productivity. Now, there are other parameters in that model that will account for that as well, but, within an assessment model, the moment that you fix natural mortality and you fix steepness, you are really constraining the model's ability to adjust the productivity of the stock, and, in this case, I thought that this was a relevant point.

Now, again, not to comment on the previous assessments, which we reviewed, and we understand the realities of data that goes into these assessments, and we accepted those uncertainties, and, by

the way, we have explicit ways within our ABC control rule to account for those things, fixed versus non-fixed steepness, and so I am fine with that, but, here, what I am saying is that we added one additional -- A new data stream there that changes the scale of that data stream, significantly in some cases, depending on the species.

Obviously, it's difficult for the model to operate within the constraints that we are giving it with this new data. To me, we use the same basic model, right, but we're now changing the scale of that one data series by quite a bit and also changing -- If you go look, you're going to see that the PSEs that are coming out of the adjustments are actually much higher than they were before, right, and so, now, data weighting comes into play as well, and so those are the concerns that, to me, since we have made stock status determinations based on the previous assessments, and we have projections in place that allow the fishery to stay open and operational under the information of the previous assessment, I don't think that this here is something that I can consider as properly accounting for all the additional uncertainty, that we can account for that. I don't understand it, how that is impacting, really, all of this in a way that makes sense.

Then the last comment about the FES data -- Again, I am not trying to be unhelpful and make a blanket statement about the FES data, and I just know that the agency has professional statisticians looking into those right now, and it's taking this issue very seriously, and so I have given presentations to the Gulf Council to that effect, and they have asked for where we are in that process, and I explain that the agency is looking into this, and there are professional statisticians and a team of consultants that is looking into this, and they are going to try and bring some additional information, and so I hope that that additional information could help us understand some of what is going on in the South Atlantic as well, and, if there are hidden biases, or potential biases, that have been identified for FES, as it is implemented in the Gulf, that would help us understand why some of this basically is sort of anomalous.

I mean, if you look at the east Florida number of trips data, it's really mind-boggling, and so I don't know what to tell them, in terms of how to fix it, but I know that they have, on retainer, a group of professional statisticians that that's what they do for a living, and they are actively looking into this right now, and so my expectation is that they are going to bring some specific recommendations going into the future. I hope that helps, Fred, clarify my points.

DR. SEDBERRY: Thank you, Luiz.

DR. SCHUELLER: I have a series of comments based on this discussion. I guess I am standing in the boat of agreeing with thoughts expressed by both Fred and Marcel, and I guess I'm scratching my head as I look at these bullets up here, too. The first one of did not incorporate all available data, I don't know what that means, other than does it mean the same thing as the second bullet?

Then there are particular difficulties with blueline tilefish, and we already know that, based on the assessments, and I don't know that this adds any further particular difficulties, and I don't understand what most recent R couldn't be adjusted to the amount warranted by observed data -- I assume that means that there is some sort of scale changing in the assessment, which is not that surprising. Basically, we know that a segment of the population wasn't really being sampled very well, given prior methods, which is why they were changing.

I mean, my expectation is that, yes, effort increases, and catch should increase, and that's going to have a scale change in the assessment, and so, to me, I don't see anything in here that is surprising. I don't understand why this would not be best scientific information available. It's basically nothing different from the last assessment except the new time series of MRIP, or FES, as it's now being called, but those issues with FES were pointed out, a lot of them, with MRIP, and so they're not new issues, especially some of these like large concerning values, which I don't know.

Like, for example, the one value in 2013, or something like that, in blueline tilefish, the two values next to it, 2012 and 2014, were also high, and so perhaps that was high. I don't know, but there's nothing here, to me, that supports the best scientific information available -- That this is not that. We need to talk about some of these bullets more, and I would like to hear some other opinions, and maybe I am just -- Anyway, I will stop there.

DR. SEDBERRY: Thank you, Amy.

DR. REICHERT: Amy brought up some of the comments that I was going to make. I think one of the other things is -- A couple of comments that I was going to make were the same that Amy brought up, and I think I need to look back at the notes from the previous meeting, but I think -- Didn't we agree that the MRIP data are -- That the new estimates were considered best available scientific information or better scientific information than the old estimates? Again, if we are considering this not to be the best scientific information available, I think we need to be very specific in documenting why that is, and so I think that's probably at the core of what I wanted to say, and I am curious to hear from some of the other SSC members.

DR. SEDBERRY: Thank you, Marcel. I mean, I can just throw in, from our October meeting, that our conclusion was that we concurred with NMFS and peer review that the new MRIP estimates are the best scientific information available, and so, when we reviewed the data and the assessment revisions, we agreed at that time, in October, that it was the best scientific information available.

DR. REICHERT: Thank you, and that was my recollection, and so I think that's why we need to be very careful in documenting, if we collectively feel that this is not the best scientific information, and I don't agree with that. I think it is the best scientific information available, and, if we don't agree with that, we need to document that very carefully.

DR. SEDBERRY: At that time, what we were considering was the same assessments with just the new MRIP calibration data applied. That was the only change that was made, and we, again, agreed with NMFS and peer reviewers that it was the best scientific information available.

DR. NESSLAGE: The discussion of best scientific information available always gives me heartburn, because we tie ourselves in, and we see the new MRIP approach, and in general, we say, yes, it's way better than before. When we get to species-by-species decisions that need to be made at the data workshops and by the analysts in the assessments, I get really worried when we tie ourselves into this argument that, well, we said it was BSIA two meetings ago, but now we see something different, or we look more closely, or we thought about it more deeply, and we realize that this doesn't pass the red-face test.

I guess I disagree with Amy that -- I'm still worried about that 2013 point for blueline. It's three-times larger than any of the surrounding points, and does that really make sense in anybody's mind? If it does, that's fine, and I'm happy to be quiet about it, but I just don't see that, in a blueline tilefish fishery, as being reasonable, and it's a very minute -- It's a bit of minutia, but, in general, yes, I think the new MRIP is better, yes, and it's best available, but, when you get to the minutia of an assessment, with a data point like that -- Again, if you look on page 51, it seems to be really influencing the assessment results and changing our idea about what is going on with the stock. I hate tying ourselves into this, and so, I don't know, and I guess I'm wavering between -- I don't know. I'm not sure that I'm fully onboard with the best available, but I will stop there.

DR. SEDBERRY: Thank you, Genny.

MS. LANGE: I am having the same fluctuating position that Genny just spoke of. I agree that the methodology -- I agree that the assessment scientists did exactly what they were supposed to do, which was update just changing to the new MRIP data, and I agree that we all looked at the methodology for the MRIP estimates and agreed that it was the best scientific information available, but that was before it was actually used and an individual data stream was more carefully examined as it was incorporated into the assessment.

The same issues that Genny just brought up, and, for instance, the blueline 2013, it raises questions, and, overall, the assessment is still the best available, but I am concerned about the impacts of the revised data, where it wasn't until it was actually used that you could start seeing -- That you could see the implications, and that's where the conflict comes in, because you don't want to not use something after you see the results, but, by incorporating it into the assessment, we were able to get a better, closer look at the actual impacts of those individual estimates.

I am sort of talking in circles here, but I am conflicted with whether or not more work needs to be done to adjust or smooth or whatever the new MRIP data, and, to that point, this data didn't go through a data workshop, the revised estimates didn't, as was stated by Mike early on. That 2007 number, quite a bit of discussion went into how to smooth that, and I think, had this data had the benefit of a data workshop review, there might have been some adjustments made that would have made it not so -- Well, I'm not sure exactly what the word is, but, anyway, again, I am a little concerned. Thank you.

DR. SEDBERRY: Thank you, Anne. I don't see anybody else with their hand raised, and so now where are we? We started out saying that it's not the best scientific information available, and now we're kind of -- Which certainly disagrees with what we completed in October, and now I'm not sure where we are. I think that we can say that the revised data have probably increased uncertainty or have different levels, or different areas, of uncertainty, and they certainly have made the uncertainty more obvious, I guess.

DR. SCHUELLER: I have a question for the group, I guess. I am not necessarily in one camp or the other, but I don't necessarily think that the bullets we have up here put us strategically in one or the other, and that's why I spoke up, and so my question to the group is -- It sounds like Luiz is suggesting this is not the best scientific information available for all four species that we're discussing. Is that how everyone is feeling, or are some folks particularly concerned about blueline tilefish and not the other species? I am trying to get a sense of where the group stands on that with respect to the different species.

