GULF OF MEXICO FISHERY MANAGEMENT COUNCIL

MEETING OF THE STANDING & SPECIAL REEF FISH, MACKEREL, SOCIOECONOMIC, & ECOSYSTEM SCIENTIFIC AND STATISTICAL COMMITTEES

WEBINAR

SEPTEMBER 14, 2020

STANDING SSC VOTING MEMBERS

Joseph Powers.....
Lee Anderson.....
Luiz Barbieri.....
Harry Blanchet.....
David Chagaris.....
Benny Gallaway.....
Bob Gill.....
Douglas Gregory.....
Walter Keithly.....
Robert Leaf.....
Kai Lorenzen.....
James Nance.....
Will Patterson.....
Sean Powers.....
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SPECIAL REEF FISH SSC VOTING MEMBERS

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The Meeting of the Gulf of Mexico Fishery Management Council Standing and Special Reef Fish, Ecosystem, and Socioeconomic Scientific and Statistical Committees convened via webinar on Monday morning, September 14, 2020, and was called to order by Chairman Joe Powers.

INTRODUCTIONS/ADOPTION OF AGENDA/APPROVAL OF VERBATIM MINUTES AND MEETING SUMMARY: AUGUST 11-12, 2020 WEBINAR/SCOPE OF WORK

CHAIRMAN JOE POWERS: Good morning, my name is Joe Powers and I welcome all of you as the Chair of the Scientific and Statistical Committee of the Gulf of Mexico Fishery Management Council. We appreciate your attendance on this webinar and input into this meeting. Representing the Council is Greg Stunz. Council Staff in attendance are Ryan Rindone and Jessica Matos.

Notice of this meeting was provided to the Federal Register, sent via email to subscribers of the council's press release email list, and was posted on the council's website.

Today's meeting will include the following topics: Adoption of Agenda; Approval of Minutes; Scope of Work; Selection of SSC Representative; and then the substantive things are the SEDAR 38 update for king mackerel; Gulf gray triggerfish; review of red snapper research track; the review of Gulf of Mexico gray snapper; discussion of carryovers in the IFQ program; allocation review procedures; looking at spatial management of gag grouper; habitat research; red snapper supply chains; any other business; and public comment.

This webinar is open to the public and is being streamed live and recorded. A summary of the meeting and verbatim minutes will be produced and made available to the public via the council's website.

For the purpose of voice identification and to ensure you are able to mute and unmute your line, please identify yourself by stating your full name when your name is called for attendance. Once you have identified yourself, please re-mute your line. To signal you wish to speak during the meeting, please use the raise-your-hand function, and staff will display your name. Please remember to identify yourself before speaking and to also re-mute your line each time you finish. Thank you.

MS. JESSICA MATOS: Lee Anderson.

DR. LEE ANDERSON: Lee Anderson.

MS. MATOS: Luiz Barbieri.

DR. LUIZ BARBIERI: Luiz Barbieri.

MS. MATOS: Harry Blanchet.

MR. HARRY BLANCHET: Harry Blanchet.

MS. MATOS: Dave Chagaris.

DR. DAVID CHAGARIS: David Chagaris.

MS. MATOS: Benny Gallaway.

DR. BENNY GALLAWAY: Benny Gallaway.

MS. MATOS: Bob Gill.

MR BOB GILL: Bob Gill.

MS. MATOS: Doug Gregory.

MR. DOUGLAS GREGORY: Douglas Gregory.

MS. MATOS: Walter Keithly. I know you're on there, but have been having some sound issues. Walter is present. Robert Leaf.

DR. ROBERT LEAF: Robert Leaf.

MS. MATOS: Kai Lorenzen.

DR. KAI LORENZEN: Kai Lorenzen.

MS. MATOS: Camp Matens. Jim Nance.

DR. JIM NANCE: Jim Nance.

MS. MATOS: Will Patterson.

DR. WILL PATTERSON: Will Patterson.

MS. MATOS: Joe Powers.

CHAIRMAN POWERS: Joe Powers.

MS. MATOS: Sean Powers. Ken Roberts. Steven Scyphers.

DR. STEVEN SCYPHERS: Steven Scyphers.

MS. MATOS: Jim Tolan.

DR. JIM TOLAN: Jim Tolan.

MS. MATOS: Jason Adriance.

MR. JASON ADRIANCE: Jason Adriance.

MS. MATOS: Jud Curtis.

DR. JUDSON CURTIS: Jud Curtis.

MS. MATOS: John Mareska.

MR. JOHN MARESKA: John Mareska.

MS. MATOS: Kari Buck.

DR. KARI MACLAUCHLIN-BUCK: Kari Buck.

MS. MATOS: Jack Isaacs.

DR. JACK ISAACS: Jack Isaacs.

MS. MATOS: Andrew Ropicki.

DR. ANDREW ROPICKI: Andrew Ropicki.

MS. MATOS: Cam Ainsworth.

DR. CAM AINSWORTH: Cam Ainsworth.

MS. MATOS: Mandy Karnauskas. Paul Sammarco.

DR. PAUL SAMMARCO: Paul Sammarco, here.

MS. MATOS: Thank you. Greg Stunz.

DR. GREG STUNZ: Greg Stunz.

MS. MATOS: Thank you. That's it.

CHAIRMAN POWERS: All right. Thank you. Then we begin with the agenda. We've had our introductions, and now the Adoption of the Agenda. You will note that, in order to accommodate some of the environmental pressures being put on the Gulf of Mexico,

that the order has been changed a little bit, and, also, the implication is we're going to try to spend more time today, and I will be monitoring the time closely, but, with those changes, and the agenda as sent out yesterday by Ryan, are there any objections to adopting this agenda? If not, the agenda is adopted.

The minutes, Approval of Minutes, the meeting summary for the August 11 and 12 webinar, any objection to the approval of the minutes? If not, then the minutes are approved.

Scope of Work, this was the document kind of outlining what we have to do and some of the details of what is required of us. Unless Ryan wants to mention something in particular, this should be used during the meeting to kind of remind ourselves of what we're getting at as we're going through these individual discussions. Ryan, do you have anything further to add to that?

MR. RYAN RINDONE: I do not.

SELECTION OF SSC REPRESENTATIVE FOR THE OCTOBER 26-29, 2020 GULF COUNCIL VIRTUAL MEETING

CHAIRMAN POWERS: Okay. Thank you. Agenda Item IV is the Representative for the late October Gulf Council Meeting. Do we have any volunteers?

MR. RINDONE: Just a reminder that this meeting will also be held via webinar.

CHAIRMAN POWERS: Yes. I think we're resigned to that for a while. Any volunteers? I guess, at this point then, you can put me down for this. I will probably re-ask for volunteers during this meeting, because I would really appreciate if other people were involved, but, anyway, for the time being anyway, put me down as that.

DR. BARBIERI: Mr. Chairman, I can help you, and perhaps we can do the divide-and-conquer and break up pieces. This is going to have the equivalent of two full, or maybe or three or four, SSC meetings to present.

CHAIRMAN POWERS: Yes, and that's part of the reason, and so thank you, Luiz, and I will surely hit upon you for this. Thank you.

DR. LORENZEN: I just raised my hand, and I would also volunteer to do a bit. I can't do the whole thing, but --

CHAIRMAN POWERS: Okay. Thank you. All right. Moving on to Agenda Item V, the Gulf king mackerel, and this is a fair amount of time allotted for this, and so we'll begin, I believe, by the presentations. Let me turn it over to whomever is doing the presentation.

REVIEW OF SEDAR 38 UPDATE - GULF OF MEXICO MIGRATORY GROUP KING MACKEREL ASSESSMENT PRESENTATION AND STOCK STATUS DETERMINATION

DR. MICHAEL SCHIRRIPA: Good morning, everyone. I send concerns out to you guys that are in the face of Hurricane Sally now. We had our share yesterday, as it blew by.

What I am going to present to you today is the SEDAR 38 update. As you recall, in SEDAR 38, we did both the Gulf of Mexico stock as well as the South Atlantic stock together, and we tried to make those models as similar as possible, that is the configurations, and the unofficial goal that we were after here was we tried to keep the models, the configuration of the assessment model, as similar as possible and replacing only the data that went into the models.

You will see, in the presentation, that, although we tried to keep the model configuration as close as possible, and repeat the same assumptions and so on, we were not able to replace the data, update the data, exactly as we had last time, and that's due to some issues that you're all too familiar with, the migration to the FES data being one of the major changes that had to be implemented, but we'll still be able to see some comparison between the two assessments and why we are where we're at today.

The outline for today's talk, we'll talk some terminology, to make sure we're all on the same page there, and I have to admit that I learned a few definitions myself this time. After that, we'll talk about the terms of reference that we needed to satisfy for this effort. The overview, the data that we used, the base model development, and then we'll slide into projections and then a summary, as well as some research recommendations.

Let's first then go to the terminology, and this is where I had to learn a few definitions. Catch will be considered all fish caught, and that is the fish that are retained, discarded dead, and released alive. Landings are only those fish that are retained, and removals are retained catch and dead discards, and

the term "discards" refers to all discarded fish, whether they were dead or released alive, and then, finally, we have dead discards, which are discarded fish that are assumed to be dead.

Also important, that we had to discuss a little bit, was the status determination criteria, and one of the issues, or one of the challenges here, was that the status determination criteria may have been different than the one that is used today, and so we had to think about whether or not we were going to use the old terms or the new ones, and I think, as luck would have it, they are the same as last time, although there was some discussion on that.

Overfished is being defined as when the spawning stock biomass current is less than MSST, where SSB current is the SSB in the terminal year of the data, of the model, in this case 2017, and MSST is defined by one minus natural mortality times SSB at MSY, or its proxy. In this case, as in the last case, M was equal to 0.174, and the proxy used for SSB MSY was SSB at SPR 30.

For overfishing, F current -- When F current is above MFMT, the stock is considered overfished, where F current is the geometric mean of the most recent three years of fishing mortality, and MFMT is equal to FMSY, or its proxy, and, in this case, the FMSY proxy is F at SPR 30.

Let's go briefly over the terms of reference and what was expected for this effort. I'm sure you've all read this before, and there's a lot to read here, and so the high points are basically that we update the model through the 2017-2018 fishing year, and we were to document any changes or corrections made to the model and dataset inputs, provide tables of such, update the model parameter estimates and their variances, their model uncertainties, and estimate stock status.

To the extent practicable, provide recommendations of future research to be conducted on the Gulf migratory group, and then, finally, develop a stock assessment update report to address these terms of reference, and I'm sure that you all have access to that now.

Let's go to the overview then, and the overview is good news. The approved SEDAR 38 Gulf of Mexico king mackerel base model was updated through 2012, and I emphasize the word "approved" here. Some of you may recall that, in 2017, we had an independent review of the model configuration, and it did pass the approval process through the independent review, and so we stuck with that, as close as possible. The base model was used

with the same datasets as SEDAR 38, with the updated time series, with the exceptions that I have mentioned.

These key changes that we really had almost no choice in making were to incorporate the new FES data adjustments to the recreational catch and our method of estimating shrimp fishery bycatch of king mackerel. Again, those almost could not be considered choices, and they were almost must-dos, especially the FES data.

The stock assessment update fully documents the input data and the SEDAR 38 update base model, and the good news is that the updated base model found that the king mackerel in the Gulf of Mexico is not overfished and not undergoing overfishing. In fact, in 2017, the stock was being harvested at 84 percent of MFMT, and the SSB was 112 percent of MSST.

The upper-right-hand plot shows you where we want to be, in the green zone, and you will see, if you look close, that the 2017 point lies right in that buffer zone between SPR 30 and the MSST. The updated base model projections indicate that landings can remain at their current values with a very low probability of future overfishing or becoming overfished.

Let's take a look then at the data that was used in the model, and hopefully, at this point, most of us, or most of you, are familiar with the data that goes into SEDAR assessments, and I'm sure many of you are familiar with the stock boundary map between the Gulf of Mexico and Atlantic and the mixing zone. The important note here is that the mixing zone is -- Generally, the landings from the mixing zone are spread out 50/50 between the Gulf of Mexico and the Atlantic. Other than that, nothing has changed from the last assessment.

Then the collection of data that we had to work with. The upper-right-hand plot shows you each dataset and the time series associated with it, and this is actually considered a data-rich assessment, in terms of SEDAR. We have indices of abundance, and we have lots of length compositions, and we have lots of age-at-length information, and we have some discard information.

Our fishing year for the Gulf is July 30 through June 30, and we used a gender-specific growth, a von Bertalanffy growth function, with males being different than females. We used a fixed natural mortality, as you can see on the bottom-right-hand panel, which was a length-based Lorenzen function.

A Beverton-Holt recruitment relationship was used. However, the

steepness was fixed at 0.99, and, essentially, what this tells us is that recruitment is not related to spawning stock biomass, in this case. The start year of the model, or when we considered the stock to be in its unfished state, was 1929, and the end year of the model was 2017.

The fleets that we used were the commercial handline, the commercial gillnet, the shrimp bycatch, the recreational headboat, and the recreational charter/private. All selectivities for all fleets were allowed to be dome shaped, except for the commercial handline, which was fixed to be asymptotic.

The indices of relative abundance that we had to work with were the commercial hook-and-line and trolling logbooks, the recreational headboat survey, the SEAMAP trawl juvenile survey, and it's not shown here, but we also had the SEAMAP phytoplankton survey to work with. Now, we did have a charter boat survey as well, but that was deemed unreliable in SEDAR 38, and so we again skipped over using that index this time as well.

I have a feeling that many of you are familiar with the manner in which we model the shrimp bycatch, and it's effort driven, and that is the more effort -- We can measure effort better than we can the shrimp bycatch, and so we use that to drive the bycatch estimates, the effort, and many of us cannot wait until we can migrate this model to SS 3.30 that has the ability to explicitly model a bycatch-only fishery and that ability to SS 3.3 was more or less designed with SEDAR in mind.

We handled regulations, that is size limits, through time-blocking the retention at-length, and MSST, as we said, was tabled to one minus M, as last time, and -- I'm sorry. One minus M times SSB at SPR 30, and MFMT at SPR 30. We did use 3.24 in this assessment, and that is exactly the same model that we used last time, and so any differences are not due to the version of SS that we used.

Commercial landings and discards, the overall commercial landings have shown a steady increase since 1990, and we would like to think that this is due to good management of the stock. Regulations went into place when the stock was first deemed overfished, and we have seen an increase in the stock size. The commercial landings are made up mostly of handlines, with a little bit of commercial gillnet in there as well. The hook-and-line discards have shown an initial decreasing trend from 1998 to 2010 and then a slight increase, or leveling off, of the discards since 2011.

Let’s look at the data update of landings, and we’re going to go into an analysis of this a little bit later, but this is just going to show what we worked with before and what we worked with this time.

The upper-left panel is commercial handline, and, as one might expect, no changes were made in that, and so we had good agreement on what we used last time, which is the red line, and the one we are using now, which is the black line, and, obviously, they are laying on top of one another, and so you cannot see the red line.

The same was true for gillnet, the two lines laying on top of one another, because there was no change in data or methodology in the upper-right, but it is headboat and charter/private where we see the difference with the migration to the FES data. The headboat landings, the black line, the FES data, shows that we now, with the FES landings, have a slight decrease in the headboat landings, the black compared to the red line. In the bottom-right, there is more of a difference in the charter/private, keeping in mind that the charter/private makes up the majority of the king mackerel landings in the Gulf of Mexico.

The FES look at the data, the analysis, decreased the headboat landings a little bit and increased the charter/private landings a bit. We will see soon, in the presentation, the ramifications of those two changes.

We also got, from the FES, an update of discards, and the upper-left is the commercial handline, and, much like the landings, we saw no changes in discards, just an addition of data. In the upper-right is the discards of the charter/private, and we saw more discards from the charter/private, obviously from the increased catch estimates that we saw from the FES data.

The other point that we’ll talk a lot about is the shrimp trawl bycatch estimates, the red line again being SEDAR 38, and, this time, the estimates of shrimp bycatch, as you can see, were higher than the ones that were arrived at in SEDAR 38.

The headboat discards went down slightly from last time, but remember that the headboat catch makes up a very, very small portion of the overall catch of king mackerel. Most of the investigation you will see will be focused on the charter/private and the shrimp trawl bycatch.

Let's look at the data that we actually used, the FES recreational catch and discards for the update. Again, the overall recreational landings have been seen steady since 1990, when regulations first went into place, and the discards, of course, are mostly from charter/private, and they have been somewhat stable, with some fluctuations around a mean since after 1984. Again, you can see, in the upper-right panel, that the sliver, the yellow sliver at the bottom, is the headboat landings, making up a very small portion of the overall landings.

As we've been discussing, total Gulf of Mexico king mackerel landings are dominated by the red, the charter/private, and then second would be the commercial handline, a little bit of commercial gillnet, and the rest being the headboat fishery.

Discards in metric tons, the total discards starting where the regulations, the minimum size, I believe, came into place are showing a decrease over time, and we're not certain if that could be a decrease in recruitment or just fish growing less discards, because fish are growing more into the legal size, or, perhaps, fishermen are actually moving off the small fish, and I will throw in right now that -- I will sneak-peek into the recommendations, but what we really need to have to discern some of these options, or these alternative views, is we need more lengths of released fish. We don't get a sampling of those, for obvious reasons, but having more of those would be a great asset to the assessment.

Let's go ahead and explain how the shrimp fishery bycatch was arrived at this time around. We went ahead, this time, and used the Zhnag and Isely 2019 bycatch estimates. Now, keep in mind that we actually did have these estimates for the SEDAR 38. We did have the option of using them, and so, in this case, we didn't really, per se, use different data, but we chose a different method. We had both methods to choose from last time, but we chose to use what we thought was a better method.

Now, if you look at the stock assessment report from SEDAR 38 and follow it through, you will see that this estimation process went through several iterations, and it was presented at the data workshop, and some modifications were suggested, and it was presented again at the stock assessment workshop, where it was suggested that some more modifications were done, and then, after several rounds of modification, we ended up using what we felt was the best scientific information at the time.

This year, this time, we took a second look and decided that the

best available information would be to take it directly from the Zhnag and Isely 2019 report. The blue portion of the plot that you see, the figure, is the SEDAR 38 estimate and its median, the blue line, and the red line is the new estimate with the median.

We could not repeat the SEDAR 38 method to our satisfaction, and so we decided that we would stick with the published method that was used from Isely and Zhnag, and I think you have access to that paper, and so we went from a SEDAR 38 median of 708,000 fish to a value of 1,998,000 fish for this update. Again, you can see where we got that estimate of 1,998,000 from that paper.

Now, you will see some slides where I hope I'm going to show clearly what the effect of this change has had, and we also had fishery length composition, of course. For king mackerel, we have thousands of fish measured annually. In fact, so many that you should have to then adjust the effective sample size, and we capped that at a hundred. If you don't cap that at some size, you end up with the model fitting only the lengths and no other source of observational data, but just for the sheer sample size.

At the time, the effective sample size being capped at 100 was the standard being used throughout many assessments, but I will note that, since then, a lot of research has been done, a lot of trials have been done, and even a seminar, a workshop, was devoted only to the effective sample size on lengths. There is no hard science on where to cap the size-at-length is, but, this time, we stuck with the 100 sample size, so that that would not be one more change that was added to the assessment, and 100 is not an unacceptable value at all.

Again, what we need to really fill out this length comp are the discarded fish, and this was -- We can use those discarded fish as a good indicator of recruitment, as well as helping us discern the amount of discards, and so, if we were to do this assessment all over again, we would probably -- One of the things we would reevaluate is seeking a balance between the variances from the major data sources.

Now, while we're on this note, I will say, and you won't see it, but I did do a complete variance reweighting of the model for CPUEs, length comps, and ages, and I will tell you though that the answer changed very, very little. The status of the stock changed very little, as well as the fits. However, I think that the next assessment that we do here should take advantage of all the work that has been done since.

We used conditional age-at-length, the same as we did in the previous assessment, remembering that, because these are conditional age-at-length, they are not assumed to be a random sample of the catch. Due to the sheer number of samples, ages made up of the majority of the log likelihood, and, again, variance reweighting is an approach here to make sure that we don't swamp out the fits to all other observational data, and, like the lengths, next time this assessment is done, reevaluation of the balance between the data sources, to make sure we're not overemphasizing any one particular data source.

Let's look at the indices of abundance that we had available to us. The commercial hook-and-line, the blue line, indicates the updated data, and the orange line are the data used in SEDAR 38, and the commercial hook-and-line CPUE agreed very strongly with the previous CPUE effort, and that is the upper-left-hand panel, and the middle left-hand panel is the headboat indices, and what I want is you to look at these last years of the update here, and I want you to kind of put a pin in that drop that we saw in the headboat that will be part of a discussion that we'll have here a few slides into this.

It agreed up to the updated year, where we saw let's say a significant drop and then an increase after that, and we'll see the effect of that in a little bit.

The SEAMAP trawl data agreed very well with the last assessment, the bottom-left-hand panel, and the shrimp effort was in very good agreement with the previous assessment. That last year I don't believe was used in the shrimp effort, and it was probably a preliminary estimate, the orange dot, the outlier there at the bottom.

The charter/private CPUE was done. However, remember that that was not used in this assessment, as it was not used in the SEDAR 38 assessment either, and then, finally, we have the SEAMAP plankton survey on the bottom-right. There is very strong agreement there, without too much change in the updated data.

We'll talk now about the base model development and the development of that and the fit to the indices and results and diagnostics. The first thing we want to do is to look into the effect of the updated observational data, and how we did this was in two parts. We swapped out the data sources individually first, and that is only one data source at a time, to try to ascertain how exactly each of the data sources compared -- How the model fit individually to the new data sources compared to

the SEDAR 38.

Now, in all of these plots that you will see, the heavy black line is the trend in SSB from SEDAR 38. All other lines that are colored are going to be a comparison to that, and so swapping these data sources out individually, and, to make the comparisons more comparable, we fit only up to 2012, just for the comparisons now, and so we'll start with the upper-left-hand panel.

What we did here was replace only the MRFSS data with the FES data, and what we see makes sense. Remember that we had an increase in landings from the FES data, and so, of course, we got an increase in population size. In order to have more landings with the same F, you need more fish out there, and so note that the beginning, the R-zero, increased, and you see in 1930, but, after around 1990, we see that the trends were pretty similar.

Using the same recreational data, the MRFSS that was used, but swapping out the headboat data in the upper-right panel, that led to a decrease in the stock size, because there were fewer landings from the headboat, and that makes good sense too, and so, really, it's just a scalar from the headboat, swapping out the headboat, and we changed the absolute population size, and that decreased a little bit.

Then, finally, when we simply replace the shrimp bycatch data, keeping all other data constant, what we ended up with was an increase in R-zero at the beginning of the time series and then a decrease in the current SSB, and, again, this is pretty intuitive, because you're killing more younger fish, and so it took a larger population size in the beginning. Because of the long trend in killing more fish, you end up with less spawning stock biomass. For the most part, except for the bottom-right, the trends are very similar, but the overall, the absolute, numbers are a bit different.

This is replacing the data sources individually. Now that we have an idea of what's going on with those, let's look at a cumulative approach, using the exact same method, only building one data source at a time. The upper-left-hand plot is the same as you saw in the last slide, and that is let's just replace the recreational landings with FES landings. Of course, that's going to look exactly like the other one.

Now let's add to that, in the upper-right-hand panel, and let's add the change in headboat landings, and, as you might expect,

we don't see too much change, because the headboat makes up a very small portion of the landings, and so it's going to look very similar.

However, when we then put on top of these changes the new shrimp fishery bycatch estimates, you see our R-zero goes up considerably, and this is because it's a combination of the FES raising the R-zero and the shrimp bycatch raising the R=zero. As we saw before, when you cumulate those, you get even a higher increase in R-zero,

Now, I will say, at this point, that remember the R-zero, in this case, is not only a function of our shrimp bycatch, but it is also a function of the natural mortality that is used on the age-ones, and so the shrimp -- As some of you may recall, back in red snapper, probably ten years ago, or maybe even fifteen years ago by now, or maybe even twenty, there was a balance between the natural mortality of these fish versus those that would end up in the shrimp fishery bycatch, and so just keep in mind this is not just a data-driven phenomenon, but it is also driven by what we use for natural mortality on those age-one fish.

Let's take these models then and fit them all the way -- Well, let's take the SEDAR 38 update and fit that all the way to 2017 and see how that compares to SEDAR 38. Again, the black line is always going to be SEDAR 38, and the colored line is the SEDAR 38 update.

What we see, if we add and fit to the 2017 data, is we keep that increase in R-zero, and we have slightly less -- Well, we have less spawning stock biomass than we had before.

As a comparison, let's just fit the model just like we explained, but let's just change the shrimp bycatch and see if we can get close to that SEDAR 38 estimate that we got, and what you can see in the bottom-right-hand panel is, if we go back to the shrimp fishery bycatch of 708,000 that we used, we start to get a very similar picture. That is our R-zeroes are much closer than they were before, but we still have that decrease in the most recent year, and so we're getting closer. We're figuring out why we deviated from SEDAR 38, and we can see from here that, yes, the shrimp fishery bycatch is driving some of that change, but not all of it.

During the jack-knife analysis, it became evident what was responsible for the ending year biomass being different. In the upper-right-hand panel, what we see is the trend in SSB by

deleting, one at a time, the indices of abundance, as well as the shrimp bycatch.

When we're removing each of these indices of abundance, we still pretty much end up with the same trend, and that is this cluster here and this cluster down here. However -- Well, of course, when we remove the shrimp fishery, like we just showed, the shrimp fishery bycatch, we get very close to what we had before, but look at this. When we remove the headboat indices, we start to get very close to where we were before, much closer than with the other indices.

Remember that I asked you, a few slides ago, to put a pin in that drop in the headboat CPUE. Before we remove that drop, the estimates of recent spawning stock biomass are much closer than we were before. If we use the old shrimp fishery bycatch, we get much closer in the beginning than we were before. If we then take out the headboat CPUE and use the old shrimp fishery bycatch, down here in the bottom right, we see that we get very close to where we were in SEDAR 38.

What do we conclude? We conclude that the shrimp fishery bycatch is driving the change in the R-zero and the initial biomass, and it's mostly the headboat CPUE that is driving the difference at the other end. If we take out the headboat, and we resort back to our old estimate, we get very close to where we were in SEDAR 38. Those are the two changes that are making the most difference in the assessment this time.

We're going to move on to diagnostics, and, as we saw in the last assessment, the likelihoods are not as stable as I would have liked to see them in the model, but the resulting trends are not very different either. Like last time, the model configuration and the observational data coupled together to have a consistent model, but not one that arrives at the exact same answer every time it's run when you jitter it. This was the case last time, and it's the case this time, which you would expect, using the same model configuration.

This does not make me happy, but it is what it is in this case, and that would be one of the first chores of doing an update. Why is this unstable? Remember that we can't always blame the model. We tend to do that a lot of times, and we start right at the end and say, well, there must be something wrong with the model, and, oftentimes, we forget to work backwards and say, well, wait a minute, maybe it's not the model, per se, and maybe it's the observational data that is not in agreement with each other.

I think what we need to do, in the next assessment, is not just worry about how we're modeling this data, but let's go back and see if we parsed out the data correctly, if we weighted the data correctly, and let's even take a step before that and review the GLMs that were used to arrive at the CPUEs and let's review those, and let's even take one more step back and go right from the beginning and examine, with great scrutiny, how this data was collected right at the dock, and are we using the data in accordance to how it was collected, and that's a very important question.

You can collect data for an age sample, and you can collect data for an age-and-growth study, and you can collect data for conditional age-at-length, and all of these would be collected in its own particular manner, but you have to make sure you're using the data in the model appropriately, in the manner in which it was collected.

The next assessment, we need to not only review the model, but we need to step all the way back and make sure that everything is in harmony with each other. Thankfully, the trend did not change though.

Profile analysis on R-zero, let's look at the upper -- First of all, you can see that there was conflict in the data. If you do a broad overview of these plots, you will see that some of the observational data pushed R-zero to small values, and that would be the surveys in the upper-right-hand plot, but, just below that, the ages wanted to push the R-zero in the other direction.

In the bottom-left, you will see that the lengths wanted to push the R-zero to small values and that the discards wanted to push it to the right, and so we have an obvious conflict in signals between the ages, the lengths, and the CPUE.

In the upper-left, what we see is, in general, we have a nice bowl-shaped R-zero, but, if you be honest about it, that is really just the middle of the conflicting data, and it came out at 8.9. However, you will see that it's really just a product of the one data source is pushing it very far to the right, and the other is pushing it very far to the left, and so, low and behold, you end up in the middle, and so don't be fooled by that. You will also see that the discards are driving a lot of that bowl shape as well, and this is why the model fitting surface is as flat as it is and not more of a definitive fit to the data.

A profile on steepness, remember that we fixed at a 0.9, but we still did a profile on it. If left to be estimated, the steepness did want to bound out at one, and, if you look at the upper-left-hand plot, you can see why. All of the general sources of data, the discards, the length data, the index data and so on, wanted to push that steepness as far to the right as it could.

If we look at the upper-right-hand, we can see that that's being driven a lot by the shrimp fishery bycatch. If you look, there's a difference. If you look closely at that small number on the Y-axis, you will see that there's a fifty-point difference made up for by the shrimp fishery bycatch and almost nothing made up by the discards of the headboat or the hook-and-line.

In the bottom-left-hand, you will see the same thing, that the length comps want to push the steepness to one, but the survey generally wants to push it to a small value, but there are also surveys that want to push it to the one, and so, again, we have conflicts in the signals of the data, and this is why I would, again, argue that we need a closer look at the data as well as a closer look at the model.

We'll look at the fit to the indices, and we had the hook-and-line in the upper-left, and we had the headboat indices, and, here again, you will see that drop that we are discussing, and the model tried to fit it as best as it could, but it was the only CPUE that dropped, and so it's not going to fit it exactly, but, for the most part, the directed fisheries show either stable the last couple of years or an increasing trend, and this is showing an increasing trend, but it was likely being dragged down by the decrease in the headboat CPUE.

The SEAMAP trawl data is an index of age-one fish, and so that's going to be driving the recruitment quite a bit, and then the SEAMAP plankton is an indicator of spawning stock biomass, and that's a common use of the plankton survey.

The fit to the length comps was not all that bad. The top histograms are females, and the bottom histograms are males. It's not what I would call a perfect fit, but it is a reasonable fit, and these are the length comps aggregated across all fleets. On the left is the SEDAR 38 and on the right is the SEDAR 38 update.

Since 1995 or so, the percent of the length data is the same data that was used last time, and that is we have so many years

of historic data that we are just carrying it over, and, with only an update of five years, you would expect a very similar fit to what we did last time.

Let's look then at the retrospective analysis, and, on the upper-left-hand panel, you will see the entire time series of SSB, and you can also see, from the view from a hundred feet, you can see that there was very little retrospective pattern to this data. If you focus in on the most recent fifteen years, that is blown up in the upper-right-hand panel. If you look very closely, there is a retrospective effect, but there is not exactly a retrospective pattern. That is there is not a unidirectional effect.

If you look down at the bottom-right-hand plot, that is the Mohn's rho, which is used now to quantify the retrospective pattern and to help make the decision that yes or no there is a pattern, and that ranges from a negative-fifteen to 0.2, the two red lines there. As you can see, the Mohn's rho falls very close to zero, and so you would conclude that there is no retrospective pattern to be concerned with in this model.

The fleet selectivities came out to be pretty much exactly the same as they were. Again, we assumed asymptotic selectivity for the commercial hook-and-line, and the rest were allowed to be freely estimated. Fish enter the fishery at around twenty-four centimeters, or that may be inches. It says inches, and that would be age-two. Then note here that we chose an age-zero selectivity, and only age-zero, for the SEAMAP trawl survey as well as the shrimp fishery bycatch.

An examination of lengths from those two sources showed that a very light bimodal distribution -- That there are not many age-one fish in there at all, but they are present, and you can see them moving through, but there's not enough of them, at this point, to where it should matter very much at all, but I would say that, like we did last time, it's something that should be investigated as perhaps being a mix of age-zeroes and age-ones.

Exploitation, SS 3 uses exploitation as a proxy for fishing mortality, and it's very simple. It's the percentage of fish available to the gear that are removed from that population. The exploitation rate on the far-right-hand corner, we were in the green zone up until around 1990, and we went above the FSPR threshold of 0.17 in around 1990.

It was overfished up until around 2000, or 1999, where the regulations put us back into the green, and now our fishing

mortality is very close to where we want it to be, just slightly below, a very good place. We saw that strong decline with the advent of regulations, and, again, we're currently very close to that 0.17 level.

As in SEDAR 38, we chose to fix the steepness at 0.99, because there was no obvious -- There wasn't even anything close to a stock-recruitment relationship, as you can see here. We ended up with no way to estimate the stock-recruitment curve, and it would have ended up bounded out at one anyway, as we saw, and so we're sticking with that assumption, and, if we look at the recruit deviations on the bottom-left, we see a somewhat cyclical trend, with the early portion being either average or below average, and then a period of above-average, sliding back down to a couple of years of negative, with some higher variance in the last couple of years.

That would be because we've had a very short look at those cohorts, and so we don't have as much information on those as we do the previous ones, and that's why the variance on those is higher.

We did have what looks to be a very strong year class in 2016, a low year class in 2015, and an above-average in 2014, again, and so those would be working their way into the projections.

Here, we are comparing the trends in recruitment from SEDAR 38 in the top panel and then the update, and, again, of course, because most of the data is the same, we're going to see very similar patterns. The new recruitment estimates are the large red dots on the right, and, as we saw before, the fluctuation between high and low recruitment. Because we had no information on that last year, it's going to fall right on the maximum recruitment line, or the R-zero, and this is where the recruits will be taken, and all the projections as well.

We're going to take a second look at the total spawning stock biomass, and we're on a generally increasing trend from about 1990, with a little dip, and I believe that would be because of some lower year classes coming into the fishery, as we just saw, but hopefully those don't last long, as that trend may be coming back up.

The differences between the two are shown in the bottom-right-hand panel, and we've pretty much already seen that, and the model suggests we're starting at a higher place, and, although we're ending up in a slightly lower place, we are still not overfished, still not overfishing, and we're pretty much where

we would like to be.

I want to add here that the 95 percent confidence intervals in that upper-right-hand plot are most likely deceiving. They are very tight there at the end. Unless you estimate all the parameters in the model, you are likely going to get that type of pattern, but, because steepness is fixed, you're going to get what I would call a misleading tight distribution around the final spawning stock biomass. That's not just this model here, but other models can experience this as well.

Finally then, almost, is the stock status, and, again, we're not overfished, and we're not overfishing, and we are pretty much in that sweet spot of our F is below MFMT, and our SSB over MSST is between our 1.0 and our -- Let's see. Our F at F 30 percent. Our F in 2017 is 0.84, with a confidence interval of 0.68 and 0.98. Let's go to the top.

The SSB in 2017 over MSST is 1.12, with a confidence interval of 0.98 to 1.26, and the estimated probability that the stock is not overfished is 85 percent. The F 2017 over MFMT is 0.84, and the estimated probability that overfishing is not occurring is 91 percent, and so, again, I think the stock is in a real good condition right now. If I was a manager, I would be very proud of myself that it's been managed very nicely, and we're right where we want to be, and we can, at the very least, maintain catches right where they're at and likely be in a very good position.

Overall, how has the stock changed since SEDAR 38? We're going to look at trends in the various management type quantities, and we have, starting from the left-top, the SSB panel, we have a larger virgin population size than we estimated in SEDAR 38. Consequently, on the upper-right-hand, we have a larger recruitment than we did in SEDAR 38.

In the bottom-left, we have increased exploitation compared to SEDAR 38, and, consequently, we have a decreased SPR in the middle and the bottom, and then, finally, if we look at SSB over SSB-zero, we are further depleted than we were before. However, we still remain not overfished and not overfishing.