DR. SEDBERRY: Those are good points, and my feeling was, and this is why I asked Luiz to clarify, is that his feeling was that -- His conclusions about best scientific information available were in general with the assessment data being used, MRIP data revisions being used. Now, of course, he's here and can actually say what he was talking about, and so go ahead, Luiz.

DR. BARBIERI: Thank you, George. Amy, yes, that's what I meant, but, also, thinking about the fact that assessments -- I mean, these species are going to be assessed again by the Science Center and that these assessments coming up are potentially more complete and will not have the constraints, and that is part of my point, that were put upon the analytical team for these assessments, these revisions, to just basically update that one data series and be done with it.

If you go back and you look at the presentation that John Foster and Kelly Denit gave to the South Atlantic SSC and the South Atlantic Council, and that's the presentation that is going around to all the councils, it's that the agency has a schedule and a plan for incorporating these new data as the benchmark-type assessments are developed.

I mean, I can tell you, unequivocally, that that is how we are handling it in the Gulf. The Gulf SSC did not want to proceed with these MRIP revisions, because we knew that the analytical team would be constrained on how much they could adjust the models and how much they could change parameters and adjust things to account for a source of data that, in some situations, is significantly changing the scale of landings, or catch, for that one fleet, relative to the other fleets that are already in the model, and so that's my point.

I mean, it doesn't reflect the quality of the previous assessments, which to me stand on their own, and their catch level recommendations and stock status determinations stand, and my point is that, given more freedom to update this to revise the data, basically, add this data, with more freedom to work on the model, we might end up with a better way to account for uncertainties and be able to provide more meaningful catch advice.

DR. SEDBERRY: Luiz, I think you're saying that, because of the constraints that were put on the analytical team in regards to the revised assessment, that they are not the best scientific information available for these assessments on these species, but that, going forward, when the MRIP data goes through the regular SEDAR process, with a data workshop and a data review and all that goes into SEDAR, that -- Well, we can't say that it will be the best scientific information available, but it's an improvement as we go forward, but, for what we have done now, given the constraints that the analytical team had, this is not the best scientific information available to look at stock status for these species.

DR. BARBIERI: George, I did not think that we are being asked here -- That this SSC is being asked to review either the FES survey or the MRIP program or the MRIP data. Our charge here is to review the stock assessments, the revision stock assessments, and comment on their appropriateness for stock status determination, catch advice, and comment on uncertainties, whether we can account for them or not properly.

Going into the future, there will be a different process for looking -- The process that we have in place right now is SEDAR for the development of stock assessments in the southeast U.S., and so

my comment about best scientific information available is that I don't believe that the results of these assessments can be considered that for stock status determination and catch advice.

DR. SEDBERRY: Okay. Thank you. That last sentence was very concise. Thank you.

DR. REICHERT: As I said earlier, I'm still struggling with this, and so I have a question for Luiz. Are you then saying that our previous, our standing, recommendations are more appropriate than a recommendation based on this revision? You mentioned appropriateness. Because that's what the committee's recommendation then will be, to fall back to our previous recommendations, and that's where I am still struggling with, whether that would then be more appropriate than this assessment, and so maybe you can comment on that. Thanks, Luiz.

DR. BARBIERI: To that point, Marcel, yes. The issue here is that -- I think Genny put this very well. It's whether our decision here on this can pass the red-face test. Can we, as scientists, look at the amount of uncertainty that is being accounted for, or not accounted for, in these assessments and know the full degree of impact on these assessments and be able to adjust our P* accordingly and provide ABCs that we believe are improvements to the ones that stand? I mean, this is the way I am looking at this. Are these better?

Now, of course, every stock assessment is difficult, and every stock assessment faces a number of data issues in our region and so we know that a lot of these assessments are imperfect, by nature, and we live with that, right, but we try to account, to the extent possible, for those uncertainties in our ABC control rule and then provide, adjust, our catch level recommendation to account for that uncertainty, and, here, I just feel that there are a number of unknowns that I cannot, as a scientist, look people in the face and say now this is actually an improvement from the previous one and so I'm recommending that we change a catch level recommendation and a set of projections that stand already, are on the books and are approved by the Secretary of Commerce for implementation by the council.

DR. REICHERT: So you feel there are additional uncertainties, based on the new estimates, in addition to the uncertainties that we have discussed in the previous assessment, is what you are saying.

DR. BARBIERI: Yes, absolutely.

DR. REICHERT: Okay. Thanks.

DR. SEDBERRY: Thank you, Luiz and Marcel.

DR. NESSLAGE: To piggyback on that a little, and maybe to ask a question of Erik and the analysts, and to answer Amy's question, I am, obviously, concerned about blueline, and less concerned about the other species, perhaps, but, to the point about uncertainty not being accounted for, I know, earlier, Rob had asked Erik how uncertainty in the MRIP estimates were being incorporated, and then I think, if I understood him correctly, he mentioned that that was going into the bootstrap estimates, but, when I look at the slides starting, for instance, for tilefish on page 54, going through to the F estimates, they are on the same scale.

The blue intervals are on the same scale for both biomass at F as they were before, and so I guess, to Luiz's point, and correct me if I'm wrong, Luiz, we don't seem to be capturing this possibly increased uncertainty with the new shoreline estimates that are multiple times larger and some of these weird discard changes we're seeing that don't seem to make sense, like Fred pointed out, and I just guess this is concerning to me, that we're not possibly taking it into account as much as we should be with these revised assessments.

Yes, I know that the analysts' hands were tied, and so I'm not blaming them in any way, shape, or form, but I guess -- I don't know if that's something that we can make a recommendation moving forward, and how would we deal with that? I know, in the SEDAR process, in the South Atlantic Beaufort model approach, we've been criticized in the past for incorporating too much uncertainty, and so I would love to hear from Erik and the crowd down there how you might -- I don't know, but any reaction to those thoughts.

DR. WILLIAMS: Thanks, Genny, and I will chime in on that topic and avoid the rest of the discussion. The thing with blueline to keep in mind is that the recreational component for blueline is small relative to the total landings as it is, and that particular 2013 data point actually has one of the lower adjustments compared to the neighboring years, and so, all that taken into account, I mean, how that then impacts the total uncertainty from our model, yes, it probably didn't affect it very much.

The other thing to keep in mind is that it then increases a little. I mean, the uncertainty in that model to begin with is pretty high, I think, if you look at the ASPIC output, and so, I mean, I don't know what else to say. You're correct that we've gotten a lot of criticism lately, in the last couple of reviews of our assessments, that we're actually -- They are worried about us overestimating uncertainty in our assessment models, which my own personal opinion is that seems ridiculous, but that's the criticism we've gotten from review panels.

DR. SEDBERRY: Thank you, Erik and Genny.

DR. SERCHUK: One of the things that we know the revised MRIP data did is a -- First of all, they corrected the entire time series, because it was found that some of the sampling was biased and incomplete, and so, to that extent, the addition of the MRIP data was an improvement. It may have created additional uncertainties relative to the models that had been used in the past without those data, but clearly the examination and recalibration of the MRIP entire series meant that there was an underestimation of effort, certainly, and there were problems with the recall, because previously it was a system that didn't take into account transfer, for example, of people using cellphones rather than landlines, and recall periods were different now with a mail survey versus a telephone survey.

If we're going to point out some of the shortcomings, we ought to also point out some of the positive things, that the inclusion of the MRIP data is a positive development. Having said that, I am concerned, and Erik foreshadowed this, that the inclusion of the MRIP data will have an effect on the assessment, in many cases, and it's a scaling factor, but it will also have an impact on those assessments in which the ABC is divided between sectors, and maybe, in this case, it's not going to make a difference, in blueline, because the recreational component is a small fraction of the overall catches, but, in other cases, it may not be.

It gets back to, okay, if we don't accept the current assessment as being best available science, how does that affect the recommendations and projections that we've already done before the revisions were conducted? We know that those projections did not include the revised MRIP data, and, so, therefore, they don't include all the presumed catches, whether they were discards or landings, and certainly, going back to those and saying it's not the best available science, and then using the previous projections, clearly it's not going to be satisfactory, because they don't include catches that we know now were taken from the stock, whether they be discards or recreational landings.