Finally, let's move on to the projections, and the projections were made from 2021 to 2030. The exploitation rate -- Remember the last year of data was 2017, and, since regulations from this meeting were expected to start in 2021, we had to fill in 2018 to 2020, and what we did was carry the exploitation rate from 2017 over to 2018 to 2020.

The retained catch in 2018 to 2020 were arrived at by using that exploitation rate and exploiting the estimated stock size for 2018 to 2020. All future recruitments were equal to the maximum, the R-zero, and that is because we had a fixed steepness of 0.1.

The P value, P* value, that was used in the original assessment was 0.43, and we applied the 0.43 P* to the projections of the overfishing limit to arrive at the ABC. These projections are a P* of 0.50, and you cannot apply the P* value until after you've made the projections, and, in the bottom-right-hand corner, we see the table for the projected landings and resulting SSB over MSST for fishing at F current, F MFMT, and also F optimum yield. In this case, F optimum yield is the 85 percent -- Let's see. It's the spawning stock biomass at 85 percent of the target.

In the upper-left-hand panel, the red line, the red-dotted line, is MSST, and the black line is SSB at SPR 30 percent equilibrium. As we are so close to that line, if we maintain the current F, we stay pretty much where we're at, and, if we go to -- This projection is at 85 percent of SPR 30. That would be the green line.

The upper-right is the forecast of landings, and, as you can see, we could even increase the landings slightly, because of we're a little above where we need to be in SSB and a little below in fishing mortality, but, even if we keep the F where we're at currently, we should be in good shape and arrive pretty much right at our target.

This is the projected OFL and ABC from SEDAR 38, and that is on the right, and the SEDAR 38 update, fishing at FSPR 30, and using the same P* value of 0.43. The recommended, or the forecasted, ABC, in millions of pounds, is the far-right-hand column in the pink box. It's 10.47 for 2021, 10.6 for 2022, and 10.7 for 2023.

Because of the FES data increasing the stock size slightly, we compared those ABC to the ones arrived at in SEDAR 38 on the right, and we were closer to eight-and-a-half million pounds, and now the advice would be the ABC would be closer to 10.7 million pounds, give or take a few, and so the FES landings, and I suppose also the shrimp fishery bycatch, has given us a larger stock size, and so, consequently, the ABC has increased accordingly.

Then, finally, let's summarize. In order to maintain the use of

best available data, it was necessary to change three sources of the catch data: the headboat data, the charter/private data, and the shrimp fishery bycatch. The Gulf of Mexico stock is currently not undergoing overfishing, nor is it overfished. The stock size threshold is above the minimum stock size threshold, but below the benchmark of the SSB/SSB MSY proxy.

Forecasts indicate that maintaining yields at or below the 2021 overfishing limit of 10.89 million pounds in the near term will allow the stock to rebuild towards the SSB MSY proxy, but we're already very close to that.

Similar data and modeling challenges faced in SEDAR 38 are still evident in this update, and that is the conflicting signals in the data and the jitter analysis arriving at slightly different values, indicating that the fitted surface is a bit flatter than we would like.

I would end with, while updates in the catch data for 2018 and 2019 might increase the accuracy of the projections somewhat, really, to me, personally, without updating the indices of abundance, these updated projections would only be of limited value. I would rather see the CPUEs updated as well, and the length comps and so on, and that would, obviously, be superior to just making projections based on catch alone.

Research recommendations, and this is the last slide, I believe, are, obviously, migrating to the latest version of Stock Synthesis 3.30, and that would be the first and most straightforward thing to do. We need to investigate the reasons for these conflicting signals in the observational data, and these should include, but not be limited to, all the way back through reviewing the standardization of the fishery-independent indices of abundance as well as reviewing the fishery-dependent indices, to ensure that they are not being overly influenced by management regulations, and that is quotas, minimum sizes, and bag limits.

As all of you are aware, the more we regulate a fishery, the less reliable the fishery-dependent indices and data become for the stock assessment.

We should explore the use of other stock-recruitment relationships other than just fixing the steepness of 0.99, and this could be done with either an informative prior on steepness, based on hopefully some type of a meta-analysis approach or other similar highly migratory species in the Gulf, but getting away from the 0.99, or at least investigating that

would probably be high up on the research recommendations.

We need to take full advantage of the upcoming shrimp bycatch workshop. It's obvious, from other assessments, that we need to take a good look at that and make sure that we're satisfied with the methods that we're using, and this case is no exception.

We should take a more detailed examination of the effects of minimum size in the bag limit regulations on further research into the length compositions of discarded fish. I stressed, in the beginning, that getting these length comps of the discarded fish -- I realize it's difficult to get lengths on fish that are only onboard for a few moments and are thrown right back in, but, in getting a sample of those, we would benefit greatly.

Then, finally, we need to make assurances that there is an appropriate match between the sampling design of the biological data, how it's being collected, the ages, length, et cetera, and the assumptions of its use in the assessment model, and we touched on that before. If we're collecting data for an age and growth study, we have to make sure we're using that for age and growth. If we're collecting it as a random sample of ages from the fishery, then we can use those in an appropriate manner.

With that, I will -- You can begin the discussion, and I will entertain any questions that you might have about the assessment. Thank you.

CHAIRMAN POWERS: Thank you, Michael. I think that was very comprehensive in understanding what is going on. One little note though. If you would refer to Slide 39, in the bottom figure, all of these graphs are being shown in relation to MSST, and there's a tendency to think of this as a target, and I think one time you might have referred to it as a target verbally, and it's not really the target. It's the limit, and you make that distinction in the projections when you talk about ABC and that sort of thing, but that's something that people should be aware of, that the normalization that's being done here is relative to the overfished condition and not the target.

DR. SCHIRRIPA: Thank you, Joe. I was a little stuck in ICCAT mode, I have to admit, and one of the challenges, for me, was to keep straight the buffer and the target versus the overfishing limit, and thanks for pointing that out.

CHAIRMAN POWERS: Thank you. Are there comments and questions? I will begin with Luiz.

DR. BARBIERI: Thank you, Mr. Chairman. Michael, thank you for this very thorough and very good presentation. I really like the way that you walk us through a whole bunch of decisions and carefully present the stuff clearly to us. My question is about your slide, and I think it's Number 14, and can you clarify -- I am having trouble understanding how the FES, changes in the FES, impacted the headboat data.

DR. SCHIRRIPA: Yes, and so do a lot of people. That seems to be a popular question, and I will personally have to admit that, having not worked with this data as much as others, I compare what I have heard, and what I understand, but there may be other people that have a more clear explanation, but, to my understanding, we took -- I believe it has to do with discards mostly, in that more -- Maybe I don't understand it as well.

It's estimated using a ratio from another recreational fleet, and so it's really just about discards, and so the landings went down, because the discards went up, because the discard estimates are taken from another fishery. I suspect you will see this in other assessments as well, as it's handled the same way, and it's not unique to king mackerel.

DR. BARBIERI: Thank you. A quick follow-up, Mr. Chairman?

CHAIRMAN POWERS: Yes.

DR. BARBIERI: Michael, sure, but, by landings here, I mean, is this landings plus discards? Because what you have there is landings,

DR. SCHIRRIPA: Yes. I am going to -- I don't think I can give you as satisfactory of an answer as I should, and I'm going to punt that to people that are more familiar with the FES data migration than I am, and I apologize for not being able to answer that, and I should be, and I'm going to have to ask if anybody else has a better understanding than I do of this. I do recall that we saw it in the South Atlantic, and I believe we saw it in vermilion snapper as well, and so I think there's a very logical answer for that.

CHAIRMAN POWERS: Shannon, can you address this?

DR. SHANNON CALAY: I think I cannot fully answer this question, but I can say what I know, and then maybe it will ring a bell with Michael, and, if not, we can look into it more thoroughly, but this assessment is a bit unlike the other Gulf assessments. They made some different choices during SEDAR 38, and I believe

that one of them was that, in some cases, the discards were very small, and so, in some cases, they did lump dead discards in with the landings data, because they didn't have the length composition of dead discards.

Furthermore, with the discards of some of these components, and headboat is one, I do know, for a fact, that they have used one of the other FES recreational fleets to estimate ratios and then applied them to headboat, which leads to some unexpected trends here, and so that's how thorough I can get, if that -- We can look back into that and give you a better answer later during this meeting.

DR. BARBIERI: No, and that helps, Shannon. Thank you.

DR. CALAY: This is unusual, and I don't think there is another Gulf assessment that has handled the discards in exactly this way. Usually, we do use the discards from the individual fleets themselves more directly, and so it has to do with the discard components are quite small for king mackerel and the choices made during SEDAR 38 to lump dead discards with landings.

DR. BARBIERI: Right, and thank you, Shannon. That makes sense. I mean, basically, this is like a carryover from the actual SEDAR 38 that we haven't been able to resolve here in the update, for obvious reasons, and it represents an uncertainty that we can't properly account for at this point, and that's enough for me. Thank you.

DR. CALAY: Thank you.

CHAIRMAN POWERS: Thank you. John Froeschke.

DR. JOHN FROESCHKE: I guess I had the same question regarding that panel on Slide 14 for the headboats, and it does look similar to what was done with lane snapper, in that dead discards were part of that initially, because it was very low, but I'm still a little confused on that, and so any follow-up information would be appreciated.

CHAIRMAN POWERS: Thank you. Doug Gregory.

MR. GREGORY: Thank you. There's a couple of different things that I wanted to touch on, but, with regard to the headboat, this wouldn't be so problematic if it didn't have such an unsized, oversized, influence on the assessment itself. This is a small component of the fishery, and it's almost like you might be better off ignoring headboat landings and discards, if we

can't estimate them, but that's my concern, is that it's having an outsized influence on the assessment, being a very small component of the fishery.

The other thing that I wanted to touch on, if we can go to Slide 17, is -- You see the recreational private and charter landings and the big spike in the 1990s, and then it declined in 2000. In 2000, and 1998 was the trial survey, and then, in 2000, MRFSS officially went to a separate charter boat effort survey. That dramatically reduced the annual recreational harvest of king mackerel, to the point where, in the 1990s, the recreational harvest of king mackerel continually overran their quota, and they overran their quota because the system allowed charter boat catches to continue after the commercial season was closed or whatever.

My question is were those 1990 recreational landings calibrated to the new charter boat survey that started in 2000, similar to the way we're calibrating FES to the Coastal Household Telephone Survey? If they weren't calibrated, then this is a problem, and this is not real landings, so to speak, in the current currency, and so that's my question, if this was calibrated after the new charter effort survey was implemented.

CHAIRMAN POWERS: Michael, do you want to attempt?

DR. SCHIRRIPA: It's my understanding that the FHS calibration is included.

MR. GREGORY: What is FHS?

DR. SCHIRRIPA: I'm sorry. FES.

MR. GREGORY: No, that's not the question. We know FES is calibrated, but was the charter boat recreational landings in the 1990s calibrated to the new charter boat effort survey that was implemented in the year 2000?

DR. SCHIRRIPA: Yes, the charter method calibration is included.

MR. GREGORY: That's interesting, because that's a real anomaly, those high, high catches in those years, when the other sectors didn't have a similar large increase.

DR. SCHIRRIPA: I did speak correctly, and it is FHS, and that's the for-hire survey.

MR. GREGORY: Okay. That was my confusion.

CHAIRMAN POWERS: Shannon, do you want to add to this?

DR. CALAY: I was just going to confirm what Michael said.

CHAIRMAN POWERS: Thank you.

MR. GREGORY: My last comment, while I've got the floor, is, on the bycatch, and I appreciate all the different analyses that you did to explain the influence of the bycatch, and I understand bycatch estimation has always been problematic, and we should put our hats off to Scott Nichols for all the preliminary research that he did on it, but it's still problematic, and, similar to my concern about the headboat having an outsized influence on the assessment, the bycatch estimates seem to have an outsized influence on the assessment as well.

I know you said the methodology changed somewhat, but it's really hard to understand how the bycatch estimates could increase as much as they did between the regular assessment and this update when the modeling probably didn't change that much, and the current estimates of bycatch, in the last four years since the assessment, have been very, very low, 400,000 fish or whatever, and not 1.9 million, not even close, and so that's another concern I have, but I appreciate all the extra analyses that you apparently did to try to explain what's going on with that. Thank you very much.

CHAIRMAN POWERS: Thank you.

DR. SCHIRRIPA: Can I address that, Joe?

CHAIRMAN POWERS: Yes, and go ahead.

DR. SCHIRRIPA: I just want to clarify, Doug, that the headboat landings -- They don't have too much influence. What has the influence is the headboat CPUE, and I don't know if that's what you meant or not, but the headboat landings, in the grand scheme of things, because they make up such a small portion, are not too influential, but, as I tried to demonstrate, it's the headboat CPUE, just as a clarification.

CHAIRMAN POWERS: Yes, but, to that point, and that was my question, is have those differences in catches somehow affected how the CPUE was standardized? That translation of the catch and effort data from the headboat survey to a CPUE standardized for the headboat survey -- That translation, what went on there,

that caused, that might have caused, the decline in CPUE in the last few years. If you can answer that, go ahead.

DR. SCHIRRIPA: Yes. Because the CPUE is based on direct observations of the logbooks, without any estimation or anything, it should not affect the CPUE.

CHAIRMAN POWERS: Okay. All right. Harry.

MR. BLANCHET: Thank you. To follow-up on the question about Figure 14 on the headboat, is that -- Rather than that being landings, should that be harvest that is being shown there?

DR. SCHIRRIPA: I am not really certain. I can check on that.

MR. BLANCHET: Okay. Also, in the clean-up phase, in that I guess it's Figure 39 that Joe had mentioned earlier, that what you're showing is the status of the SSB compared to the limit, and could you add what the target is? Basically, right now, we're supposed to be at SSB at MSY, I believe is our target, and could you add a line in there to show what that target is? I think that would help with communicating current status better.

DR. SCHIRRIPA: Okay.

MR. BLANCHET: But neither of those was the question that I had.

DR. SCHIRRIPA: That would be the upper-left-hand panel here. Go ahead.

CHAIRMAN POWERS: When you said the upper-left-hand panel, they're all right-hand panels, and they're just panels. Anyway, in terms of presenting this to the council, it would be nice to have another horizontal line in there, to either redo the graphs and rescale it or just put in another horizontal line.

DR. SCHIRRIPA: Okay.

CHAIRMAN POWERS: I would probably suggest that that should be done for the executive summary, and probably more so important for the executive summary, which we'll get into a little bit later as well.

DR. SCHIRRIPA: Okay. Will do.

MR. BLANCHET: The real question that I had was something that Doug brought up, and that was the issue of the shrimp bycatch. The real impact of that is all in that -- It's driven by those

not very well-defined old bycatch estimates from the 1990s and before that set the -- That really elevate what that R-zero was.

You mentioned an upcoming shrimp bycatch workshop, and when is that going to occur, because that really does seem like -- I mean, I saw the work that was done, and, honestly, I could not understand a whole lot of it, because it was a pretty brief paper, and maybe I couldn't wrap my head around it, but it seems like addressing that is really important.

I understand that this has always been an issue with king mackerel, and I remember discussions similar to this way back in the day, but I have a hard time with the effect of that very poorly characterized thing from back in the day having that much of an impact, and I will let it go at that.

DR. SCHIRRIPA: Okay. I am going to go ahead and -- Shannon has her hand up, and I guess she has a comment on that question.

CHAIRMAN POWERS: Go ahead, Shannon.

DR. GALLAWAY: I would like to interrupt. I am trying to raise my hand, but it doesn't register. Bernie, am I on the right -- Did I join as a member, or what's my problem?

MS. BERNADINE ROY: You're in the right spot, and I'm not sure why it isn't working.

CHAIRMAN POWERS: I will remember that you're on the list, Benny. Shannon, did you want to address something related to this?

DR. CALAY: Yes, and so we started, just this -- I guess last week now, but we started, last week, with our first meeting of a committee of members of the Southeast Fisheries Science Center, the SSC, and council appointees as well, and academics, to review all of the shrimp bycatch estimation procedure, and, as Michael said, we were unable to exactly reproduce the SEDAR 38 shrimp bycatch estimates, and, furthermore, we don't have a document describing how those estimates were made.

We chose to default to something that has been reviewed and is reproducible. That being said, we have questions about how shrimp bycatch is calculated, and that's the whole point of these workshops, which will continue throughout the year and into the spring, and the deliverable for those workshops is a best practice. That's what we intend to do, is produce a document describing best practices for shrimp bycatch

estimation.

CHAIRMAN POWERS: Thank you. Harry, any other follow-up?

MR. BLANCHET: I think I have some other questions, but I will let somebody else chime in right now.

CHAIRMAN POWERS: All right. Thank you. Ryan.

MR. RINDONE: Thank you. Michael, I was just going to echo adding in an SSB at MSY line for the lower-right plot there, for council purposes.

CHAIRMAN POWERS: Benny.

DR. GALLAWAY: Thank you. Michael, it's good to hear from you again, and it's been a long, long time. It seems like we were talking about the same issue with a different species.

DR. SCHIRRIPA: Indeed.

DR. GALLAWAY: If you go back to the bycatch graphic showing the stock assessment and the update graphic, the comparison of the two, and I think Shannon may have answered some of my question, but it's the big difference in the early years, and you couldn't find how the early years were estimated, or it wasn't documented, and is that correct, as a starting point for our discussion? The graph I am looking for is the bycatch-specific graph, and I didn't jot down the number, and I'm sorry.

DR. SCHIRRIPA: I believe it's 19.

DR. GALLAWAY: Prior to 2008, the differences are remarkable, and the SEDAR 38 estimates were not documented, and you have no idea, basically, how those were generated, and is that correct?

DR. CALAY: It is correct, yes. Unfortunately, the actual estimates that appear in the SEDAR 38 stock assessment, we do not have a corresponding document.

DR. GALLAWAY: Okay, and then, for the present estimates, as I understand it, the main changes were incorporating estimates of uncertainty varying nets per vessel, rather than using the average value, and separating the observer data into BRD and non-BRD datasets, and so, for the previous estimates -- These changes were made from the original Nichols approach, and is that correct? This was Zhnag and Isely's modifications to the prior method, and I was wondering how the SEDAR 38 update model

compares to the previous Nichols model without these modifications.