It's a little bit of a Pandora's box now that we've opened. If we don't particularly think that the incorporation of the revised MRIP data work well with a model that was used in the last benchmark, and that the last benchmark was used for projections, but the projections don't include the best scientific catch data, we're between a rock and a hard place, let alone getting into a situation where the inclusion of the revised MRIP data mean that a larger fraction of the total catches are taken by the recreational sector than previously calculated, based on the split for the ABC between sectors, there are some problems that we're going to have to address.

I don't have the answer, but, when we basically say it's not the best scientific information available, and we revert back to a previous assessment, which was incomplete without having the MRIP data, we're either going to have to modify those projections or somehow take into account that they don't include the revised MRIP data and therefore don't include all the catches, but it has a knock-on effect, and how we handle that I think requires a webinar by itself, or we're going to have to think about that, because maintaining the status quo on those projections is not -- I don't think it's going to be entirely satisfactory, and I think it will draw some criticism as well from constituency groups. Thank you.

DR. SEDBERRY: Thank you.

DR. SHAROV: It was a good discussion up to this point. I understand sort of all the subtleties in the arguments put forward so far, but I am just still trying to formulate for myself what we're trying to say. It appears that, in general, folks agree that -- I guess we could say that there is an additional uncertainty with the new MRIP data that the group is struggling with and that you believe, or we believe, that this additional uncertainty is not fully quantified by the model formulation, as it has been formulated, and I think that's what the sentiment is.

In general, in terms of the precision, that's one thing. As I said, it's just a larger level of uncertainty and whether we're going to quantify it versus the bias in -- I think I sense that the argument is that there is potentially bias, because the estimates are high and, whether objectively or subjectively, some of us feel that the assessments are unrealistic or too high, and, if that's the case, then we should lay out specific reasons. If the group believes that this is not the best scientific information, that the new MRIP numbers affect the assessment, to the degree that we do not consider the results reliable enough for management recommendations, we have to say something as to why we don't believe that this is the best scientific information.

I guess I am trying to pry out of you folks if you think that there is a bias and that, specifically, higher numbers are the reason why the group has difficulty to accept this, and that we possibly think that this would have to be resolved either through additional data collection or in terms of the model testing, additional model testing, but there has to be some recommendation from this

group of how to handle it, because, otherwise -- I guess, all that being said, if we agree that we're not confident that the current information is sufficiently reliable, then we're left with the old methodology, where everybody agrees that, in general, the methodology is an improvement, but its specific application in the stream of data that was obtained for this species is suspect, and we have to formulate why is it suspect. Thank you. That's what I wanted to say at this point.

DR. SEDBERRY: Thank you, Alexei. I agree. You know, no matter what we conclude, we're going to have to say why and whether the biases are problems that cause us to come to that conclusion, and particularly if our conclusion differs from what we may have concluded before.

DR. BARBIERI: Well, just to Fred's question about how do we deal with this, the MRIP implementation team actually thought about this and deliberately developed a calibration process that goes both ways, and so it provides old to new and new to old, specifically because -- If you guys, later today, go back to that presentation from I believe it was last October, or last year, but John Foster and Kelly Denit gave a presentation that they've been going around to all the councils and talking about implementation of the FES and how this side-by-side was conducted, and then it provides some general agency guidelines for how they are going to handle catch advice until these more complete benchmark-like assessments are being conducted that can properly account for the new data.

Again, when I'm saying best scientific information available, I am saying in terms of what our charge here is, is for these assessments, and I think I've gone on and on and on about the reasons why I feel that way and why having more complete total assessments through the SEDAR process, like we have always done, would bring us better results than what we have here.

DR. SEDBERRY: Thank you, Luiz.

DR. SERCHUK: Pardon me, Chairman, but I am not really quite understanding what Luiz's comment pertains to, and I'm not sure, from our point of view in providing scientific advice, what it implies, and so, per you, Chairman, could Luiz clarify, in terms of what he meant pertaining to the blueline assessment, because I'm a little bit confused. Thank you.

DR. BARBIERI: Fred, I wasn't speaking specifically about the blueline assessment. I mean, and then I will shut up, but I'm telling you that this is -- I am trying to be consistent with a lot of the things that we have been seeing and discussing with the MRIP team and the whole process of implementation of FES-based recreational catch estimates into stock assessments and the fact that we discussed -- The Gulf SSC discussed this, and we decided to not conduct these revision assessments and to have normal assessment processes put in place through SEDAR, like we always have, and that vetting of the data and discussion of anomalies and adjustment of the model could be done in a much more thorough way.

I understand that, if there is a need for catch advice for this species, I could understand us having to go through this accelerated process, but I just think that we have standing catch advice and projections for this species, and so I don't understand why we are doing this for these particular four species and not for everything else.

Then, given all the issues that are likely to come up during a stock assessment, why not have a normal stock assessment process, where all the data can be looked at more carefully and the

analysts have more freedom to actually work on the model and adjust things the way that they feel is best? Is that clearer, Fred?

DR. SERCHUK: It's clear to me, and, in fact, it was one of the reasons that I, some time ago, suggested that, if there are going to be benchmarks or SEDAR assessments done incorporating the revised MRIP data, that it be a group grope, that it just not be done, a SEDAR, by just having one stock, but have a number of stocks in which the recreational data are looked at, because they are going to impact assessments differently, and perhaps it could be useful, rather than on a stock-by-stock basis, to do two or three stocks at one time in the SEDAR process, using the updated MRIP data, and that there might be issues raised that would be pertain to all stocks in which the revised MRIP data were being used, and so I don't disagree with that.

In fact, it was one of the reasons why I suggested that, once the calibration was done and the intercept peer reviews were done, that there needed to be a significant amount of work done in terms of the following benchmark assessments, but we still have a system in which we're doing stock-by-stock, and we still have a system in which the benchmarks are planned many years out, and so we need to, I think, realize that assessments done where the terminal year is 2015, and now we're in 2019, and the previous advice we gave was only through 2020, and even the timeframe for using assessments in which they didn't have the revised MRIP data, and therefore a significant component of catch in those assessments where the recreational data comprise a significant amount of the catch, that projection advice is really quite deficient, and so I think, as a committee, we're going to need to think about that a little bit more, because the estimates are out there.

From the MRIP point of view, they are the best available data for the recreational fisheries, and, if I understand your concern, they are not going to be used until we have a benchmark, and my feeling is, well, there is sizeable datasets out there that we know are not complete and that we're just going to accept until we have a benchmark, and that's going to create some problems, as far as I'm concerned.

I don't have the answer, but we need to explain that quite fully, because we're not using -- We will not be using a significant amount of the new data if we don't incorporate those in revised assessments or updated assessments. What you're suggesting is they have to wait for benchmarks or assessments on which the model can change. Thank you.

DR. SEDBERRY: Thank you, Fred and Luiz. It seems to me that we're beginning to conclude or come to some consensus that the existing assessments and stock status, which we have previously said are best scientific information available, are better compared to these revised assessments that have additional uncertainty and have been done outside of the normal SEDAR process.

DR. CROSSON: I agree with how you just put it, George, but I guess my question is more for council staff. When was the last time the council weighed-in on this issue about their management intentions for potentially using these data revisions, and, also, I guess, are they going to be discussing this next week when they meet? I think it's next week that they're meeting in Georgia.

DR. ERRIGO: Yes, they are meeting next week, yes, and they know that these updated ABCs are on their way. Whether they come from these revision assessments or not is really irrelevant, because they are coming, and so the council is actually going to start discussing allocations at this upcoming council meeting. They are going to start the discussion of allocations, because we can't

implement these ABCs, any ABCs from the new FES calibrated MRIP data, until allocations can be adjusted, because, if there is a significant increase, or a significant change in the recreational landings, that nullifies the old allocation formula, and so allocations need to be adjusted.

DR. CROSSON: I understand that part. I guess this is a question for -- Is the Regional Office going to be implementing management measures using the new FES numbers anytime soon? Is that switch about to happen? I understand the issue about allocations, and so my question is --

DR. ERRIGO: I see. Do you mean like the AMs and things like that?

DR. CROSSON: Yes, absolutely.

DR. ERRIGO: Only new FES numbers are coming in now, but they have to be back-calculated to the old numbers in order to match up to current ACLs, and so that is what is happening now. Everything is being back-calibrated to old MRIP numbers in order to make any kind of -- For closures or to trigger AMs and things like that, and so that's what is happening, until new ABCs and ACLs can be implemented, and then we can just match up to the data that is currently coming in through MRIP.

MR. WAUGH: I spoke with Jessica, and her intent is to have some discussion about you all's deliberations here today during our council meeting next week, with the intent to provide any guidance that they may feel is appropriate for when the SSC meets to discuss this further at your April meeting.

DR. SEDBERRY: Gregg, just to clarify, at the council meeting next week, you are going to come up with -- Jessica wants to come up with some -- After reviewing what we submit from this webinar, they will come up with some specific suggestions for our April meeting?

MR. WAUGH: I wouldn't want to commit her to any specific suggestions, but they are going to discuss it, and the intent was that there are no ABC recommendations coming out of this meeting today, and so she would want to have some discussion about informing you all's deliberations when you are talking about ABCs at the April meeting.

DR. SEDBERRY: Okay. Got it. Thanks.

MR. WAUGH: Thank you.

DR. CROSSON: Again, if we make a recommendation, which my understanding of the consensus that we're sort of gravitating towards is that we don't believe that it would be prudent to incorporate these two numbers outside of the normal SEDAR process, because of all the different uncertainties and the potential for blowing up numbers into much larger landings than we feel comfortable with, is that something that I guess -- Can we reasonably deliver it to the council and say bring these numbers into the SEDAR process as it comes along? I just want to make sure, if we do that -- I think that's the recommendation I would favor, as long as there is no implementation on the Regional Office that's going to change the accountability measures and how those are implemented. I mean, that's, I guess, where I think the group would like to go, but I could be wrong.

DR. ERRIGO: None of that changes until the ABC changes, which you guys do, and so, if you don't recommend a new ABC, all of the old ABCs will stay in place. Therefore, everything that the Regional Office and the Science Center does will be based on the old MRIP numbers, and so they will all be back-calibrated to the old MRIP numbers, and so none of that will change. It will have to stay to whatever is in place now. Unless I am incorrect, and someone would like to jump in and correct me, that is my understanding of how the process will move forward, because, unless you make a new ABC recommendation, there is no way to change -- The ABC will just stay. Whatever ABC is in place will stay.

DR. SEDBERRY: Yes, Mike, that's my understanding, too. I would say, at this point, do we want to move onto the next species, but we really have kind of gotten off of the way we had originally outlined discussing this. I think most of the points that have been made so far apply to all of the revised assessments.

DR. WILLIAMS: It would help, I think, when you put bullets in there like the revision is unable to account for all of the additional uncertainty added, that you be very specific about what uncertainty you're discussing there, and, when you say, "in addition", in addition to what. Just be very explicit about exactly what type of uncertainty you guys are referencing there. The other thing I caution is that be very specific also about what recommendations you're making to SEDAR.

I have heard reference to the new FES data needing to go through like a benchmark-type process. Be very clear about that, because, right now, we're going to be moving into a 2020 -- Benchmarks won't exist anymore, and we're going into an operational and research track only sort of mode of conducting assessments through SEDAR, and so that all -- It's fine, and you guys are making good comments, but just be very explicit, so that I think the managers and even the Center can sort of evaluate what you guys are saying here and how that could impact the way we move forward with future assessments.

DR. SEDBERRY: Thanks, Erik. Good points. Mike, do we need to make a recommendation here on each of these revised assessments?

DR. ERRIGO: If you are going to make the same recommendation for all four, then we can simply cut-and-paste, for the most part, as long as the issues are exactly the same. However, if there is additional problems or uncertainties with other assessments that are unique to those, you should talk about those.

DR. SEDBERRY: Okay. I see, and that makes sense, and I think maybe, at this point, we might scroll down to the next assessment and see if there are any comments or questions or uncertainties or recommendations that are specific to each of those assessments.

DR. ERRIGO: I do have one question. You guys were talking about the new FES data being incorporated in a benchmark setting. However, if we're at the point where we are no longer conducting benchmarks, do you think that they should only be incorporated in a research track, or does the operational assessment cover that? Research tracks are long, and they are not -- They don't happen terribly often, and they take many years to get anything out of.

DR. WILLIAMS: Mike, I don't know if it has to be that black-and-white, like research track or operational, because I think the operational allows for some modified terms of reference, and so,

really, that's why it gets to that question I had about characterizing the uncertainty that the SSC is really concerned about, is we can then draw up specific TORs that would go into our operational assessments that would basically recommend that the analysts look into these specific uncertainty issues that you guys seem to be concerned about.

DR. ERRIGO: Okay. That sounds good. Thanks, Erik.

DR. SCHUELLER: I was just going to add, on top of this, this whole MRIP process already went through a review, right?

DR. SEDBERRY: Right.

DR. SCHUELLER: So, in my mind, it's already been through a review, and I guess I'm falling in line with it could go through operational assessments with specific TORs if there were specific concerns for individual species, and that's my take on it, too.

DR. SERCHUK: George, the concern that we've just raised here on blueline relates back to the appropriateness of the existing model to deal with the additional FES data and the -- What Luiz had brought up was that the model -- The existing model has some problems dealing with the new data.

Operational assessments typically do not change model structure. Nothing says that they cannot, but, typically, based on the experience in the Northeast, which has had experience with both research track assessments and benchmarks and operational assessments, operational assessments generally do not change models. That doesn't mean they couldn't, but the fact is the level of review that's required when you change models or address uncertainties requires a level of peer review that's different from the level of peer review that normally is associated with an operational assessment.

In the Southeast, we can develop operational models however we feel, but what I am suggesting is, when you talk about models and changing the type of model or the use of the model, typically that level of review is pretty high, because you expect that whatever model is finally selected in that process will be used for a number of years forward, either in terms of revisions or updates or, as we're now calling them, operational assessments, and so I think we better be very careful in terms of what we allow in an operational assessment, particularly with regard to new data streams and to selection of the models, and that we ensure ourselves that whatever process we select is going to be one that can be implemented for a number of years after that without question. Thank you.

DR. SEDBERRY: Thank you, Fred. Marcel, did you have something?

DR. REICHERT: My points have been made, in terms of addressing those issues in the terms of reference, and so I will take my hand down.

DR. SEDBERRY: I think, in our October meeting, we made some specific recommendations about including MRIP terms of reference in the SEDAR process, and I would have to go back into the notes and see what those were, but some of them included comparisons of new MRIP versus old MRIP, and there are some other recommendations regarding terms of reference for SEDAR

that we have already made. Before we move on to just look at the other assessments, to see if there's any specific recommendations regarding them, is there anything we need to finish up on the blueline tilefish?

DR. NESSLAGE: I am just looking at the wording here for the -- You're talking about the bullet with "due to recreational catches"?

DR. SEDBERRY: Yes, and that's specific to blueline.

DR. NESSLAGE: While I agree with -- It's hard to say, because I haven't played with the model a lot, but, while I agree with Erik that the recreational component is a small component of the blueline assessment, or the landings in general, in that year it wasn't, and so I'm still having a hard time accepting that conclusion without looking at, for instance, an alternate run where it was more like the nearby years, and so I guess maybe that's a little too specific of a comment to make, that I'm willing to make, but I don't know how others feel. Sorry, Erik.

DR. SEDBERRY: Does anybody have any comments on that, to that point?

DR. DUMAS: I've got a comment on that, perhaps. I see that there are sort of two issues that we're talking about. One is sort of the blueline tilefish issue, and the other is sort of the east Florida versus west Florida angler trips and the differences there. I see those as possibly two different issues, but both important.

On the blueline tilefish, with regard to the question of best available science, it could be that the MRIP model is the best available science, and it could be that the data collection sampling model is the best available science, but it could be that the particular sample that was obtained was an unusual sample. Statistically, you're going to get -- If you're statistically sampling, you're going to get an unusual occurrence every so often, and so it could be that one issue -- It could be that we -- If we sample a particular trip where they caught an unusual number of blueline tilefish, and if there is a low frequency of data points for that species or that location, and that's an outlier data point, then it gets blown up to be something much larger, and so that -- It could be that, for example, the 2013 spike is due to outlier data that we got not because the sampling methodology was flawed, or not because the MRIP model in general is flawed, but just because we got a bad draw in the sample, or an outlier draw.