DR. CALAY: I know that Dr. Zhnag did look into that, and I can review some information that he gave me and see if I can provide an answer to that question.

DR. GALLAWAY: Then, from our meetings yesterday, and from the paper itself, it seems like there's a very strong recommendation from Zhnag to separate the modeling data into two periods, that for which we have good data and the early period, 1972 to 2007 or 2008 or so.

If one looks at the estimates that are generated in SEDAR 38 and looks at the confidence intervals, they are just off the charts, and, as was pointed out, the uncertainty is very high in that early effort, and we should focus on getting the best estimate, or agree on what is the best estimate, for the early years and then use that estimate and go forward with the years for which -- - There's nothing we can do, analytically, to offset the problems with the early datasets, and that's been put in print by everyone since Nichols, and so I would suggest that --

I think that will be a recommendation coming out of the bycatch workshop, and so I would like to see what the original model, before you divided it up into BRD and non-BRD datasets, et cetera, et cetera, et cetera, how that compares to this, and are the confidence intervals still off the charts? My question is, is the original -- Using the Nichols original model, without the modifications, is that available somewhere?

MR. GREGORY: I think I can answer that.

CHAIRMAN POWERS: Go ahead, Doug.

MR. GREGORY: If you go back to 2004 or 2006 documents, SEDAR 7, SEDAR 9, and clearly red snapper was the first species that bycatch was being addressed in detail, and SEDAR 9 was a data-limited stock assessment of vermilion, gray triggerfish, and I think greater amberjack.

At that point, Scott Nichols tried to use this Bayesian estimation process with the data-limited species, and it didn't work, and he used king mackerel as an example of data-limited, to compare with his red snapper analysis, and so he found that he could not make annual estimates of bycatch, and so he stumbled across this idea of taking the median catch of the time series, and I don't know how it's done, but somehow taking that

median and combining it with other data to get annual estimates of bycatch.

He got a median value for each year of the time series and then took the median of the medians, and that's where the red line comes from. The only difference between what the bycatch people do and what Michael did is the Center, Michael's group, didn't use the first three years of the data series, 1972, 1973, and 1974, and we all know, that has worked with the 1972, that it's always been a crazy year. It was the first year of the survey, and I don't know why it hasn't been chopped off years ago.

Scott Nichols did not do a king mackerel bycatch estimation this way, and there is no direct model that we can compare to what was done by Zhnag and Isely, but these workshops that NMFS is doing on this should resolve the issue at the end of this series of workshops, and so, in another year, I think your question, Benny, will be resolved, but, right now, it's kind of up in the air, and I don't know why, and that was one of my original concerns, why this methodology is being used in this assessment, and apparently it was used in 38 in some manner.

In the 2008 assessment, SEDAR 16, the old GLM and delta log normal approaches to bycatch estimation was used, and I do know that they were using this Bayesian approach in vermilion years ago, because I remember that somebody from National Marine Fisheries Service kind of not being happy about the way that particular assessment went years ago, and I don't know what assessment that was, and so we're kind of in a new territory.

I think the bottom line is there is no old model to compare it to, particularly since we don't know how the SEDAR 38 benchmark assessment was done, but I assume it was done similarly.

DR. GALLAWAY: This modeling effort that was done is the old model, with several modifications, and so, if you just use the old model without those modifications, you can get the answer I'm looking for, wouldn't you, or am I forgetting something?

MR. GREGORY: I don't know. Thank you.

DR. SCHIRRIPA: First of all, Doug, we used the super-year approach both in SEDAR 38 and in this, and that is the median is used for the entire time series, because we didn't have faith in the year-to-year estimates, and more faith in the median, and so the median value of 708,000, versus the median value of 1,998,000 was used, and then it's effort that actually drives the bycatch.

This is why the migration to 3.3 is probably going to take a different approach, because it has explicitly in there a bycatch fishery, and that is a fishery that kills fish, but does not contribute to the catch, and so we are using the same method, and it is the same super-year method that was used before, and we do take the median, the one median value, for the entire time series.

CHAIRMAN POWERS: Thank you. David, were you going to talk about this subject?

DR. CHAGARIS: No, and my question was about something different.

CHAIRMAN POWERS: All right, and let me go to Shannon. Is it on this same subject?

DR. CALAY: Yes. Thank you. Michael's intervention is correct. We did use a super-year approach in SEDAR 38 and in this assessment, and so what we have is a median that is the median of the annual median, and we fit that to approximate the magnitude of shrimp bycatch across the time series. We also fit to an effort series, which controls the trend in the shrimp estimates, and so it's not a constant, necessarily, across all years, and it does vary by year, and it's informed by the median and the shrimp effort trajectory.

I did want to point out that Zhnag did run several comparisons, to try to determine whether the magnitude of shrimp bycatch was similar to Scott Nichols' SEDAR 7, actually, estimates. It was a red snapper assessment, but it contained king mackerel estimates as well, and he did find that they were similar to Scott Nichols -- The magnitude of Scott Nichols' estimates.

He did run several different types of models at different assumptions, and we agree that the uncertainty is quite large, but that the magnitude of these SEDAR 38 update assessments are more similar to Scott Nichols' estimates than they are to what was in the original SEDAR 38 model, which we cannot duplicate, and so I hope that's clear. That's a lot of information.

CHAIRMAN POWERS: Thank you. Anything else on this subject, before we move on? Harry, did you want to talk about this subject?

MR. BLANCHET: I think it was Figure 22, and the indices, updated indices, of abundance and shrimp effort. The upper-

right-hand label, should that -- Rather than be CPUE, should that be labeled as total effort or something? It looks like that's not a CPUE graph. That's just a note.

DR. SCHIRRIPA: No, that's the -- I am not certain -- It's updated indices and shrimp effort, and the upper-right-hand panel does say shrimp -- I'm with you. Okay. Yes, you're right. That should say "effort". Okay. Thank you.

CHAIRMAN POWERS: All right. Thank you. David Chagaris.

DR. CHAGARIS: Thank you. Michael, my question pertains to the effective sample sizes, and we see this over and over again, where the composition data is input as the number of fish measured, where probably a better value would be number of samples from which those fish came from, and I know you said that you did the reweighting, and it didn't make much of a difference, but I am curious. How often did you have to apply the 100 cap to the composition data, and what were the effective sample sizes that were input for the indices of abundance, just for comparison to that 100 cap?

DR. SCHIRRIPA: Okay, and so thanks, Dave. I am looking at the data file right now, and the 100 had to be used -- Wait a minute. If Microsoft gives me an update now, I'm going to -- 100 did have to be used, as I'm looking at the data file, pretty extensively. I apologize, but what was the second part of your question, while my file is loading here?

DR. CHAGARIS: I am curious what the effective sample sizes were for these indices, for comparison.

DR. SCHIRRIPA: Well, in the indices, we don't use sample size. We use the CV on the -- Just to be clear, if the sample size of the lengths was greater than 100, then 100 was used. However, if the sample size was less than 100, that value was used. So we do capture the year-to-year variation.

DR. CHAGARIS: Except for when the cap is applied.

DR. SCHIRRIPA: Well, yes. Correct. For instance, if we only had a sample size of nine, that was used, and so that year shouldn't count for much in the fit.

DR. CHAGARIS: Right, but, if you had a thousand fish, but they only came from three sets, or three trips, that should have a much lower sample size than the 100 cap that gets applied. I'm just curious, because we see this a lot, and I'm wondering how

the relative influence of the composition data versus the index data, in general, across multiple assessments, how that interplay is working, and then to what extent are we losing some of the interannual variation in sample sizes by applying that cap, versus taking like a square root or something like that, that would still maintain some of the differences?

DR. SCHIRRIPA: Like I said, there was a workshop just on this particular topic, and, if I had to do this assessment over, god forbid, but I would go up to the -- I would refer to the latest studies on this and see. You're absolutely right that it should be the number of trips sampled and not the number of lengths, because, as you point out, one trip could account for lots of lots of lengths, when in fact it's not an adequate sample of the fishery, but it's an adequate sample of that particular trip, and so I agree with you that it should be number of trips.

DR. CHAGARIS: Thank you, Michael.

DR. SCHIRRIPA: Thanks, Dave.

CHAIRMAN POWERS: Thank you. Any other questions or comments? All right. Should we move on then to whatever recommendations we're making? If you refer to the scope of work, we have to --

MR. RINDONE: Dr. Powers?

CHAIRMAN POWERS: Yes.

MR. RINDONE: We have Ms. Emily Muehlstein with the Something's Fishy analysis that we do for each of the stock assessments, and so I think it's probably appropriate to have her share that before you guys get into your recommendations to the council.

CHAIRMAN POWERS: Okay. I'm sorry. Thank you then. We will go ahead then.

SOMETHING'S FISHY

MS. EMILY MUEHLSTEIN: Sure. I will go ahead, and so we've got it pulled up, it looks like. I am just going to give you a quick overview of our Something's Fishy tool for king mackerel. Just sort of as a refresher, this is a tool that the council uses to gather information on a fish stock from active fishermen on trends or sort of unusual occurrences that science and managers might not have observed.

Just internally, as a little update here, we do plan to conduct

one of these efforts ahead of each assessment, and we have been doing it, but it's been a while since the SSC has heard the summary of one, and so, in addition to presenting the results to the stock assessment scientists while they are conducting each assessment, we also plan to share the results with you each time you review an assessment, and so that's why we're doing this right now.

Then, also, sort of to help legitimize the tool and sort of explain a little bit about how it works and how the analysis takes place, I think we will try and give an overview presentation of the Something's Fishy tool to the SSC at a future meeting.

For kingfish specifically, we gathered responses from September 6 through October 6 in 2019, and then we generated a final report and emailed it to all of the stock assessment scientists that were working on king mackerel in February of 2020.

We didn't get a ton of response for this one, and we had forty-seven respondents, and they were allowed to self-identify with a sector, and, as you can see, a majority of respondents identified themselves as private anglers.

We analyzed the sentiment in two ways. We manually analyze sentiment with two readers, who independently classify each comment as positive, negative, or neutral, and then the two readers resolve any discrepancies to come up with a final analysis, and then we also perform automated sentiment analysis using R statistical software with a package TidyText, using a revised bing lexicon library.

In this case, manual classification found that most comments indicated a negative trend in stock health or abundance, and the automated analysis did show a minor trend towards positive comments.

This is probably one of the most useful things that we got out of this particular analysis. As you can see, the positive perception of stock sort of occurs off of peninsular Florida, as well as off the Texas coast, where the negative perception of the stock was expressed in the central and northern Gulf. Now, respondents could report observations for one or more grid location, and so we did have seventy-two reports for locations, even though we only had forty-seven respondents.

The automated analysis showed the most frequently used words, and you can see that here in both the bar chart as well as this

word cloud. Sort of based on the words that came out of the most frequently words for both contribution to negative and positive sentiment, they indicated that, while potentially some anglers are seeing more large fish, overall, there might be a decline or a negative perception of abundance across the Gulf.

Then, finally, the manual analysis is able to pull out some themes, and we did find that respondents in the central and northern Gulf indicated that the mackerel stock was in decline. We found that anglers indicated that the positive trends in stock abundance were occurring off of Texas and the peninsular region of Florida.

We also noted that many of the negative comments specified that there was a lack of bait, and that was driving the observed decline in the stock, and the positive comments seemed to indicate that fish were larger than normal. I think that's all I had for that one, and I will take any questions, if you have any. Thanks for the time.

CHAIRMAN POWERS: Can you go back to the previous slide? I have a question. What was the question being asked that got the response about the lack of bait? I don't understand.

MS. MUEHLSTEIN: That's a great question, and I think it's part of the reason that we want to sort of talk to the SSC eventually about the tool itself, and so, because we are limited under the Paperwork Reduction Act, we can't ask any -- We can't solicit any specific feedback, and so the tool, when it's built, simply asks for the angler's association with the fishery, and so which sector that they identify with, and then it asks for any general observations that they are seeing about the stock, and that is as specific as we can get without sort of having to get into specific survey regulations. Then it asks the respondents to identify the location. There wasn't any call, specifically, that would have prompted that response, but it's just a general observation of the stock and perception.

CHAIRMAN POWERS: Well, I guess my question is really does lack of bait mean lack of bait for fishermen to use for bait or lack of bait for mackerel to use as food, and I'm not sure exactly what --

MS. MUEHLSTEIN: Based on the comments, it was a lack of baitfish being available for the fish to eat as food.

CHAIRMAN POWERS: Okay. Thank you. Ken Roberts.

DR. ROBERTS: The question I have is why one month that the system was open to the public, the September to October, and what's the basis for choosing such a short period of time? Is that characteristic of what is going to take place in the future applications of this approach, or was it done for economy of purposes, to only do a month's worth of information? Thank you.

MS. MUEHLSTEIN: Thank you for your question. We perform one of these efforts prior to each assessment, and that includes both the update assessments and sort of standard assessments, and it's just sort of part of what we have been doing, is we allow for comments for one month, and so it's just we standardize that across all of these efforts.

DR. ROBERTS: Okay, and so, to follow-up then, the observations they are reporting are for some period of time and not just that thirty days, and is that correct?

MS. MUEHLSTEIN: Yes, and so the tool itself asks for observations over recent years, is the actual wording that we use.

DR. ROBERTS: Thank you so much. I appreciate it.

CHAIRMAN POWERS: Thank you. Michael.

DR. SCHIRRIPA: Thank you. Two comments. I think this is really useful, and I would recommend that you keep this as one document, and like every year being a chapter, because years are not independent of each other, and you may see lots of small fish, observations of small fish, in one year that would affect the population a year or two later, and it would be nice to have that all in one place.

Comment Number 2 would be it might be helpful to engage the stock assessors in the formulation of these questions, and there might be very good questions that could be used in the stock assessment, and better than other questions, and so I might recommend that you engage a stock assessment person, or two, when building the survey questions. Thank you.

MS. MUEHLSTEIN: Thanks, Mike. Prior to each assessment, actually, we have been trying to engage the assessment folks. The first time we did this, we did it with red grouper, and we were able to ask some specific questions about red tides and discards, and, truthfully, we sort of are skirting the regulations of the Paperwork Reduction Act, and so, since that effort, when we sort of got a little bit of advice that maybe

that was not the legal way to do it, we have been dialing it back to just ask the general question.

Now, I will say that I did give an overview of the tool itself at a meeting last week, and what I did make clear is sort of, in our future efforts, one of the things that we're working to do is trying to gain clearance from the Paperwork Reduction Act that would allow us to expedite the addition of questions that the assessment scientists sort of specify that they need information on, and so it's definitely something that I have on my radar, but it's just not something that we've been able to do. We have only been doing this for about two years, and so we're really trying to hone it and make it better as we move forward.

CHAIRMAN POWERS: Okay. Thank you. Ryan, to that point?

MR. RINDONE: Thank you, and, Michael, we had reached out originally to Matt Lauretta, and I guess the connection back to you somehow fell in the crack somewhere along the way, but we did get pretty good input from Matt, and we had a lot of back and forth over a few phone calls about what specifically to ask, and, like Emily said, we're going to try to see how we can improve that process specifically, but we will continue to keep the Science Center involved on the front end.

CHAIRMAN POWERS: Thank you. Benny Gallaway.

DR. GALLAWAY: My question has been answered.

CHAIRMAN POWERS: Thank you. Paul Sammarco.

DR. SAMMARCO: Thank you, Mr. Chairman. The last few talks have been very interesting, and there's a lot of very interesting data and good solid stuff to rely on. On this last analysis, a quick couple of comments, and the first is that it is, of course, a small sample size, and there's not too much you can do about that, other than throw out more flyers, as usually the return is low, but the other thing is that it is -- Most of the questions have been answers of perception that are not -- If you compare Michael's talk with this one, Michael's talk is very hard, or it's hard data to get, and this is more soft data.

My thought would be that, when we're to use these data as they have come in, to use them to temper the first set of data and to take two steps back and say, ah-ha, these are the perceptions that are out there, and the rest of the hard data is probably what's really going on, and how do we deal with that, and so

that's just a couple of thoughts that crossed my mind. Thank you.

MS. MUEHLSTEIN: Thank you, Paul. I do think that the idea here is that you can sort of groundtruth some of the trends that you're seeing in the hard data, or, if there's an opportunity to look at projections, when there's some uncertainty there, that this data might give you a better idea of what the fishermen are perceiving in recent years, when the terminal year of an assessment is a few years in the past, and so I think you're dead-on with the sort of idea of how this tool should be utilized.

CHAIRMAN POWERS: Thank you. Andrew Ropicki.

DR. ROPICKI: I just wanted to ask, really quickly, if there's any thought to changing the title on Something's Fishy to something more generic, where -- If you're going to do this positive/negative analysis, it seems like titling it Something's Fishy is you're asking for issues with the fishery, and you might be biasing the results towards negative opinions.

MS. MUEHLSTEIN: That's a reasonable point, and we hadn't sort of thought about it. Really, from a communications standpoint, that title just came out, because it's kind of catchy and quirky, but certainly, as we sort of look into improving the tool further, that is absolutely something that I will consider.

CHAIRMAN POWERS: Thank you. Anything else on this subject? If not, the next thing on the agenda was actually the review of the executive summary, but I would want to go ahead and go through our recommendations for king mackerel, the best available science and ABC and ACL and those sorts of things, overfishing limit, and I would like to begin that discussion now, before we get to the executive summary, so that it may affect what modifications might be for the executive summary.

With that, I would open the floor and remind people, in terms of the scope of work, what is being asked of us in terms of this. Can you put up the scope of work, real quickly, and then, Luiz, you can mention -- I will give you the floor.

SSC RECOMMENDATIONS

DR. BARBIERI: I just have a quick motion to offer regarding the assessment results in general. Let me know when you're ready.

CHAIRMAN POWERS: I just wanted to put the scope of work up

there, just so people realize what it is that we're trying to address, but go ahead.

DR. BARBIERI: The SSC determined that the SEDAR 38 update assessment of Gulf of Mexico king mackerel represents the best scientific information available, and, based on assessment results, the stock status is not overfished and not undergoing overfishing.

MR. GILL: Second, Mr. Chairman.

CHAIRMAN POWERS: Thank you. All right. Is there any objection to deciding right now, and we have plenty of time for discussion, I guess. Is there any objection to this motion? Will Patterson, do you have discussion?

DR. PATTERSON: I just have a friendly recommendation here to insert the words "estimated to be" between "not" and "overfished", or, actually, the "not" should come after the "be". I'm sorry.

DR. BARBIERI: Friendly amendment accepted, Mr. Chairman. Thank you, Will.

CHAIRMAN POWERS: Doug Gregory.

MR. GREGORY: I still have difficulties. This is an update, yet we changed the catch data for recreational dramatically, and I think the assessment says that it increased by 102 percent. We changed the bycatch estimation, all contrary to the rules of being an update assessment, and, with these changes, this should have been a benchmark assessment. I think maybe, going forward, other species that incorporate FES should not be done as updates, and so I'm going to oppose this motion. Thank you.

CHAIRMAN POWERS: Ryan, to that point?

MR. RINDONE: Thank you, Mr. Chair. Based on the work that was done for this assessment, if we were thinking about the way that we've done SEDARs in the past, this would not be considered a benchmark, and this would be more on a standard level, in that some of the retooling had to be done for shrimp bycatch, which would have deviated from just a strict update, but, however, like Dr. Schirripa had stated, some of these changes were unavoidable, and that includes the use of the MRIP-FES data, which are considered by NMFS and the Science Center to be the best scientific information available, and, in the case of this species, for many states, and for much of the time series, it's

the only information available, and so the use of those data was requisite to doing this assessment at all.

CHAIRMAN POWERS: Thank you. Benny.

DR. GALLAWAY: I too will vote against the motion, because I object to using a median for the entire time period, versus using an estimate since 2008, which is represented by high-quality data, separate from the early years of 1975 to 2008, which probably should be broken into two additional segments, including not only BRDs, but the use of TEDs and the increase in observer effort, and I'm just not satisfied that the estimates are the best available on the bycatch. Thanks.

CHAIRMAN POWERS: Thank you. Shannon.

DR. CALAY: I think Ryan pretty much said what I would have. The only thing I will add is that update assessments essentially are not part of the SEDAR process any longer. Instead, now we'll do operational assessments and research track assessments, and the operational can range from something approaching a strict update all the way through a more advanced assessment, but this one is a little unusual, in that it got caught back in that old nomenclature of the strict update assessment, but what Ryan said is true, that some of the data series we no longer support, and so it was basically required that we update the FES estimates. That, we don't think, necessitates a research track assessment, but it should be, in the future, called an operational.

CHAIRMAN POWERS: All right. Ryan, if this were voted down, if there was no recommendation made about best available science, about this particular assessment, what would happen? What would become the default?

MR. RINDONE: Well, I would compel you all to try to figure out where the shortcomings are and to work with Michael, in providing him with recommendations of what you would like to see revised, so that those revisions could be explored and then brought back to you for additional review. In the meantime, the status quo would be maintained.

CHAIRMAN POWERS: Thank you. Doug.

MR. GREGORY: Notwithstanding the virus that's causing us all to meet virtually, the trend with SEDAR is to have fewer meetings, but maybe we're all learning how to meet virtually more effectively, but, during the process, and I assume operational

assessments will have an ongoing series of assessment webinars, with SSC participants and others, and that would resolve the issue we have here, for me.

In other words, here, we have no choice to really ask questions like we normally do in an assessment workshop and have them evaluated and resolved, and so we're almost faced with an all-or-nothing situation, and so my question is, if we're not doing updates anymore, and we're doing operational, what is the gray snapper assessment that we're looking at terms of reference for? I don't see the gray as operational or update or standard there, and so what assessment is the gray snapper assessment going to be?

Clearly the red snapper one is a research track, but, so that we can guide our guidance for the terms of reference on gray snapper, is that an operational, and maybe we need to be reminded of what is an operational assessment now, because we've gone from benchmark/standard/update and the new research and operational, and I just worry that, as time goes on, the SEDAR process is getting less transparent and less thorough than even what we used to do prior to SEDAR. Thank you very much.

CHAIRMAN POWERS: Thank you. We're really talking about definitions of what assessments are and things like that, and let's focus on, at this point in time, what the motion is, in terms of whether or not we can make statements about overfishing and overfished specifications. Paul Sammarco.

DR. SAMMARCO: Thank you. I think it was Benny who made a comment about the use of medians to work through some of the data, and I would sort of agree with him that it's not the all-time most powerful technique or accurate technique to use, and it has its points, but I would say, offhand, that the data that we have, and the rest of the data surrounding that, are probably strong enough to be able to move through that and allow the acceptance of the motion.

Then perhaps, in the next year, or coming years, whatever, we should shy away from that particular technique and use something a bit more robust, and there are many indicators, or many parameters rather, that one could use, and so, on that basis, I would say it's within our purview to approve the motion. Thank you.

CHAIRMAN POWERS: Thank you. Julie, is it on the motion or just about organizational things?

DR. JULIE NEER: Actually, I will withhold my comments until we get to gray snapper, where we can talk about what an operational is, and I agree that you should focus on this topic. Thank you.

CHAIRMAN POWERS: Okay. Michael Schirripa.

DR. SCHIRRIPA: Thank you. I am probably walking a thin line entering into the SSC discussions here, and so I will tread lightly, but I just want to make clear that there were terms of reference outlined for this assessment, and, to meet those terms of reference, like I believe this effort did, and then to draw the conclusion that it does not represent the best available is a bit contradictory.

If it did meet the terms of reference, then, sort of by definition, it did use the best available, and it did meet the terms of reference, and so I don't think you can have it both ways. I think, if you're going to ask for something, and it is addressed as it was asked -- I think it could be a bit contradictory to then say, well, it's not the best available and the conclusions, the results, are not adequate, and so that's all I will say for the rest of the discussion. Thank you.

CHAIRMAN POWERS: Thank you. Luiz.

DR. BARBIERI: Thank you, Mr. Chairman. I can defer to Shannon, if she has a comment that is specific to what Michael just said. Is that it, Shannon?

CHAIRMAN POWERS: Shannon.

DR. CALAY: Essentially, I was going to say that there are two major changes to this stock assessment, and they are the FES estimates, which NOAA considers best available science, and the shrimp bycatch, which, unfortunately, we could not reproduce, and so the only option you would really have for shrimp bycatch, other than what was done, was to retain the former median, and, frankly, since we cannot reproduce that work, and it is not documented, we would not recommend that.

CHAIRMAN POWERS: Thank you. Luiz, again.

DR. BARBIERI: Thank you, Mr. Chairman. Well, I just wanted to bring this up as points of discussion for Doug and Benny. I understand your concerns, and I am trying to think here on the practical implications of these decisions here and thinking.

When you look at the trajectories of biomass and fishing

mortality there, you don't see things that are too different than what we have found in the SEDAR 38, outside of the scaling factor that has already been explained, and so, yes, there are things that are imperfect with this assessment, and I think that this process, or review, that we are providing now is helpful in identifying what those imperfections, those uncertainties, are and then making recommendations, going forward, perhaps to speed up the process of a, I guess, research assessment for king mackerel, and that we try and deal with some of these issues that are complicated and complex and not easy to resolve.

I doubt that, within the update-type framework, and I guess this is a question for Julie and Shannon as well, whether Michael could go back and completely redo methodologies to account differently for the shrimp bycatch and then bring this back to us during the next six months or thereabouts.

Yes, there are serious issues, and we've had those come up with different assessments, and usually we review them, and we identify what the problems are, and we make recommendations to the Science Center and the SEDAR Steering Committee to perhaps upgrade those assessments, the next ones, to be a research, dealing with those issues in more detail, but I am not sure that we can handle this outside of that process, given the complexity of what we're dealing with. Thank you.

CHAIRMAN POWERS: Thank you. Benny.

DR. GALLAWAY: Shannon, in response to your point, I wasn't advocating using the previous median from the 38. What I was doing is just following the author's recommendation that said, you know, we need to revisit this estimate and divide it up into at least two periods, and, given the impact that the bycatch has on the overall assessment, I think that needs to be done as well.

CHAIRMAN POWERS: Kai.

DR. LORENZEN: While I sort of share some of the concerns about the shrimp bycatch issues, I also think that we really should have a separate analysis of that taken forward, in maybe some type of research track process, but, in this particular case, I mean, it's really just scaling the estimates, and so I am good with it for the current assessment, as it is.

I also wanted to comment on this idea that -- I don't quite agree with Mike's point that -- I don't see that, as long as the assessment does what is asked in the terms of reference that

we're more or less bound to declare it the best available science, and I think it would very much still depend on the actual assessment results, and so I don't think that's a foregone conclusion. Thank you.

CHAIRMAN POWERS: Thank you. Jim Nance.

DR. NANCE: I am going to speak in support of the motion. You know, it's one of those things that, if we have an old estimate of bycatch, really that was undocumented and can't be reproduced, we need to use the method that has been used in the past to come up with our estimates. I think, as has been pointed out, we have a working group that's ongoing now to come up with more refined methodology to be used in bycatch estimation, and, once that's done, then we can start to use that more refined method, but, until that's done, I think we need to go back and use what has been done in the past. Thank you.

CHAIRMAN POWERS: Thank you. Will Patterson.

DR. PATTERSON: Just to follow-up on what Kai said there, I think sometimes the terms of reference are so specific that the analysts, or the analytical team, has to do exactly what is said, and, in that case, there's no wiggle room for interpretation, but you can address a term of reference, but use a different methodology in doing so, and I think that's where that kind of gray area can come in, and so, anyway, I don't want belabor the point, but I see what Mike is saying, and I agree to an extent, but there are some places where you can deviate from what was done previously and interject a new methodology, which isn't specifically asked for in a term of reference, that the SSC could then find to be not the best available approach.

CHAIRMAN POWERS: Thank you. Jim Tolan.

DR. TOLAN: Thank you, Mr. Chairman. My points have been addressed.

CHAIRMAN POWERS: Thank you. All right. I think we're at the point of voting. Let me do it this way. I will ask if there is any objections to the motion, and, if anybody wants to object or abstain, they can individually do that. If it turns out to be a large number, then we'll go to voice vote. **Is there any objections to this motion, and, those that do, please state that you do object.**

MR. GREGORY: I object.

CHAIRMAN POWERS: Thank you.

DR. GALLAWAY: I object.

CHAIRMAN POWERS: Are there any abstentions?

MR. BLANCHET: I object.

DR. ROBERTS: I object.

CHAIRMAN POWERS: All right. **Are there any other objections? Are there any abstentions? The implication is all other people, including myself, are voting yes. If that's the case, then I believe the motion carries.**

I have worded this as objections, but, to me, it's just voting no. I am not sure what the proper wording is here for objections versus -- Anyway. All right. The next step is the --

MR. RINDONE: Mr. Chair, one moment, please. Jason, you're unmuted now.

MR. ADRIANCE: Thanks. I was just trying to chime in and also vote no, but I was muted. I apologize for the delay.

CHAIRMAN POWERS: Thank you.

MR. RINDONE: Sorry, Mr. Chair.

CHAIRMAN POWERS: All right. Thank you. The next step is the ABC, OFL, and ACL sorts of discussions. Let's begin that discussion by referring to the table in Michael's presentation. I am not sure which it is, but it's the one with the time stream of the numbers there.

MR. GREGORY: I think the following slide is a better place to start.

CHAIRMAN POWERS: Yes. Thank you.

MR. GREGORY: Of course, I may be disqualified from commenting anymore.

CHAIRMAN POWERS: All right. This is sort of the candidate list, based on the discussions that Michael made in terms of the presentation. Will Patterson.

DR. PATTERSON: Given that we've accepted the assessment and projections as best available science, the OFL is basically part of this process, but we have not yet actually worked our way through the ABC control rule table or had any discussion about whether we think some other proxy should be utilized, as we have done sometimes in the past.

CHAIRMAN POWERS: Yes, that's correct. What you're suggesting is to make sure -- At least apply the original control rule, in terms of determining the P*.

DR. PATTERSON: Yes, and I think we should work through that, because, given the discussion about whether this was the best available science, people have chimed in about different sources of uncertainty that may not have been considered last time, and so I don't think we should necessarily just utilize the 0.43 as the P* here.

CHAIRMAN POWERS: Okay. Luiz.

DR. BARBIERI: I agree with Will's point there about the fact that the 0.43 P* may not be appropriate here, and I wonder if any P* approach that we will use would be appropriate, given some of the concerns that we have identified with this update assessment that may not be easy to take care of, but, nevertheless, will remain as major uncertainties in the assessment, and I don't think that those would get captured within the framework of our ABC control rule.

I guess the OFL yield stream that we would recommend would just be the regular OFL and a P* of 0.5, and that's fine, but then, for the ABC, I think it would be helpful for us to discuss some alternative approaches for us to make the ABC recommendation, and I would say depart from applying that ABC control rule.

CHAIRMAN POWERS: Then you're sort of making Will's point that, in order to -- You need to document what that ABC control rule actually does and go through that process. Given that, then are we -- Do we have a -- Can we go through that table, that infamous table?

MR. GILL: Mr. Chairman, since this is -- I agree with Will's comment, and I happen to agree with Luiz's as well, but, since this was an update, would not the P* calculation be the same as it was previously for SEDAR 38, and, hence, we don't need to go through it?

CHAIRMAN POWERS: One would argue that P* isn't a decision of

the assessment, but it's of the SSC, in which case maybe we would have to do it, and I realize that -- Well, I think, at this point, particularly if we can go through this fairly quickly, let's at least visit the control rule table. Ryan, do you have access to that?

MR. RINDONE: I do. If you want to take five minutes, I will formally join the webinar on my laptop instead of just here in the office, and I will switch screens, and I can get it up on the screen.

CHAIRMAN POWERS: Okay. All right. You can do that. Ryan, go ahead and do that. Let's not take a break, because I want to move as quickly as we can on these sorts of things. Is there any other discussion about the time streams and the catches that are used in the intervening years and things like that, while we're waiting for Ryan? Doug Gregory.

MR. GREGORY: My comment is more on this question, or issue, of uncertainty. I agree with those points, and I brought up major points of uncertainty for me, and we get wrapped up with this concept, knowing that the PDFs and the ABCs are not really capturing real uncertainty, which is probably infinite, given that we're dealing with an ocean and populations and lots of variability, but, if there is some way to capture it, and maybe this is what the Pacific Council did, but our real -- Our best measure of uncertainty is how things change from assessment to assessment.

Just look how much changed in this update, for whatever reason, and those changes, those differences, from assessment to assessment of a species vary much more than any inverted Hessian or anything else we can come up with for PDFs, and how to capture that in a quantitative manner, I have no idea, but that's really our best measure of uncertainty, if we could do it, is from one assessment to the next and how the status changes. Thank you.

CHAIRMAN POWERS: Again, this sort of leads to at least going through this discussion, in terms of this table, and so I think that we should do this. Will, because this table, the printing, is rather small, can you kind of lead us through this?

DR. PATTERSON: Sure. At the top, we have assessment information, and there's just one dimension here with the tier, and the elements are quantitative age-structured assessment that provides estimates of exploitation and biomass and includes MSY-derived benchmarks. For quantitative-age structured assessment,

it provides estimates of either exploitation or biomass, but requires proxy reference points. What is the SSC's score here?

CHAIRMAN POWERS: Well, clearly it has proxy reference points, because the steepness was fixed, basically.

DR. PATTERSON: Right. Okay. Characterization of uncertainty, the OFL PDF provided by the assessment model includes an appropriate characterization of within-model and between-model model structure error. The uncertainty and important inputs, such as natural mortality, discard rates, discard mortality, age and growth parameters, landings before consistent reporting has been described, using Bayesian priors and/or bootstrapping and/or Monte Carlo simulation, and full uncertainty has been carried forward into the projections. It doesn't seem we're quite there.

Next, the OFL PDF provided by the assessment model includes an approximation of observation and process error. The uncertainty in important inputs, such as natural mortality, discard rates, discard mortality, age and growth parameters, landings before consistent reporting, has been described with sensitivity runs and full uncertainty has been carried forward into the projections, or the OFL provided by the assessment model includes an incomplete approximation of observation and process error. The uncertainty in important inputs has been described with sensitivity runs, but full uncertainty has not been carried forward into projections.

I guess the other candidate here would be the OFL provided by the assessment does not include uncertainty, and I don't think that's the case at all, and so I think we're really between the middle two. What is the preference of the committee?

DR. BARBIERI: Will, if I may, I would say the bottom one, because I would say that the OFL does not include uncertainty in important inputs and parameters, and so there are some of the inputs that some members have pointed out are not properly accounted for, and there are still some uncertainties with the headboat data and how that information was compiled and included in the assessment, and so, even though some assessment uncertainty has been estimated, I would say that there are still points, inputs and parameters, that are not included in that uncertainty assessment.

DR. PATTERSON: My reading of that last one is that the OFL provided by the assessment does not include any uncertainty in important parameters, whereas the one before says incomplete.

Maybe I am reading that incorrectly, or supposing intent that's not there, but that's how I distinguished those last two.

DR. BARBIERI: Well, and not to try to be funny here, but English isn't my first language, but I don't see any --

DR. PATTERSON: No, it's not written clearly.

DR. BARBIERI: Right.

DR. PATTERSON: But you're talking about incomplete in your statement about how this was done. I am not advocating for either one, but I'm just trying to clarify. Does anybody else have input here? I am not hearing anything. Luiz has advocated for the bottom category, which would be the OFL provided by the assessment does not include uncertainty in important parameters, inputs and parameters. Does anybody disagree with that?

DR. TOLAN: I sort of disagree with that. It seems to me like the fourth, the last, tier on this one really applies to something like a data-limited assessment, where you don't have a lot of information to go with, and I think I like your explanation of incomplete, as some of the uncertainty has been covered, and we talked about the shrimp bycatch and the difference in the FES, and so it has been included. It may not be complete, like the upper categories, but I would go with the third one.