For situations involving sort of low-frequency fisheries, we might need to have some method to sort of detect or decide on when something is an outlier and say that -- In that case, we might have the best available science and the best available sampling methodology, but the results that we've got are not good, or reliable, just because they happen to be an outlier and we think not representative, and so that might be an issue with blueline and similar fisheries, but I don't think that sort of argument or explanation addresses what's going on with Florida and the east Florida angler trips versus west Florida angler trips, because those differences are not just about an unusual spike or occurrence here or there.

Those are persistent, large differences over the whole time series of thirty years, and so I think that's a different issue, but I wanted to bring up the sort of outlier data point. You could have the best available science method and the best available science sampling methodology, but you could just happen to get an outlier data point, and that's going to happen every so often statistically, and

so we need a method to sort of identify when that happens and what to do in those cases that the resulting information may not be good for management, even though it came from a process that was the best available process, but the data that you actually end up getting are unrepresentative or outlier data. Thanks.

DR. SEDBERRY: Thank you. Good point, Chris. Mike, Dewey has his hand raised, and I think he wants to ask a question or make a comment before we move off of blueline tilefish, and is that acceptable?

DR. ERRIGO: That's up to you, George. I unmuted him.

DR. SEDBERRY: All right. Go ahead, Dewey.

MR. HEMILRIGHT: Thank you for giving me a chance here to give some comments. Listening to the deliberations is quite interesting to me. I want to address a couple of things. The recreational fishery, or MRIP, estimates is not a small component of the fishery, because the allocation, historically, even though I've got problems with old MRIP, has set it at 50/50 commercial/recreational, and then the Mid-Atlantic is 73 percent recreational, through a Delphi process with 27 percent landings, and so I don't understand why, for the conversation, that MRIP, or recreational, is a small component of the fishery, when it was allocated in the past, and I'm not sure what years, as a 50/50 fishery.

I think Chris's point that he just made -- You know, MRIP is the best available mechanism, but there is definitely some outliers that have done nothing but exploded these estimates, and it would be my recommendation, and I'm not at you all's level, that, until these outliers for this data, this extra MRIP expansion, has been able to have been gone over, then you can't continue, or it can't be used. You know, I would like for a data workshop to be used on these expansion numbers, because clearly, and my focus is north of Cape Hatteras, there is just no way that these numbers are even close to correct.

You don't have the vessels. You are coming out of one -- I've got a lot of questions, and I'll be doing my research between now and April, with MRIP, just because there is some -- You know, Chris's point to outliers here is not what you're addressing. There is no doubt that the problem is what MRIP spits out is not believable or accountable, but I appreciate you all's time, but I would like somebody to address that part of the 50/50, where they say MRIP, or the recreational, is only a small component of the fishery, and I don't understand that, and can somebody address that, please? Thank you.

DR. ERRIGO: I might be able to help with that, actually. I think what was meant there is that -- What we mean by MRIP is the private recreational itself, and that does not include charter or headboat. That, by itself, tends to be a small part. When you put in charter and headboat, it gets significantly larger.

In most years, the charter and headboat fleets account for most of the recreational landings, but there are occasional spikes in the private recreational fleet, like the 2013 spike, where it's the private recreational that suddenly jumps up dramatically, and that's the only piece -- The private rec is the only piece in blueline tilefish that is affected by the FES calibration. The other parts, the

charter and headboat, are not affected by that calibration. They stayed the same as they were before, and so that's what is meant there.

MR. HEMILRIGHT: In that response, and I focused north of Hatteras, and, north of Hatteras, you don't have the large -- The majority of the fishery is charter/headboat, I mean charter boat, and so you don't have the private recreational angler to any magnitude, and so how does that part work?

DR. ERRIGO: Actually, when I looked at the differences in the landings overall, north of Hatteras, there was a very, very small difference between SEDAR 50 and the revision, because the private rec component was very small.

MR. HEMILRIGHT: Thank you.

DR. SEDBERRY: Okay. Thanks, Mike. Genny, did you have a comment?

DR. NESSLAGE: (Dr. Nesslage's statement is not audible on the recording.)

DR. SEDBERRY: Genny, you're coming and going. Can you --

DR. NESSLAGE: Can you hear me better now?

DR. SEDBERRY: Yes, but I kind of missed everything that you said so far.

DR. NESSLAGE: I feel like the first arrow there, the due to recreational catches statement, was Erik's statement and not the SSC's statement, and I would like to see it removed unless the SSC feels differently than I do, which is fine as well, and the second bullet was, I think, in response to my comments that I would like to see a comment, and I don't want to be that descriptive, but I was just using that as an example of something that -- I really like Chris's response and I think a general suggestion to look at identifying processes that deal with these different types of patterns we're seeing -- I think that's the right recommendation, and I don't know whether SEDAR -- What I was told is their working group protocols workshop might be -- Instead of going the research track option with all this stuff, and so that might be an option, and I don't know, but I'm still very uncomfortable with that statement going into the report. Thanks.

DR. SEDBERRY: So the statement is the analysts' explanation of the anomalous data point, rather than the SSC's conclusion?

DR. ERRIGO: I just want to make sure -- Maybe I didn't capture it correctly. I tried to get what I heard quickly, but I can take that out, and so, basically, you're saying, in relation to specifically the 2013 point, that the MRIP catches weren't really a small component of the catch, and therefore -- I put recreational catches, but perhaps what was meant was the MRIP catches, which is the private rec, but that still might not be a correct statement, and so I can take that out.

DR. NESSLAGE: Am I missing something? I just felt that we didn't go that far yet to say that, but maybe I'm --

DR. SEDBERRY: I think what's Genny is saying is -- She's asking if this is an SSC consensus statement or is this the analysts' explanation?

DR. ERRIGO: I was getting that from what Erik was saying about the 2013 point that he was explaining from what Genny had concerns about 2013, and so, since this had to do with impacts of the data on the uncertainty of the assessment, I put that there, but it doesn't have to stay there. I just put it there, and it's up to you guys whether it stays or goes or gets modified.

DR. SEDBERRY: What's the pleasure of the committee? Does anybody besides Genny feel strongly about this or have any feelings at all about it? Do we agree with it?

DR. ERRIGO: I think what was meant is that the MRIP catches are a small component of the total across years, like in general, and then, particularly in 2013, there was a small adjustment factor used there. Therefore, that anomalous point didn't have a large effect on the overall uncertainty in the model.

DR. NESSLAGE: Yes, I think you're reiterating, but I still don't -- I am not convinced that it's true, and so I don't want it in the report.

DR. ERRIGO: I think it's the comparison from SEDAR 50 to now, but that doesn't mean that there wasn't a large amount of uncertainty in the model. I think maybe that was in comparison to what it was in SEDAR 50 and that it wasn't a big change. Maybe I am wrong about that.

DR. SEDBERRY: Can we say here that the committee concurs with the analysts' explanation of the anomalous data point? Is that the issue? I mean, there's nothing in this statement that is wrong, but it's just not our statement.

DR. NESSLAGE: Well, no, I disagree. That's my point.

DR. SEDBERRY: You disagree with it. Okay.

DR. ERRIGO: Perhaps we should just remove it and not -- This way, it's just not there.

DR. SEDBERRY: That would be fine with me, unless there is objection from anyone on the committee.

DR. NESSLAGE: Like I said, that bullet, that other one, the would like to see, was what I had said, and I don't -- Like I said, that was an off-the-cuff comment of something that could be explored, and I don't want that to be -- I worry about when stuff goes into here, and people get really antsy about what gets done and what doesn't get done off of our comments, and so I am just am not comfortable with that bullet either, but, I mean, obviously, I'm getting grumpy.

DR. SEDBERRY: Well, it would be interesting to see, but it's not something that the SSC is requesting from the Center.

DR. NESSLAGE: Yes, exactly. I don't want them to be tied into that if that's not the best approach. Thank you.

DR. SEDBERRY: I think we have about thirty minutes left in our scheduled time.

DR. ERRIGO: Yes.

DR. SEDBERRY: So, to me, the best use of that time would be to just look at the other revision assessments and see if there is anything specific to those assessments and those stocks that we want to comment on and then to make sure that the bullets we have here capture our kind of overall feeling about the revision assessments and blueline tilefish in particular.