DR. POWERS: I would agree. I think that Michael has investigated some of the uncertainty.

DR. NANCE: I agree with that, that it should be the third one.

DR. PATTERSON: Is that the general sentiment? I am not hearing anything else.

CHAIRMAN POWERS: Let's go ahead and move on then, Will.

DR. PATTERSON: Okay. Let's go to the next. Retrospective patterns have been described and are not significant. Retrospective patterns have been described and are moderately significant. Retrospective patterns have not been described or are large.

CHAIRMAN POWERS: They have been described, according to the Mohn's statistic, as not significant.

DR. POWERS: Joe, I have a question. Is this where the jitter

analysis comes in? It seems that the jitter analysis said there some fairly large patterns.

CHAIRMAN POWERS: The jitter analysis presumably relates to the yellow category, the uncertainty, and not necessarily the retrospective analysis, or maybe, and I don't know. It's hard to say.

DR. PATTERSON: So we have some issues here with changes in methodology and not being able to fully duplicate the previous assessment. We've heard Joe's perspective here about retrospective patterns have been described and are not significant, and does anybody else have a different opinion on that? I'm not hearing any, and let's move on to the final.

DR. GALLAWAY: I have a question. Will, exactly what are we talking about? What does retrospective patterns refer to exactly?

DR. PATTERSON: It means that you take the current model and you work back in time and start -- You look for divergence with previous runs, and, if you start to see a divergence back in time, then you have a retrospective pattern that's caused by some issue in the data.

CHAIRMAN POWERS: I think, Benny, you're kind of getting at another interpretation of retrospective, in the sense of things like the changes in bycatch, and what was your recommendation five years ago versus what it would be now, and, from that standpoint, there has been a change in retrospective, but I believe this blue category has really more been focused on what Will said, in terms of the retrospective pattern of the data themselves, for better or for worse, and, again, those others were in the yellow category rather than the blue category.

SSC MEMBER: I would vote for moderately significant, for your intermediate level in the blue area. Thank you.

SSC MEMBER: I would certainly second that, given that the currency for the stock assessment has completely changed, and so it's tough to do retrospective on a totally different currency now.

MR. GREGORY: This is referencing Slide 33 of the stock assessment, and the retrospective analysis is perfectly good.

CHAIRMAN POWERS: Will, let's skip on to the last category, and then we'll return to this blue thing.

DR. PATTERSON: In the last category, known environmental covariates are accounted for in the assessment, known environmental covariates are partially accounted for in the assessment, known environmental covariates are not accounted for in the assessment.

This came up recently when we talked about Deepwater Horizon and dead zone issues, red tide, et cetera, and the fact that those are known environmental covariates, but they're not accounted for in this assessment, or they weren't accounted for, excuse me, in the previous assessment. What is the committee's preference here?

SSC MEMBER: I think, for every one of these tables, it's almost always in the last category, and so that's what my vote would be.

DR. PATTERSON: Does anybody have a different opinion on that? I am not hearing any. Joe, do you want to revisit the retrospective pattern?

DR. NANCE: I think it should be the first one, or not significant.

DR. PATTERSON: Are there any other opinions? Joe, do you want to weigh-in here?

MR. RINDONE: Joe has fallen off the map. Kai.

DR. PATTERSON: Maybe we're having a hard time hearing Kai as well, and so, if anybody wants to speak is able to, just talk over me, and I will shut up. It seems to me that how retrospective patterns have been thought of in the traditional sense, and utilized in this table, and how Schirripa and his team performed retrospective analysis in this assessment, then we would fall into the first category. I think some of the discussion about really not retrospective, but perspective, has crept into this discussion, but I am open to hear other perspectives.

SSC MEMBER: I will certainly yield to that line of thought and go with the first category.

MR. ADRIANCE: I would agree with the way you described that, Will, given how we've approached this in the past.

DR. CHAGARIS: I also agree that it should be the first

category.

DR. PATTERSON: Okay. It sounds like we're forming some consensus there, and so I think we're done with our table, if we can scroll up, and so our P* does change slightly. I am waiting for Joe to kind of chime back in here, but it seemed to me that what Joe was talking about previously -- We have 0.43 versus 0.40 as our P*, and so that's one thing to take into account.

Then the second is do we think this P*, given the fixed parameters in the assessment and given our ideas about whether the PDF actually captures -- Accounts for all the uncertainty in the data inputs, whether that is the appropriate choice to use the P* approach or whether we should use some alternative approach. Really, I think I should probably yield her to Kai, as the Vice Chair, to carry the meeting in Joe's absence.

DR. LORENZEN: So we've arrived at a P* recommendation, and is that right?

MR. RINDONE: Yes.

DR. LORENZEN: Okay. So do we return to the ABC determination? Any discussion, any more discussion, on the P*?

MR. GREGORY: I have a question, I think for the analyst. How much difficulty is there in recalculating the P*, because I can -- Given our experiences, I can assure you that the difference between 0.398 and 0.43 is only going to be a few thousand pounds, in the tens, and not even hundreds of thousands of pounds, and I wonder if it's worth the effort. If it can be done quickly, that would be great.

DR. SCHIRRIPA: Doug, for you, it can be done, and no one else though. If I can have the screen for a moment, and everyone can see that, but here is the P* table for a P* of 0.4. I hope you can see that.

MR. RINDONE: Yes, Michael, we can see that.

DR. LORENZEN: Okay, and so that is very close to what we have, the point-three-nine-something, and are we happy to run with 0.4?

MR. RINDONE: Kai, you have hands up from Will and Luiz. Michael, your screen is still being shown.

DR. LORENZEN: Will.

DR. PATTERSON: Sorry. My hand was just up accidentally.

DR. LORENZEN: Luiz.

DR. BARBIERI: Thank you. This is -- I think it was worth going through the ABC control rule, as Will and Joe pointed out, so we can see how the uncertainty is or actually is not properly being accounted for with this process, but, to me, the difference in ABC using the different levels -- I found that slide, Michael, that you have as an extra slide that has the different levels of P* already calculated, and, to me, relying on the control rule and this change in P*, for a stock assessment update that has shown this level of problems, I think is not really appropriate.

Just fifteen minutes ago, we had four SSC members actually not agreeing that this assessment represented the best available science, because they felt that the uncertainty was either too large or too many things were not properly accounted for, but I think that having our uncertainty estimation trying to be measured by this control rule is really inappropriate. I would vote for us to discuss potentially using something different, and we've done this in the past, and we can justify departure from our ABC control rule.

MR. RINDONE: You also have Shannon, Kai.

DR. CALAY: I think we would agree with you that the scientific uncertainty of this assessment is larger than the PDF that is produced by Stock Synthesis, and so we also would agree that considering an FOY scenario, or some percentage of the OFL, the annual OFL estimates, would be advisable.

DR. LORENZEN: Thanks, Shannon. I am actually wondering -- I am conscious of the fact that we have a lunch break scheduled for 12:00 to 1:00, and the fact that we've been going solidly for three hours, and whether we should ponder this question and reconvene at 1:00.

CHAIRMAN POWERS: I am back online, and sorry for the delay, but, obviously, I missed much of the discussion, and I heard the last comment from you, Kai, that, basically, maybe we should consider, over the lunch period, how to approach this sort of problem, specifically for this particular situation, and so, if there's no objection to that, then let's break for lunch now, with the proviso that we'll come back and within a fifteen-minute period we will resolve this issue. Do you all promise? All right. Let's break until 1:00.

(Whereupon, the meeting recessed for lunch on September 14, 2020.)

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September 14, 2020

MONDAY AFTERNOON SESSION

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The Meeting of the Gulf of Mexico Fishery Management Council Standing and Special Reef Fish, Ecosystem, and Socioeconomic Scientific and Statistical Committees reconvened via webinar on Monday afternoon, September 14, 2020, and was called to order by Chairman Joe Powers.

CHAIRMAN POWERS: Can you put up the table, the 0.4 table that was shown, because I wasn't able to see it. Let me open the floor then to motions relative to this. We always have this debate about whether the P* approach captures all the things that we want to capture versus the fact that we do have a bonified control rule, which goes through this process, in this case to produce something like 0.4. The floor is open for a motion. Go ahead, Doug.

MR. GREGORY: I will put the target up there. **I move that we use the equilibrium OFL projection and the OY projection for ABC, the OY equilibrium projection for ABC.**

CHAIRMAN POWERS: Okay. We will probably have to reword this.

MR. GREGORY: Sure. Consider this as the consensus statement anyway, but what struck me was that the equilibrium projection for OY was pretty much the same as the current projection -- For the current year, the 2021 projection, if we were fishing at MFMT.

CHAIRMAN POWERS: Okay. Can you tell me where to refer to to actually see what those are? That was in the presentation.

MR. GREGORY: Right, and it's Table 5.5 in the document. In the presentation, it's near the end.

CHAIRMAN POWERS: It's 44.

MR. GREGORY: Yes, the one that you were trying to expand early

on.

CHAIRMAN POWERS: Yes. 44.

MR. GREGORY: Or 43.

CHAIRMAN POWERS: 43?

MR. GREGORY: Yes, and we've done this, or we've talked about this, in the past, about using equilibrium numbers and also trying to go to OY, if we can. In this instance, the definition of OY is 85 percent of the F of MSY, which is in the range of recommendations that we have made in the past for OY, and it seems reasonable, when you see that the FOY equilibrium level of 10.83 is a little bit less than what the landings would be currently at an MFMT level, and so it just seems to make sense to me, and it's about half-a-million pounds less than what landing would be if F stayed at current levels, because the current F is about 92 percent of F of FMSY, or MFMT. Since MSY is usually the historical definition of overfishing, I think we ought to try to get fishing mortality to MSY or a little bit above.

CHAIRMAN POWERS: Well, I mean -- All right. So everybody understands, including myself, what is being argued here, in terms of this table, which one of these columns are you arguing for?

MR. GREGORY: For OFL, it would be the equilibrium F MFMT level, 11.51. For ABC, it would be the equilibrium FOY level of 10.83.

DR. PATTERSON: Joe, I think what Doug is arguing here is to use the equilibrium values and make them constant.

CHAIRMAN POWERS: Okay, because it's constant anyway, pretty much.

DR. PATTERSON: But I don't understand the logic here. It seems like the argument is, because they are kind of close to the yield at F MFMT, that we would -- Why don't we just use the equilibrium values, but that would be a departure -- An approach -- I don't understand the logic. Why wouldn't we just use the F MFMT yield values?

MR. GREGORY: If I may?

CHAIRMAN POWERS: Yes, go ahead.

MR. GREGORY: My understanding of dynamics is, if we did that, the biomass would be approaching the biomass at MSY in an asymptotic way, and so we need a target that's a little more conservative than MSY to actually get there.

DR. PATTERSON: The yield in 2021, given the assumptions and methods of the projections, had F MFMT as 10.89 million pounds, and so 11.51 million pounds is not more conservative than that.

MR. GREGORY: Our ABC would be 10.83, and so that's our target, and that is more conservative.

CHAIRMAN POWERS: All right. Now I get the gist of what you're getting at. Also, if we're looking at these tables, look at the column SSB over MSST. Ultimately, what you're trying to do is recover to MSY, SSB at MSY, and so the implication of that is that our proxy for that would be a ratio of about 1.17 or 1.18, which is -- If you use that projection -- Because, basically, you can't make the argument -- In a sense, because it's under the BMSY level, but it's above the B MSST level, you're in a point of recovering. It's still not overfished, but you're in a point of recovering, and so that may guide some of the thoughts about this. All right.

DR. PATTERSON: Joe, I have a question for Mike, if I could.

CHAIRMAN POWERS: Yes, go ahead.

DR. PATTERSON: On these figures accompanying the yield streams, it gives FOY as 85 percent of the F of FSPR 30. Is that accurate, or is that supposed to be 75 percent?

MR. RINDONE: That is accurate.

DR. PATTERSON: Okay. Thanks.

CHAIRMAN POWERS: All right. The motion -- Conceptually, the motion on the floor is to essentially use a constant value, and did you specify a particular time period?

MR. GREGORY: No, but values stay the same until a new assessment is done.

CHAIRMAN POWERS: Okay. That would be the implication of it. All right. Assuming that this will get a second -- Is there a second, conceptually, to what we're doing here?

SSC MEMBER: Second.

CHAIRMAN POWERS: Okay. Then let's put in some words to know exactly what it is that we're talking about, in terms of what the actual values are.

MR. GREGORY: I assume you want me to do that?

CHAIRMAN POWERS: Yes.

MR. GREGORY: **Use of equilibrium OFL projection of 11.51 million pounds.**

MR. RINDONE: This is whole weight. Previous assessments, in antiquity, have used landed weight, but SEDAR 38 converted everything over to whole weight, and so that's good to note.

CHAIRMAN POWERS: Okay.

MR. GREGORY: Thank you. **The OY equilibrium projection of 10.83 million pounds for ABC.**

CHAIRMAN POWERS: All right, and there is a second for this. All right. The debate really centers, again, between some approach like this versus the direct application of the P* approach.

DR. BARBIERI: Mr. Chairman, if I may?

CHAIRMAN POWERS: Yes.

DR. BARBIERI: **I can offer a substitute motion, when it's appropriate.**

CHAIRMAN POWERS: It's always appropriate.

DR. BARBIERI: Then, Jessica, I emailed that to you, to the meetings@gulfcouncil. I will wait to see if there is a second, and then I can explain in more detail the rationale.

CHAIRMAN POWERS: Is there a second?

DR. NANCE: I will second it.

CHAIRMAN POWERS: Okay. Go ahead, Luiz.

DR. BARBIERI: Well, this would be in the same spirit of what Doug just recommended, and I don't disagree with that approach, Doug, of going to an ABC that is based on OY, given the fact

that we would like to have a bigger buffer between OFL and ABC, but it actually uses the yield streams that are available in the projections, and so, instead of using the equilibrium, it uses the yield streams for OFL at that 50 percent probability of overfishing. Then, for the ABC, setting that equal to the 85 percent of F 30 percent SPR. It gives that timeline of three years to basically set some expectation of having a more informative assessment in place, and I think that's it.

CHAIRMAN POWERS: Okay, and so -- Again, this was based on the P* of 0.4, correct?

DR. BARBIERI: No, this is based on --

CHAIRMAN POWERS: In essence, it would be -- The difference is using the F 30 percent SPR of 0.85.

DR. BARBIERI: Correct.

CHAIRMAN POWERS: Okay.

DR. BARBIERI: And using a yield stream there of three years for the OFL, instead of using the equilibrium OFL projection, and so that would move --

CHAIRMAN POWERS: Excuse me for interrupting, but, in a sense, because the stock -- I am sort of putting forth an argument of what this means, in terms of if we need a justification for it, but it's that, currently, the stock is close to the overfished condition, and, if you want to more rapidly approach the MSY condition, and, therefore, the 0.85.

DR. BARBIERI: That's correct, yes.

CHAIRMAN POWERS: Okay.

DR. BARBIERI: It creates a buffer in the order, depending on years, of 10 to about 15 percent, which is consistent with the buffers that we have recommended in the past.

CHAIRMAN POWERS: Okay. Is there discussion? John Mareska.

MR. MARESKA: Joe, I think you were asking my question, but I don't think I got a good, solid answer to it. Based on Slide 43, it looks like these projections -- If you scroll to the top, all these projections are based on the P* of 0.5, and so was that the intent for both Luiz and for Doug? That is my question.

DR. BARBIERI: Well, the OFL, John, yes, because that's how we set OFL, is at that level there of P* of 50 percent, and so the yield stream for OFL is that, and the yield stream for ABC -- My intent was not to use any P*, but use the value that is given by the 85 percent -- The yield at 85 percent of F 30 percent SPR. Instead of using a P* approach, we actually make an ABC recommendation based on that value.

CHAIRMAN POWERS: Another way to interpret that is you are using a P* approach, but it's just different than what was derived by the control rule.

DR. BARBIERI: Correct, yes.

CHAIRMAN POWERS: At some point, probably -- If we were to adopt this going before the council, I would probably translate back into P* or something, but anyway. All right. Going back to the motions. I think, Harry, you were on the list. Harry, I can't get you. Will, do you want to go ahead, and we'll check on Harry?

DR. PATTERSON: Sure. I support this substitute motion. I think it's in the spirit of how we've handled this in the past when we didn't feel like the PDF fully captured all of the uncertainty in stock dynamics and the assessment.

Also, the biggest uncertainty, I feel, for king mackerel we haven't even talked about, and it's one thing that was supposed to be an international sort of benchmark assessment this go-round, is what's happening in the western Gulf and the connectivity between the western migratory group and Mexico and what impact Mexican landings have on the productivity of that western migratory group, or potentially a separate stock even, and so I think it's important to be precautious, and this is consistent with how we're handled this in the past, and, for that reason, I support it.

CHAIRMAN POWERS: Thank you. Harry, are you back? Is he on, or has he lost his signal?

MS. MATOS: He's on, and he's unmuted, but we're not hearing him.

CHAIRMAN POWERS: Okay. All right. Any other discussion? I hesitate to go ahead without allowing him input.

MS. MATOS: He's on a phone, and so I'm not sure if his actual

phone is muted.

CHAIRMAN POWERS: Just to fill up space, is there any indication of when a more complete assessment for king mackerel might be done, in terms of the next five years, in terms of scheduling and things like that?

MR. RINDONE: Let me pull the schedule up.

DR. NEER: Ryan, it's not currently on the schedule for the next five years. It is not on the schedule at all.

MR. RINDONE: I was just trying to see if there was room to squeeze it in somewhere.

CHAIRMAN POWERS: I am thinking ahead, and, if this substitute motion were to occur, and so it's basically setting things for three years, and then, as with other things, if nothing was done at that point, it would stick at the 9.99 million pounds for the ABC, correct?

MR. RINDONE: That's correct, and so, when you guys make these recommendations, and they are adopted by the council, they remain in place until changed, and so, like in the regulations, it would read that the OFL would be 11.18 million pounds whole weight, and the ABC would be 9.99 million pounds whole weight for 2023 and subsequent years.

CHAIRMAN POWERS: Okay.

MR. RINDONE: "Whole weight" should probably be added to the motion, Luiz, if you care to make that adjustment, just to be specific.

CHAIRMAN POWERS: Yes, please do.

DR. BARBIERI: Absolutely, Ryan. Yes, thank you.

CHAIRMAN POWERS: Benny.

DR. GALLAWAY: I was just curious. Seeing that this is not on the schedule, does this mean that, if the bycatch working group worked out the bycatch models, to where they were more realistic and had less uncertainty, it wouldn't get incorporated for years to come?

CHAIRMAN POWERS: No, and that would say that that would be good negotiating fodder for making sure it did happen.

DR. GALLAWAY: Okay.

CHAIRMAN POWERS: That's the way I would kind of interpret it. Jason.

MR. ADRIANCE: I just wanted to check, and I had texted Harry, and he's got technical issues on his end, and so I'm not sure when he will get back in.

CHAIRMAN POWERS: All right. We're going to have to go ahead then, I think.

MR. GILL: Mr. Chairman?

CHAIRMAN POWERS: Yes, please.

MR. GILL: Thank you, sir. My memory says that we agreed that we were going to do these things to three significant digits, in which case we ought to round the OFL numbers.

CHAIRMAN POWERS: Three significant or one?

MR. GILL: Three significant digits is my recollection.

DR. PATTERSON: These are three significant digits, or the ABC ones are, and I'm sorry, but not the OFL.

MR. GILL: The ABC is, but the OFL is not.

CHAIRMAN POWERS: Okay. It's terminology, but I always consider significant digits after the decimal point, and so what you're suggesting then is for the ABC it should be 9.37, but, for the OFL, it should be 10.9?

MR. GILL: Correct, and the only changes I see needed are OFL numbers, the 10.9 and 11.6 and 11.2.

MR. GREGORY: Bob, you may be technically correct that we decided that at some point, but the rest of the world is going to think we're crazy.

CHAIRMAN POWERS: Yes.

DR. NANCE: It should just be after the decimal.

CHAIRMAN POWERS: All right. Jason, did you have --

MR. ADRIANCE: Thank you, Mr. Chairman. Acting as a go-between again, Harry has mentioned that he sent something to the Gulf Council meetings email.

CHAIRMAN POWERS: Okay. This is a subsequent thing. Wait a minute. All right. How many substitute motions can we do? Is this a substitute motion?

MR. RINDONE: Two.

MR. ADRIANCE: Actually, I think Harry indicated this as a separate way to deal with OY.

CHAIRMAN POWERS: Well, effectively, that makes it a substitute motion. This is cumbersome without being able to talk to him. The way I interpret this is there's no time period specified for this, and it sort of punts it into the future.

MR. RINDONE: Dr. Powers, we have an OY on the books already for Gulf kingfish, and that's that 0.85 times F at MSY, and, since we currently use 30 percent SPR as the MSY proxy, that's reflected in Luiz's motion.

CHAIRMAN POWERS: Okay.

DR. BARBIERI: Right, and this is why I used that specific number there for specification, so that it will be in agreement with what is already in the books.

CHAIRMAN POWERS: Okay, and so -- Again, sort of technically how we proceed through this, I'm interpreting this as a substitute motion. If it were to pass, then, basically, that would effectively mean what's on the books will remain on the books, and so what is gained is -- Is Harry back?

MR. BLANCHET: Can you hear me now?

CHAIRMAN POWERS: Yes. I am trying to interpret that. All right. Go through your arguments, please, Harry.

MR. BLANCHET: My concern was that, as the motion was phrased, it was a different method of selecting ABCs than what we had used in the past, and, while I don't have necessarily an issue with it, I don't know if, by going down this road, whether we are getting into some of the Gulf Council's business more than we should. Now, some of this may be colored by my perspective on the current assessment, but that's where I was going.

CHAIRMAN POWERS: So you're viewing this as a substitute motion, correct?

MR. BLANCHET: Yes.

CHAIRMAN POWERS: All right. Is there a second? There is no second? Lacking a second, the substitute motion dies. John Froeschke.

DR. FROESCHKE: I was just going to say that, in the prior substitute motion, perhaps we could put, at the yield at F at 0.85, we could put, somewhere in there, at OY, and put that value in parentheses, so it's clear that that corresponds with OY as it's currently defined.

CHAIRMAN POWERS: We ought to say that corresponds with OY as currently defined, rather than something cryptic. It also corresponds to a different P*. I mean, you can interpret this in a number of different ways. All of those arguments, I think, ought to be explained at the council level, but this was Luiz's motion. What do you feel about that further wording?

DR. BARBIERI: I don't have a problem, and I think that that helps clarify, what John just recommended, and so before --

CHAIRMAN POWERS: The one thing I am adamant about is, if you put it in, don't put it in as a little cryptic subscript. Just actually say the words.

DR. BARBIERI: Right, and so, with annual ABC being the projected yield at OY. Then, in parentheses, we can put the --

CHAIRMAN POWERS: I would think it should be the other way, because we don't have anything to do with OY. What we're doing is making a decision, essentially, based on our perceptions of some inherent P*, and we just happen to mention that it's equivalent to the OY, and so you should begin with the 0.85 SPR business and then mention --

DR. BARBIERI: Joe, if I may, I disagree, because we don't know what the probability of overfishing would be. We don't have --

CHAIRMAN POWERS: I guess my real point is why are we projecting yield at optimum yield? Optimum yield isn't our decision. We're projecting it at a value that happens to be at optimum yield.

DR. BARBIERI: Right, and that's fine.

CHAIRMAN POWERS: That's why I want to emphasize the 0.85 first, which is equivalent to the projected yield at optimum yield.

DR. BARBIERI: If I may, I think that, in this case, we are basically setting it at that value, and I think it helps the council understand what we are recommending here, that that value is equivalent to OY and that --

CHAIRMAN POWERS: I am not arguing with that. I am saying the emphasis is we aren't deciding what OY is and projecting on the basis of OY. We're deciding on something else, which happens to be equal to OY, and so that's why I want to mention the 0.85 first and then say which is equivalent to OY.

DR. PATTERSON: I disagree. I disagree with that. We have selected this yield stream based on the yield at FOY. Not at OY, but FOY, which happens to be 0.85. We didn't pick a P* and then coincidentally it was the same as this yield series, right? Luiz proposed this based on the yield at FOY, and it does correspond to a P*, but that P* wasn't selected first and then this was the yield stream.

CHAIRMAN POWERS: Well, I would argue that, psychologically, we did pick a P*, because that's why we wanted to reduce this, but I am not going to belabor it, and so what is the wording that is wished there?

DR. BARBIERI: The point that Will just made is correct. **The yield at FOY.**

CHAIRMAN POWERS: Okay. So that's the motion. We have gone through a fair amount of discussion, and is there any more discussion on this?

DR. PATTERSON: We just need to subscript that "OY".

CHAIRMAN POWERS: All right. What we'll do is we'll vote on this, and, if it passes, we're finished with this issue. If it is voted down, then we return to the previous motion and vote on it, without any other discussion. All right. **Let me just, to speed things up, ask if there any objections to this motion.**

MR. GREGORY: Doug Gregory objects.

CHAIRMAN POWERS: All right. Let's just go through the actual person-by-person vote.

MS. MATOS: Lee Anderson.

DR. ANDERSON: Yes.

MS. MATOS: Luiz.

DR. BARBIERI: Yes.

MS. MATOS: Harry Blanchet. Dave Chagaris.

DR. CHAGARIS: Yes.

MS. MATOS: Benny Gallaway.

DR. GALLAWAY: No.

MS. MATOS: Bob Gill.

MR. GILL: Yes.

MS. MATOS: Doug Gregory.

MR. GREGORY: No.

MS. MATOS: Walter Keithly. He has to enter his audio pin in order to get his audio working. Robert Leaf.

DR. LEAF: Yes.

MS. MATOS: Kai Lorenzen.

DR. LORENZEN: Yes.

MS. MATOS: Camp is not here. Jim Nance.

DR. NANCE: Yes.

MS. MATOS: Will Patterson.

DR. PATTERSON: Yes.

MS. MATOS: Joe Powers.

CHAIRMAN POWERS: Yes.

MS. MATOS: Sean Powers.

DR. POWERS: Yes.

MS. MATOS: Ken Roberts.

DR. ROBERTS: Yes.

MS. MATOS: Steven Scyphers.

DR. SCYPHERS: Yes.

MS. MATOS: Jim Tolan.

DR. TOLAN: Yes.

MS. MATOS: Jason Adriance.

MR. ADRIANCE: No. Harry asked me to indicate that he's voting no, but I will let you all confirm that, and I don't want to be responsible for that.

MS. MATOS: Jud Curtis.

DR. CURTIS: Yes.

MS. MATOS: John Mareska.

MR. MARESKA: Yes.

MS. MATOS: Kari Buck.

DR. MACLAUCHLIN-BUCK: Yes.

MS. MATOS: Jack Isaacs.

DR. ISAACS: Yes.

MS. MATOS: Andrew Ropicki.

DR. ROPICKI: Yes.

MS. MATOS: Cam Ainsworth. Mandy Karnauskas. Paul Sammarco.

DR. SAMMARCO: Yes.

MS. MATOS: Harry, are you able to speak, or can you send a chat with your vote?

DR. PATTERSON: On that previous page, there wasn't a vote entered for Jason, who was a no, and there wasn't a vote entered

for John Mareska either, and I don't recall what John voted.

MR. MARESKA: Will, she did enter them, and she entered them under Reef Fish rather than under the Mackerel.

DR. PATTERSON: I see. My mistake. Thanks, John. Joe, can I ask one more question?

CHAIRMAN POWERS: Yes.

DR. PATTERSON: So we have the second substitute motion listed here, which I assume means it would go into the report, but it didn't have a second, and so that motion in fact disappears, right?

CHAIRMAN POWERS: Yes, it disappears.

DR. PATTERSON: It was never fully made.

CHAIRMAN POWERS: Well, it didn't have a second.

MR. GREGORY: So I think the point is that it shouldn't be in the report.

CHAIRMAN POWERS: Yes.

DR. PATTERSON: Yes, and it should be deleted here, is my point.

MR. RINDONE: We have verbatim minutes for all of the SSC meetings, and so, if someone is really interested, they can go back and listen to all of this exciting back-and-forth. In the summary report though, we will just stick to the motions that were passed.

STOCK ASSESSMENT EXECUTIVE SUMMARY

CHAIRMAN POWERS: All right. The executive summary, if you can bring that up. All right. Let's just go through this, hopefully quickly.

MR. RINDONE: Dr. Powers, this is set up very similarly to the way that the rest of them have been set up, and then, of course, it will be updated under the part about SSC discussions to reflect the decisions that are made at this meeting.

CHAIRMAN POWERS: All right, and this is something that I will bring up. On that figure, the right-hand table, it's expressed in terms of depletion, and I am interpreting that horizontal

line at 30 percent. Is depletion -- But depletion is -- I can't read that. The horizontal line is represented as SPR of 30 percent, and so the SSB, relative to unfished, shouldn't be the same thing, in general anyway, as the SPR of 30 percent, or 0.3. I mean, I think -- I am trying to figure out how this is labeled.

The depletion being SSB relative to unfished, and that's one thing, but the horizontal line relates to the SSB at MSY proxy, which isn't necessarily going to be 30 percent, even at an SPR of 30 percent, and it may be close, and I don't know, but I want to make sure that --

DR. FROESCHKE: Could it not just SSB MSY proxy and leave it at that, because that's what the line corresponds to.

CHAIRMAN POWERS: That's what it should be. I mean, one, I think it ought to be labeled that way, but, secondly, because it looks like it's exactly at -- Well, maybe not. Maybe it's above 30 percent. All right. It should be labeled as the SSB MSY proxy. Let's not belabor that. Will.

DR. PATTERSON: I don't see why you need the word "depletion" here, and then have what's actually shown in parentheses. I think, if you just have SSB over SSB unfished, that accurately labels that axis. To Joe's point about the horizontal line, that's the horizontal line at full recovery to SSB at MSY proxy, and it seems you need another horizontal line here that has the actual limit, which would be the MSST value.

CHAIRMAN POWERS: That's where I was having trouble, because, in the assessment graph, as I recall, the most current level was slightly above the MSST, and, admittedly, the two lines probably are fairly close together, 17 percent apart, one minus M apart. Anyway, check that. I agree with Will to just label it SSB over SSB unfished and label the horizontal line SSB MSY proxy, or relative to -- Yes. All right. Continuing on, we'll go down a little bit. Doug, did you want to say something about this?

MR. GREGORY: Yes, and it's confusing to have that line when nowhere else in the document, or in our discussions, we really relate spawning stock biomass to MSY, but rather the MSST, and so we clearly need an MSST line there, to avoid confusion, because this will suggest, to the layman, that the stock is below where it should be. I mean, technically, it's correct, but not according to the Magnuson overfished guidelines.

CHAIRMAN POWERS: This was sort of what I brought up in

Michael's presentation, that you needed two lines, and so, actually, I mean, I think it would probably be better to rescale it, so that the 1.0 is at the MSY level, and then have two lines for the MSST and the MSY level. Harry. We'll come back to him. Let's move on down the document. Any comment on this, this section?

MR. RINDONE: F current should be specified as the geometric mean of the most recent three years, and so 2015, 2016, and 2017.

CHAIRMAN POWERS: Any other comments on this? Moving on. Okay. I want to make sure -- Harry, are you back on yet? Ken Roberts.

DR. ROBERTS: Could you scroll back up a half-page, please? Right there. Socioeconomic and ecosystem considerations, it props a question in my mind. There are currently no socioeconomic considerations incorporated. Are there ever any incorporated into stock assessments, or is that basically -- Does it come about generally when the council is going through the amendment process?

MR. RINDONE: This is usually where we fold in a bit about Something's Fishy, and so council staff can make an edit to this particular section and send it to Dr. Schirripa for inclusion. At present, we don't have the same metrics built in for including certain social and economic indicators into the assessment process, but some of those things are considered externally and do ultimately weigh on the outcomes of the assessment.

If you think back to red grouper as an example, where the combination of the NMFS interviews and surveys in southwestern Florida, combined with the red grouper Something's Fishy analysis, helped to parameterize the severity of the 2018 red tide, and it helped inform also FWC's estimate of severity.

That's an example of where those social and economic considerations actually had an effect on the outcome of the assessment, and so we do make an effort. It's not presently as comprehensive and robust as it may be for some of the biological factors considered. However, it is something that we're working on growing.

CHAIRMAN POWERS: Thank you. Shannon.

DR. CALAY: Thank you. Ryan said most of what I would have said. I just also wanted to point out that it is a strategic

objective of SERO and the Southeast Fisheries Science Center, and so there will be effort made in the future to better integrate socioeconomic considerations into stock assessments. It is something that we are aware that we do need to do better.

CHAIRMAN POWERS: Thank you. Paul Sammarco.

DR. SAMMARCO: Just a quick note to add to that, what you said that there have been no issues regarding ecosystem considerations which have been brought to this sub-committee, and, yes, there are probably important things out there, but they're, I guess, not under consideration at this time, and perhaps they should receive more attention in the future. Thank you.

CHAIRMAN POWERS: Thank you. Luiz.

DR. BARBIERI: I just have a very general question, I guess for Ryan Rindone. Where do these summaries live, Ryan, after they are corrected and adjusted? Is there a repository? I find them to be very useful to be used later on as a reference document, and, looking for them, I couldn't find them anywhere, and are they posted somewhere?

MS. MUEHLSTEIN: Luiz, I think I can handle that one for you. Right now, we're not housing them anywhere where we show them publicly, and we're just reporting them to the stock assessment scientists and then, again, to you all, when you receive the assessment report. However, we are in the process, internally, of building a new fisheries science webpage that is going to be part of our website, and they will all be housed there eventually.

DR. BARBIERI: Perfect, Emily. Thank you so much.

CHAIRMAN POWERS: Thank you. Moving on.

MR. GREGORY: I have a question. At the bottom of page 2, that last sentence, it says that trends from the optimum yield projection will result in a higher SPR of 0.35, and is that from the assessment, or was that calculated outside of the assessment? This is the first I've seen of it.

CHAIRMAN POWERS: While I look at that, I'm also sort of struck as the yield projections -- Never mind. Excuse me. Can anybody answer Doug's question?

MR. GREGORY: It references Figure 2, but I don't see -- The

dashed-blue line in Figure 2 is the optimum yield line and the biomass. Okay. I mean, I don't object to it, and I think it's good to have that perspective, but I don't know if that -- Did that come from the assessment? That is my question, or is it something put in later? I mean, it's a good perspective.

CHAIRMAN POWERS: We don't have an immediate answer to that.

DR. FROESCHKE: Those should have come from the assessment.

CHAIRMAN POWERS: Okay. Harry.

MR. BLANCHET: My general comment is what we're seeing in the executive summary includes a lot of graphics that were not in the presentation or in the original assessment document, and, unless there is some real good reason, like trying to condense something or trying to present something that's in a table in a more user-friendly form, I don't know that we ought to be having new material in the executive summary that's not in one of those prior documents.

CHAIRMAN POWERS: Thank you. Skyler.

DR. SKYLER SAGARESE: I just wanted to follow-up on a couple of the comments, and I'm listening along and making a list of all the modifications you would like, and, just in response to Doug's question here, a lot of these figures are summarizing content that should be in probably tables within the longer stock assessment document, and so, when we do projections, sometimes we have the ratio of the SSB in each year to the unfished SSB, and so that figure on the right -- We can remove the reference to depletion and just kind of -- We're just showing those different projection scenarios, and so I think Doug was kind of getting there with Figure 2 on the right-hand side.

With your MSY proxy, your equilibrium projection, you see it rebuilds to essentially 0.3 later on, and that's the 30 percent SPR, but, when you project the optimum yield, I think you're at 85 percent of that level, and you can see that it rebuilds just a little higher, in terms of 0.35 here, and so it's just some of this information we have sort of settled on figures.