DR. ERRIGO: We can always edit after the fact by email and that kind of thing, but we've just got to make sure that we get all the actual consensus points on the screen from the SSC regarding all the species.

DR. SEDBERRY: I think you're right that we can edit the bullets that are specific to blueline tilefish. We can group them together and then kind of the general edits and comments and recommendations regarding the uncertainty and the best scientific information available, but I think we do need to look at the other revision assessments to make sure we don't have any recommendations or concerns regarding those specific stocks, and so moving on to red grouper. Again, it's the same questions as the revision assessment, the best scientific information available, measures of uncertainty.

DR. ERRIGO: I am going to assume that the overall consensus from blueline -- That these are all -- We are not going to consider them best science, and we're not going to make ABC recommendations. The SSC is not going to make ABC recommendations, because of the FES data, and that it should go through a SEDAR assessment and be looked at there. If someone feels differently about an assessment, please let me know.

DR. SEDBERRY: I think you're right about that, Mike. I think that's the consensus of the committee, but, as you say, if somebody feels differently, please speak up.

DR. WILLIAMS: George, I would just make one more comment. Again, harping back on my request that you guys be very specific about what you want from this. In other words, there's been a lot of talk about uncertainty in the FES and bias in the FES and outliers in the FES, and I would want to know specifically what is the concern with the data and possibly if the SSC can make recommendations on how to proceed forward, both in terms of either making corrections to the FES, doing an evaluation of the FES at some Headquarters level, and then also in terms of stock assessments and how we move forward.

Do we not use it at all until certain things have been worked out? It's just I worry about how vague some of the recommendations are coming out of what I see on the board so far and what I have heard discussed. It's a lot of we're not sure about it, and we don't like it, but no really concrete ways forward, in terms of how to address this and how to keep moving forward with assessments.

DR. SEDBERRY: Good point, Erik, and, if the committee can provide specific advice, that would be very helpful. Anything specifically we need to add to red grouper?

DR. REICHERT: Earlier, Mike went in and out in my audio, but do I understand that Mike said that we will copy the fact that the committee does not consider this the best scientific information available? Is that the consensus of the entire committee?

DR. SEDBERRY: When I said those exact words, I didn't hear anybody object to it.

DR. ERRIGO: I was just going to clarify that the assumption will be that these will all follow the same recommendation as blueline tilefish unless someone has a different perspective on one or more of the other assessments and would like to discuss a different recommendation.

DR. SEDBERRY: Thanks, Mike.

DR. REICHERT: The comment I would like to make is I think that the blueline tilefish assessment was very uncertain from the get-go, and so I would have more concerns there than with some of the other assessments, in terms of this revision, and that goes back to something that I and others have said earlier. If that means that we fall back to our earlier recommendation to the council in terms of our fishing level recommendations, is that better information or a better analysis than this revision, and I am not sure if that is, in particular for the red grouper, vermilion snapper, and black sea bass, although I do understand Luiz's concern that he raised with that graph that was shared with the committee.

DR. SEDBERRY: Do you think we need to come up with some specific advice regarding these additional three species?

DR. REICHERT: Yes, because I think goes back to Erik's comment, and that was one of the very first comments that I made today, that we need to be sure that we very carefully document our recommendations and why we came to that conclusion, in particular relative to the already approved previous assessments, and that goes back to the uncertainties and all the other stuff that we discussed in blueline tilefish, but that's certainly also the case for red grouper, vermilion snapper, and black sea bass.

DR. SEDBERRY: Marcel, you had mentioned that you thought that the previous assessment on red grouper had more uncertainty and was not --

DR. REICHERT: No, I was talking about the blueline tilefish. Correct me if I'm wrong, but I think that original assessment had a -- The SSC agreed that that one had a high level of uncertainty, because of all the assumptions that were made, the meta-analysis, no availability of age data, et cetera, et cetera, and that's all in our original report.

DR. SEDBERRY: Okay.

DR. REICHERT: I think that assessment, that original assessment, had a lot higher level of uncertainty than the assessment of red grouper, vermilion snapper, and black sea bass, and so I would be uncomfortable to automatically copy all the recommendations that we made in the blueline tilefish revision to the red grouper, vermilion snapper, and black sea bass also, and I don't want to belabor the points that we made earlier, but I think that this is important. We need to be -- Again, we need to be very careful how we document this.

DR. SERCHUK: One of the things that hasn't been incorporated in the tables that we're looking at is the revised estimates. Now, we have those revised estimates, and they were presented to us in a working paper in September of 2018, and we considered it at our October meeting, and the Center also indicated that there would be changes in status for a few stocks, and we'll come to

black sea bass, but they found out that the revised assessments gave results that were different in respect to -- The revised assessments found the stock to be overfished, experiencing overfishing, and, with almost all these cases, the reference points changed and so on and so forth, and so I'm thinking that we ought to be very careful about this, because the same was true for blueline tilefish.

I know we haven't accepted the revised assessments as BSIA, but the fact is we now know, based on the information provided by the Center in their document, that, in almost all cases, the estimates of the quantities will change, and, based on that, the status will change, and so, if we accept that the remaining assessments, revised assessments, now represent BSIA, we will have to incorporate all the revised parameter estimates as well as what they imply in terms of stock status, and I just wanted to remind people that we had all of that information in October, and it's not presented in a table here, presumably because we haven't made the decision whether to accept those revised assessments or not for the three species that we are about to consider, but the Center did provide us with that information, and we know that, at least in one case, it's going to change the stock status for black sea bass significantly from what it was prior to incorporating the MRIP data. Thank you.

DR. SEDBERRY: Thank you, Fred. In October, when we reviewed the September 2018 document that Fred just talked about, we came to the consensus that these revised assessments did represent best scientific information available, or we concurred with the Center and peer review that they represented BSIA.

DR. ERRIGO: Not the assessments, but the FES calibrated --

DR. SEDBERRY: Sorry, yes. Are we now going to say, for red grouper, that the revised assessment is recommended as the best scientific information available? I think there was objection to just copying and pasting what we had said about blueline tilefish here. What do we want to put here then instead, what specific advice regarding red grouper? I think Marcel had mentioned that he thought that the revised assessment had less uncertainty than the previous assessment. If that's what you said, Marcel, then I think we need to have specific points about what we mean by that.

DR. REICHERT: What I mentioned was it was my recollection that the previous assessment of red grouper, vermilion snapper, and black sea bass -- That the previous assessment of the blueline tilefish had a higher overall uncertainty than perhaps the red grouper, vermilion snapper, and black sea bass assessments. I wasn't discussing the revised assessment versus the original assessment, and I was making the general comparison between the assessments of the four species.

DR. SEDBERRY: Right, and you've already clarified that again, and I'm sorry. I just got confused.

DR. REICHERT: That's okay, George. It's been a long call.

DR. BARBIERI: It sure has, George. I just want to -- I don't think that I need to say much more, and I already presented my thoughts as extensively as I possibly could, but, just for the record, just so you know, for the reasons that I stated, I do not consider these revised assessments an improvement. I think there are a lot of unaccounted issues that need to be better understood and that I think that they would be better handled through a standard SEDAR process, and so, across-

the-board, for the four species, I personally do not feel that it represents the best scientific information available to be used for stock status determination and catch advice.

DR. SEDBERRY: Thanks, Luiz. Is there anybody on the committee that disagrees with Luiz's statement that the revised assessment is not an improvement?

DR. DUMAS: I would like to make a comment to that point. Sometimes, at least in my case, certainly, you can do your best, but sometimes your best isn't very good, and so, when we're talking about best available science, sometimes we could be using the best available methodology, and based on the best available data, but sometimes the results that come out may not be very good, may not be very reliable, or may not be very representative, and so it could be, for example, the case that the new MRIP method is better than the old MRIP method, because it corrects for some biases that the old method had, and so it may be a better method, and it may be the best available science and method, and the data that we've collected may have come from a sampling plan that is, let's just assume, the best available sampling plan, but it could be that the actual data that came from that, in some cases, were biased in some way, that had some outliers in them, that affected some results that made the results not good results, or unreliable.

In the same sense that -- For example, when you do a regression analysis, under normal assumptions, the regression analysis gives you the best estimate of your parameter, but sometimes that best estimate, even though it's your best, is not reliable. It's not statistically significant, right, or different from zero, and so we may be getting our best estimates, but, to Luiz's point, they may not be good or reliable for the purpose of informing our management decisions, but the best method, the best scientific methods, may have worked well for red grouper, vermilion snapper, and black sea bass, but those best methods may have not worked well in the case of blueline tilefish, in this example, because some of the data points, just by random chance, statistically, that were sampled happened to be outlier data points, unrepresentative, and so, when they were used in the method, they produced results that may not be realistic or reliable.

That's not to say that the method is bad, or not the best, or that the modeling or the sampling method, but we just maybe got some bad draws in our sample, and that's going to happen every so often, especially for species that are low-frequency occurrences in the dataset, or in the sample, and so that may be able to help us make a distinction here between what happened with blueline tilefish and the other species.

If we think there is a problem with blueline, potentially, and not with the others, it may not be because the method is not best or that the sampling scheme is not the best, but it may just be that we got a bad draw, a bad sample, with blueline compared to the other fish. There was less data available, and we got an outlier sample with blueline compared to the other species. Thanks.

DR. SEDBERRY: Thanks, Chris.

DR. REICHERT: One more thing, and then I will shut up, but I agree. I completely agree with that, but I think, again, the complicating factor, or the tension we have, is that we approved the original assessments with a lot of the uncertainty that we have discussed, and so that goes back to, if we revert back to our original recommendations, is that better than what we have with the revision, and Luiz has made it clear that he believes that, no, that's not the case, and, unfortunately,

I am not convinced just yet, and I wish I had a solution that would allow us to move forward, and so, anyway, that is -- I will shut up.

DR. SEDBERRY: Well, I think it may be difficult then to come to consensus about this being BSIA.

DR. SCHARF: I guess I really would like to just echo what Marcel just said, in that I also understand Luiz's concerns, and I've been sitting here for three hours, and so he's been sort of pounding it into me for a while, but, at the same point, I'm a little concerned. I'm not really comfortable about the path that we're going down and that we're not going to consider this best available science and we're going to have to wait until another assessment through the SEDAR process.

I am as concerned about some of these issues in certain datasets, for instance in the blueline tilefish. This red grouper dataset and the influence of Monroe County is another example where you have this sort of unique spatial driver for the whole basin, but, at the same time, all we've done is add a data stream that was vetted through a process that was approved through the National Academy of Science in terms of the robustness of the change, and so I feel like I'm not ready to set ABCs during the webinar, but I feel like we should have more discussion in April, at our April meeting, our face-to-face meeting, and make some decisions about whether we're going to move forward or not with these revised assessments, and at the same time, if we're not, we need to be able to provide some more specific advice to Erik and his group beyond this sort of generic stuff that we've been stating so far.

I guess I'm just in the same boat as Marcel, in that I'm not really comfortable going entirely in the direction that Luiz has recommended, but, at the same time, I'm not comfortable, at this point, recommending ABCs as part of this webinar. That doesn't really advance anything anywhere, but I do have to sign-off soon to go teach a class, and so I just wanted to make a broad statement about where I was with where we are.

DR. SEDBERRY: Yes, and I think you're probably not alone there, Fred, and so thank you.

DR. SHAROV: I guess I will repeat myself, as most of us are doing and trying to bring the point, but I feel that, as the term stands in itself, what we have on our hands is the best scientific information available at the moment. I think, generally, nobody argued that either the models that were used for individual species for the assessments were flawed or the information that went into it, the MRIP, because the FES went through the peer review, and none of us went into detailed individual re-review of the Fishing Effort Survey, et cetera, and proved that it's flawed and created a potential bias or a higher level of uncertainty, and so, obviously, as a methodology, we all have to agree that this is an improved methodology.

The data collection system also has been peer reviewed, and we argued that individual angler estimates could be -- I think what Luiz was alluding to is more than just simply like one random year of bias, an outlier. I think, in general, both the users and the scientists are still struggling with accepting the new estimates and verifying them sort of to their personal experiences and perception of the status of the stock, et cetera, and that might be a difficult process that requires time, but, from the scientific point of course, there is room for sort of an independent verification or

additional information that would confirm that these estimates at least are plausible, and I don't think that we just have enough time, or enough years, of observation to say that.

The assessment model, through combining all sorts of information and process, the population model, synthesizes this, but we just still don't have sufficient time or sufficient years of new information to actually convince ourselves that these new data streams, the population estimates the different years, and particularly fishing mortality estimates, would make sense and that they would not be in conflict with all the other parameters in the data, and I think that's what is the internal struggle that Luiz and others have, is they are not convinced that, with this new data, that the population estimates are best scientific information available.

Even though, yes, we cannot argue with the new MRIP methodology, potentially the inputs themselves are -- I think that all we can say is that this is the best scientific information available at the moment, but we do have concerns about the level of uncertainty that this new information brings into the assessment process and a concern about the potential direct use of the assessment results for the immediate management advice and that additional assessment work, in the form of the -- Whatever they need to do, either operational level or any other form that would allow the analysts to more fully explore the effects of this new MRIP data on the species population dynamics and the status of the stock, but that needs to be done.

Once that is done, then there will be more confidence among the SSC and everybody else that we do really truly and correctly interpret the population dynamics of the species. I think that, yes, this is the best scientific information available, but, if there are concerns, we should say just probably that we have concerns and what these concerns are. Then, as Erik asked, and I also agree with him, specific reasons why we say that we are concerned. Thanks.

DR. SEDBERRY: Thank you, Alexei. I have a tendency to agree with what you've said, and I was looking back at our October report regarding the assessments, and, again, our action item was are the revised assessments recommended as the best scientific information available, and our response was, given the level of analyses and the degree of peer review, the committee concurred with the findings of the National Marine Fisheries Service and the peer reviewers that the new MRIP estimates are BSIA.

Now, it's a little unclear from the statement whether that applies to the assessments or the data revision, but, to me, it is under the assessment and review item in the agenda, and so I think we have -- We had a lot of discussion about what is meant by available and best scientific information available, best scientific information, just like we're having right now, and nothing has changed since then. We have a few more people with their hands raised, and we're rapidly running out of time here, but, Fred Serchuk, go ahead.

DR. SERCHUK: I just wanted to follow-up on your comment, Chair. I am thinking that, one, you are correct that that was the conclusion that we reached at our last meeting. To that extent, I don't think we need the first bullet here in each one of these assessments, and I would strike it, or, if we're going to have something about the best scientific information available, we should have it outside of each of these assessments and say it was concluded at our October meeting that the revised assessments represented the best scientific information available. During the webinar, additional concerns were raised, and the committee will reevaluate this at its meeting in April,

because I am thinking that we're getting twisted here, because some of us apparently are unhappy with the decision that was made in October.

I certainly don't want to, based on a bullet point here, without having significant discussion about, well, if we accept it, then what do we do, because we're going to talk about what are we going to do at our April meeting, and I think it's fine to say what impact did the revised data have on measures of assessment uncertainty, and we can include all of that information, any recommendations that pertain to our recommendations on fishing level that we might make at our spring meeting, our April meeting, and we can include those here, but my feeling is that we're getting twisted, and there is not complete -- There is certainly not unanimity among the committee members. I don't really -- I really think that, since we're going to have to discuss it further in April, that we not revisit the issue of BSIA as part of this webinar. Thank you.

DR. SEDBERRY: Thank you, Fred.

DR. ERRIGO: George, I would like to clarify the bullet point you read from the October meeting.

DR. SEDBERRY: Yes, that would help.

DR. ERRIGO: If you look at the minutes and the conversation that happened, that refers to the actual data points, the FES data, the new MRIP estimates, and not the assessments, because, if you read further, it said that there is not enough information provided for the SSC to determine whether the assessments are best information and usable to make ABC determinations, ABC recommendations and stock status determinations, and that's why you asked for this webinar, so that you could better review these assessments, and so there was never a decision made on the assessments for best science at the October meeting.

DR. SEDBERRY: Thanks, Mike.

DR. ERRIGO: It's unfortunate that it's not clear in the report, but, if you go back to the minutes, it's clear from the conversation.

DR. SEDBERRY: Thanks. That really helps clarify it. Thank you for that.

MS. LANGE: Even though these data may be the best available, it's always reviewed in the data workshop, and this is what I mentioned earlier, that the new data stream didn't have the benefit of the MRIP data, the benefit of having gone through a data workshop, where some of the outliers could have been evaluated, and I think the assessment methodology, the dataset, everything was fine, but I think that hindsight is twenty-twenty, and I think it would have benefited from the opportunity to go through a data workshop, or even a subset of a data workshop.

DR. SEDBERRY: Thanks, Anne. The bullet that Mike is typing right now, I believe that applies to all of the --

DR. ERRIGO: It does. I am just typing it here for convenience.

DR. SEDBERRY: That's good. I just wanted to make sure that it was clear to everybody.

DR. SERCHUK: Following up on Anne's point, and I'm glad to see this new bullet being added here, I still think that if we agree that the most appropriate thing to do is to go through a data workshop for all these species, all these four species, and that, as a rule-of-thumb, that we'll be recommending that for any and all species in which the new MRIP data will be included, then I think that we really can't make a statement about best scientific information available, if we don't have that feedback yet.

DR. SEDBERRY: Thanks, Fred. Now where are we? We're at the end of our allotted time, and I think that we have --

DR. ERRIGO: Let me ask this. Do people agree with this, meaning that it should go through a SEDAR data workshop, all the FES for each species should go through a data workshop? If people agree with that, then it still supports not using the revisions for ABC recommendations. If people are not ready to decide whether they want to use the revisions for ABC recommendations, I suppose we can add that discussion to the April meeting.

DR. SEDBERRY: Mike, I think the bullet and sub-bullet that you had highlighted there, I think that's been mentioned several times, and so I think people do agree with that, and I think there's been a couple of suggestions as to what kind of consensus we can come with for the agenda item for our April meeting, and so, to me, there's agreement on that, but I throw it out to the committee for any comments that they might have.

DR. REICHERT: Relative to the "in a formal SEDAR assessment", do we mean that to mean -- Is that specifically the FES data, or is that specific to individual species? I think we need to be clear in what assessment we are referring to there in that formal SEDAR assessment, and that was just a point of clarification, that I think we need to make sure that everyone knows what we mean.

DR. ERRIGO: I was being general there so that it could mean standard, if we're still doing those, or it could mean a benchmark, or it could mean an operational assessment, once we move to those, and I didn't want to say anything specific, but, if you mean that each species should go through them, we can add that.

DR. REICHERT: Okay. Yes.

DR. ERRIGO: Something like that.

DR. REICHERT: We are not asking for a SEDAR workshop to discuss FES data, per se. It's more how do they relate to individual species assessments, and I think we need to make that clear.

MR. CARMICHAEL: George, I just want to reiterate what Marcel was saying, because this is going to be very important, given what has been said about workshops and not workshops and the level of review expected of these new estimates. That, quite honestly, gets far above the review that it seems like we've had of some of the existing estimates that were considered to be best science and assessments adequate for management, but, if this just says, in a formal SEDAR assessment, that you guys are comfortable with greater amberjack, which we're doing though the standard process and is underway now, and that that's going to satisfy that -- I don't want to be back here again in six months wondering if people are wanting to now dig into excruciating detail on the greater amberjack data and raising these concerns that it wasn't driven through a workshop.

I think be fully aware of what these recommendations say back to what you have already done. You have taken the assessments as they were before and said they are your best science and you're ready to go, and we've got things that are in the works now that this is going to all have to be addressed on, and it's going to have probably pretty big consequences for timing and getting work done and when we're actually going to be getting new estimates for ABCs that incorporate this new data, which is the data.

It's the only data. There is no old way now, and to go back to the old way is going to require some type of assumption to make the new survey method that's in place this year line up with the scale of the estimates from past years, because they're all just some of the gut-check and reality problems that we're going to face as we get through this.

DR. REICHERT: Thank you, John. That was exactly why I was so adamant about making very clear what we as an SSC recommend. Thanks.

DR. SEDBERRY: Marcel, the bullets that are there, do they address your concerns about clarity, and is this the intent of the committee?

DR. SERCHUK: I agree with it. I do think, because we've had these four assessments, we've seen that using the updated data can change the landscape, and it can change the reference points, and it can mean that stocks that we thought there was no overfishing occurring now appears that overfishing is occurring. Stocks that were not overfished and no overfishing was occurring are now just the opposite, and those are significant changes in the landscape.

Because of that, I think we want to be very -- We want to be assured that any data issues, any issued relating to the model and how it accommodates the FES data are looked at in close scrutiny, because now we're talking about changing some significant changes to the management system, and so I think, to answer John's question, yes, I think they do need to go through a formal process, because, in some cases, it will change the -- It could change the model, and we've seen, in a couple of cases, that it can change -- Even without changing the model structure, it can change the reference points and the status of the stock using those reference points, and so I think we want to have a high degree of assurance that both the model and the data going into that model have been scrutinized to the fullest extent possible. Thank you.

DR. SEDBERRY: Thanks, Fred.

MS. LANGE: To Fred and John's points, and especially John relative to greater amberjack, we have had -- The data workshop for that was last March, and I think it might be worth, at our next meeting, potentially, the next webinar for that assessment, looking at this data. It might be worth it, to avoid what we're doing right now. Again, add that to the terms of reference or something for the remainder of this assessment process.

DR. SEDBERRY: Okay, campers. Where are we now? Have we covered the committee's concerns with the revision assessments in general as best scientific information available and the uncertainties, both in general and relative to each of the stocks that were reassessed, and have we captured those concerns in our bullets here, enough to where we can prepare a report?

I know that we have postponed some things until our April meeting, but I want to make sure that we have kind of a concise way of going forward with what we're going to address at the April meeting and how we'll do that. Have we come to any kind of consensus here about how we go forward? Does anybody have any comments? Mike, is there an expectation from the council that the SSC will provide a report on this next week?

DR. ERRIGO: No, just if they have questions about it, since you will be there, if you could just answer whatever questions they might have, and I will be there, in case you need help with that. That's all, but just verbally is how we're figuring it, because I don't foresee us getting the finalized report ready in time.

DR. SEDBERRY: Okay. The next step for this report is that you will -- You and the executive committee of the SSC will clean this up and send it out for review by the full committee, and we'll incorporate those comments and changes and have something ready within the next couple of weeks.

DR. ERRIGO: Yes, I think so. There's not much here, and so I don't foresee it taking too terribly long, but, yes, I think that sounds good. I do have something under Other Business, but it's really short.

DR. SEDBERRY: Okay. Before we move on to that, just, as we're going through this, both you and the executive committee and the full committee, be thinking about the agenda items for April and how we translate this into agenda items and what the committee might need to prepare for to address it at our April meeting.

DR. ERRIGO: Yes, and I'm already thinking about that.

DR. SEDBERRY: Okay, and so you had some additional Other Business, Item 3?

OTHER BUSINESS

DR. ERRIGO: Just very, very quickly, due to the government shutdown and the shift in the cobia data workshop, it is now April 1 to 5, Alexei is not going to be able to attend that, and he was originally going to be at that one, and so we were just wondering if anyone else would be able to attend or willing to attend the cobia data workshop. It's April 1 through 5. You don't have to answer now, if you don't know, if you need to check your schedule, and we can do it by email if you would like, but I just wanted to mention that on here, so everyone has that on their radar.

DR. SEDBERRY: That meeting is in Charleston?

DR. ERRIGO: Yes, it is here in Charleston.

DR. SEDBERRY: Right, and I will be attending, but we need one other SSC person, and is that right?

DR. ERRIGO: Yes. If there is no one who wants to readily jump in on that right now, I can send an email out with some of the details, as many details as there are, and you guys can get back to me with whoever would like to attend that, and so that's it. That's all I have for other business.

DR. SEDBERRY: Okay. Is there any additional final comments that anybody would like to make? Thanks, everybody, for attending, and thank you, Erik and your staff, the Center staff, for preparing the very detailed revision assessment report and, Mike and council staff, for the comparison document, which was very useful. I appreciate everybody being able to attend today and adding your comments, and, like I said, we will get this out for your review, this report out for your review, and comment in the near future. I don't have anything else, unless somebody has anything they would like to add for the good of the cause. Thanks, everybody.

(Whereupon, the meeting was adjourned on February 25, 2019.)

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Amanda Thomas
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