If they are too confusing, and they're not present in the assessment document, we're certainly working on trying to standardize everything, but, as you all probably remember, we did do this for red grouper, and we're just trying to kind of summarize the information with these graphs, because it's a bit

easier to understand what's going on than seeing a table of endless numbers, where some of this material is often housed, and so I just wanted to bring that up.

CHAIRMAN POWERS: Thank you.

MR. GREGORY: Thank you. I like it. I particularly like it because the Magnuson Act reauthorization in 1996 asked us to be managing to OY, and we're just a little late. Thank you.

CHAIRMAN POWERS: Julie.

DR. NEER: I just wanted to point out that the executive summaries are also going to be housed on the SEDAR website. SEDAR 61, red grouper, is the only one that has been finalized, and that's posted up there, along with the SSC report. For every given assessment, we put the SSC report on the SEDAR website for that particular SEDAR page, as well as we put the executive summary for that one.

We'll be doing 67, which was the second one you guys have reviewed, and that was vermilion, and you just reviewed that recently. Once that's available, it will go up there as well, and so I think you will either be able to find them on the Gulf Council website, when they develop a place to put them, but they can also be found under any individual SEDAR, along with the SSC report for that SEDAR, on the SEDAR website for that particular project. Thanks.

CHAIRMAN POWERS: Thank you. Moving ahead, the indices. Moving on, basic biology, biological statistics, recruitment. Moving on again, landings. Moving on, discards. Any other recommendations relative to the executive summary? Hopefully we'll come to a standardized approach to all of these things, so that, when somebody picks it up, they're used to seeing it in a certain way. All right. With that, are there any other discussions about this agenda item and king mackerel?

If not, then I'm not giving you a fifteen-minute break. We're going to move right on into gray snapper, because we want to get as much done as we can today. We're kind of behind.

MR. RINDONE: Gray triggerfish and then gray snapper.

CHAIRMAN POWERS: Excuse me. Gray triggerfish. Yes. They're all shades of gray. Gray triggerfish interim analysis, the presentation.

MR. RINDONE: Is this Matt Smith that's going to be giving this or Katie or who is up to bat?

DR. CALAY: If you can hear me, it's Matt Smith.

REVIEW OF GULF GRAY TRIGGERFISH INTERIM ANALYSIS

MR. MATT SMITH: This is a pretty concise presentation, and so hopefully we can get through it relatively quickly. It's for the interim assessment of Gulf of Mexico gray triggerfish. Off the bat, I just want to extend our apology for the delay on the materials that I provided.

We are tantalizing close to having the MSE component of these interim assessments up and running, and we attempted to use that for this gray triggerfish, and we did get some results, but, unfortunately, making that push kind of delayed the report getting written, which delayed the review, which then delayed getting the materials out, and so I hope we'll be able to answer everybody's questions today during the presentation and that not having the stuff ahead of time doesn't interfere with making progress here.

Purpose and need for the outline, and we'll start with the basics, and then we'll look at where gray triggerfish are, in terms of their management history and landings. We'll review the indices that were available to use for this interim assessment, and then we'll get into the assessment itself. We'll look at the harvest control rule that was implemented, and we'll look at the index that was selected and how that selection was made and how the harvest control rule was parameterized and then the results that come out of that.

Just for anybody who is new on the committee, or maybe just needs a refresher, in a two-sentence version, the interim assessments are a part of the three-pronged approach that the Science Center is taking with our assessments now, which includes the research track assessment, which is the old benchmark, the operational track, which is sort of akin to what an update was, and then the interim assessment, which was designed to fill the spaces between those larger assessments and allow the council and the SSC to update catch advice based on current stock conditions, and so rather than have a five-year delay between assessments.

The idea is, once we're fully up and running here, we'll be able to produce these interim advice assessments on an annual, or semi-annual, basis, to keep everybody up-to-date with what's

going on with the stocks, and so that brings us to gray triggerfish.

Just to review, the last accepted assessment from this was SEDAR 43, back in 2015, and the current catch advice is based on the SEDAR 9 update, which was a 2011 product, and you will all probably remember that -- I guess it would have been early this year, or last year, but SEDAR 62 was supposed to produce updated assessment-based catch advice for gray triggerfish, but that assessment had to be withdrawn late in the process, because the modeling was heading in a direction that just couldn't be accommodated within the specification of that assessment, and so I'm sure there will be a new triggerfish assessment coming up in the near future.

I'm not sure where it is on the schedule, but, essentially, the take-home here is that the current ABC catch advice is stemming from the SEDAR 9 update assessment out of 2011, and so quite a bit out-of-date on triggerfish.

This sort of zooms in on where we're at. Here, you can see a year, the assessment from which the advice is based, and then this OFL and ABC column on the top table represent the actual yield streams produced from those assessments, and so the annual versions of this advice.

You can see there in 2012 the ABC of 305,300 pounds, which is the current ABC, and that's where that number comes from, and then highlighted here in the red are some of the rebuilding trajectories that came out of SEDAR 43. At the time, there was an eight-year, a nine-year, and a ten-year rebuilding requested, with the nine-year essentially being what would have been recommended, because the nine-year rebuild, with a 2025 rebuilding date, was put in place for this stock.

These values weren't implemented at the time. The SSC recommended them, or a very slight modification of what you're seeing here was recommended, and the council opted to stay with the existing management of 305,300 pounds. That's where we are in terms of the management.

If you go to the bottom table, you can see some recent landings numbers from the SERO ACL monitoring website, where I pulled these, just to give a sense of what the fishery looks like, and it's predominantly recreational, and that is determined by allocations that are established. The commercial landings, by and large, stay within their bounds.

You can see it's fairly consistent through the commercial landings, and then the recreational landings tend to bounce around quite a bit, and that's because the recreational fishery, like a lot of our fisheries, recreational versions, experience some periodic overages, and then there are accountability measures in place that have resulted in paybacks from year to year.

What you see like in 2015, for example, with the 94,000 pounds of recreational landings, that's not indicative of the removals from an unrestricted fishery. That represents accountability measures being put in place and in-season closures restricting the removals.

Just to see what the indices were that are available, again, these interim assessments, in their present form, are index-based harvest control rules, and so having an index for that process is essential. We had several to choose from for gray triggerfish. What you're looking at on your screen right now are the fishery-independent indices of abundance, and these come from the SEDAR 62 assessment, despite the fact that that was not put into practice, and the assessment never came to completion, like I said before.

These represented the most up-to-date, in terms of years of available indices, and so through 2017 in most cases, and they represented the indices that will be included in a future assessment, and so SEDAR 43, for example, did not have the combined video index, and they had one of the other labs' indices. The combined video index, which includes the Pascagoula, Panama City, and the Florida video surveys, was put forward in 62 and approved for use in that assessment, and so, therefore, it's very likely to appear in subsequent assessments, and so we wanted to present that, rather than some of the indices used in the past.

The specifics here, in terms of each index and how it behaves, are not that important at this point. What we're basically looking at right now is trends in these indices and whether they agree or not, and then we will get into the specifics of the selective index later on.

Now you're looking at the fishery-dependent indices, and you've got the headboat eastern Gulf in the top-left, headboat western Gulf in the top-right, an MRIP, and so this is the private/charter index, for the eastern Gulf of Mexico in the bottom-left, and the commercial handline index, and this was basically Gulf-wide. There were two produced, but they were

identical, and so this is more of a Gulf-wide commercial handline index at the bottom-right.

The general take-away from those -- Like I said at the top for the gray triggerfish status, the current rebuilding plan is a nine-year plan that aims to rebuild gray triggerfish by 2025. The indices, in general, agree that the stock hit its low point in the late 2000s, the early 2010s, and, while there is some variation from index-to-index, in general, they tend to be trending upward, especially in the eastern Gulf of Mexico, and so this suggests that the rebuilding plan and the restricted landings is having, at least to some extent, its desired effect of beginning to rebuild biomass in the Gulf for gray triggerfish.

All that means, essentially, is that the stock can potentially support increased removals without compromising that rebuilding, and this interim assessment process can hopefully provide advice.

Here, we're looking at the harvest control rules and these are not overly complicated. There is a paper out that details some of these, and what you're looking at is a very slight modification from what has been published for these index-based assessments, and there is two essential approaches.

I guess we'll start at the top. At the core, what you're aiming to do, regardless of which approach you take here, is take a reference catch, which is shown in both of these equations with the C_{ref}, and that reference catch, in this case, would be that 305,300 pounds, and so the existing management advice, and you're going to modify that by an index ratio.

If you look at the bottom equation, it's a little bit more straightforward, because it doesn't have the summation in there, but you can see the ratio is essentially the index in the present year, and so, here, we would be in 2020 for Y, with the goal of setting catch advice for 2021, and that's the Y-plus-one on the left-hand side of the equation, over the index value at that reference time period, and this would be back in 2012, when the catch advice was put into place.

At its core, you're taking the existing catch and you're modifying it by some ratio of the indices. If the index has increased in time since the reference, you would be increasing your catch. If it has decreased in time, you would then be decreasing your catch, and then you've got two ways of dealing, or buffering, for uncertainty in your index.

As we all know, our indices do not track abundance exactly, for a number of reasons, and so you wouldn't necessarily want to change your catch advice in a subsequent year based on noise. If you happen to have a particularly noisy index, you wouldn't want to be dramatically changing catch advice every year, and you would want to kind of smooth that in one way.

The two ways that have been proposed and examined and looked at as part of this and other interim assessment processes are to either take an average, in the top equation, where you use more than one year of the index to sort of smooth it out, or applying a smoothing parameter, this beta term in the bottom equation, and, here, we have multiplied it by sigma, or an estimate of the variation in the index itself, to smooth out the process in that way.

As we kind of discussed in the previous slide, but just to summarize, the interim assessment process has two main decision points. The first one is identifying the index that we're going to use for defining the reference value as well as the current value, and then the second one is selecting the harvest control rule, whether it be the averaging approach or the smoothing through the beta parameter approach, and then parameterizing that.

In that case, parameterization of that for the average is how many years to average over, and, obviously, you could average over any number of years, but, at least through the MSE process that we tried to implement, we looked at one-year averages, three-year averages, and five-year averages. Then, for the beta parameter version, you parameterize that by trying to identify a beta parameter that provides the optimum smoother, and that parameter can take on any value you want, and it smooths it, depending on the magnitude of the parameter.

Like I said at the get-go, we are extremely close to being able to produce these MSEs to help us identify the best index and help us identify how to parameterize the harvest control rule, and that has been brought to fruition through a collaborative project developing this SS MSE toolkit, which is essentially an extension of Stock Synthesis, and, when it is fully operational, it will allow us to just take the output from our stock assessments and feed them into this extension that will turn them into the operating models we need to do the MSEs for this process.

We set out to try and do this for gray triggerfish, and we made

great progress in the time that we were working on it, and we started to produce some advice, but, at the end, we essentially started to run out of time to complete this process to use it for this interim assessment, and so we fell back on some of our old methods for coming up with a few of the decision points that we had to make, but I just wanted to bring this to your attention, is that, unfortunately, we didn't make it for this go-round, but, for the next go-round, whether that be red snapper, which I know is on the schedule, or a subsequent assessment, we'll likely be giving advice through this SS MSE process.

As we start to develop that, we're going to need stakeholder input from the SSC and from the council and from other interested parties to really pinpoint the performance metrics, or the ways that we use to make decisions from the MSE, which ones are the most valuable and which ones should be included to help the committee and the Science Center come to the right decisions, as far as which index and which harvest control rule and how the tradeoffs interact, and so that's something to keep on your radar, and we'll probably be coming at you in the future looking for input into this SS MSE process.

From the preliminary MSE, one thing -- A couple of things that were able to identify fairly clearly in that process was that the fishery-independent indices were preferred over the fishery-dependent indices for gray triggerfish. From the averaging, versus the beta parameter, the three-year average approach was preferred as well, and so we used those nuggets that we were able to get from the initial MSE runs and then combined it with a sort of something we've done in the past, pre-MSE.

That was looking at residual analyses of the indices, and so, in this graph on your screen, you see the residuals from the video, the combined video, survey in orange, and the SEAMAP trawl in blue. Essentially, what you can see is that the video index, in general, does not have any trend to it, and it's relatively un-trended, whereas the SEAMAP index seems to have some trends, suggesting some correlation in the index.

It's also a much shorter index, which weighed against it, in terms of our decision points, and so, based on this and some of the evidence we got from the MSE and other discussions we've had in the past, we selected to go with the combined video index for this interim assessment.

We're going to focus in a bit on the combined video index here, and what you're looking at now is the index that was updated

through 2019, courtesy of Kevin Thompson over at FWRI and all the other partners providing data. He went above and beyond to get this to us in an extremely short amount of time, and we can't thank him enough for that effort, if he's listening.

What you see, essentially, is that the index, like I said, has been highly variable, and it achieved its highest value in 2009, and its lowest value in 2005, but it has then hit subsequent low periods that have almost achieved the time series low in 2012 and then again in 2018, before seemingly rebounding again in 2019. This variability that is quite obvious in this index, again, plays back into the need to do some buffering, whether that be through the average or through the beta approach.

The interim assessment, like I said, is going to adjust the current ABC of 305,300 pounds, which is our C_{ref} value. It's going to do that through the harvest control rule, and, again, we ended up selecting the average approach, and so the harvest control rule you see on the screen is the one that averages the index, and it averages two different index values. It averages the reference value, which is shown in green, and this large table on the left is the output from the combined video index standardization process, with the column that has the shading in it being the standardized index values itself.

We ended up averaging the reference index here as well, shown in green, and we did that for one primary reason, and that is that the stock assessment, and we'll see this in the next slide as well, but the stock assessment that produced this catch advice of 305,300 pounds, which was the SEDAR 9 update, wrapped up in 2012, and it went through a terminal -- I guess it wrapped up in 2011, and it had a terminal data year of 2010, and it was then implemented in 2012.

2012 was one of the lowest years in the time series, and that, in and of itself, is not a reason to average this, but, if we look back, or we'll see it on the next slide as well, the terminal data in the assessment that produced this catch advice was almost a time series high for gray triggerfish, and so the projections used to create this catch advice were being informed by data that suggested that gray triggerfish were doing quite well.

Almost immediately after that assessment wrapped up, the stock appeared to drop quite low, based on the indices, and that's supported by a number of indices, and so it seemed ill-advised to use a reference index value from the trough of a time series when that information was not available to the assessment that

produced the catch advice.

There was two things that we could have done. We could have tried to use the predicted index value from the SEDAR 9 update assessment for 2011, 2012, and 2013. That information was not available to us at the time of this interim assessment, due in part to the fact that that assessment was from 2011, and it's quite a bit out-of-date. In lieu of having those predicted index values to use in its place, we decided to average over the reference index to provide some additional smoothing at that end.

The other part of the equation is the observed index, and, there, we have a three-year trailing average, and so we used the 2019, 2018, and 2017 value to create our three-year current index, and so those two values are shown here. The reference index came at 0.66, and the current index at 0.988, and that creates a ratio of those two indices of nearly 1.5, suggesting that ABC could be increased.

This is basically a graphical representation of what we just went over, just to reinforce some of the points, and so this vertical black line in the plot that you see, or I guess I'll start with the basics.

This is the combined video index, again, obviously, and the blue line shows the predicted index, and the orange line is the nominal, or observed, and the orange dots are the nominal, or observed, index. The vertical black line at 2010 is denoting the terminal data year of the SEDAR 9 update assessment, and then the red dot is showing the average, the reference index value, and the red line is showing the recent value.

Then the rest of the information is presented that we just went over, and this just reinforces what I was saying. If you look back, this 2010 data point would have been included in that assessment, but, by and large, 2009, again, was the highest point on record for this index, and so the assessment was getting fed information that was quite positive right before falling off a cliff.

This similar type of scenario occurred in red grouper, and not in the interim assessment, but in the assessment itself, where we had a situation where catch advice was set, and rightfully so, from an assessment that suggested the stock was doing quite well right at the time the projections were done. In subsequent years, shortly thereafter, the stock declined quite a bit, and we found ourselves in a scenario where we had catch advice that

was much higher than seemed appropriate, because it was based on a much rosier picture in the past.

I won't beat that dead horse any more, but, down here at the very bottom, tucked away, is what applying this harvest control to the reference catch gives you, and it gives you an adjusted catch recommendation of 456,900 pounds whole weight for 2021.

This is just a summary of the options that we are putting forward, which is essentially, if you keep the status quo value, which is 305,300 pounds, and then, over to the far-right of the table, how that breaks down on a sector-to-sector basis, based on the established allocations, and then adjusted reference catch is in the bottom row of that table.

The other thing to mention here is that the OFL was not changed. We have looked into this some, and we believe the OFL can be adjusted in the same fashion as the ABC, using that index ratio. In this case, the OFL of 1.2 million pounds stems from the SEDAR 43 assessment, and that OFL got implemented when the ABCs did not, and that remains unchanged. Here, it's not going to be limiting in any case, because the ABC is quite a bit lower.

The need to adjust the OFL will certainly become an issue if we do interim assessments on stocks that are managed by a P*, where the ABC and the OFL are quite close to each other, and you could very easily run into a situation where the ABC is recommended to be increased and that the increased value would exceed the existing OFL without an adjustment to the OFL as well, and, like I said, we think that can be done using the same index ratio approach, and we would certainly recommend that in future interim assessments where it's necessary. However, here, it's clearly unnecessary to raise this OFL at this time, and so we recommend sticking with the current 1.2 million pounds that is on the books.

I believe this is my last slide, and the next slide is just a question slide, and so I'm happy to take any questions at this point. If we want to put the other slide back up, for discussion purposes, that's fine as well. Thank you for your attention, and I'm happy to answer any questions.

CHAIRMAN POWERS: Thank you. The floor is open. The OFL, using this process, has not changed. The ABC is 456,000, and the reference level for the -- The ABC before was 305,000, correct?

MR. SMITH: Yes, that is correct.

CHAIRMAN POWERS: Okay. All right. Any discussion? Paul.

DR. SAMMARCO: Great presentation. I enjoyed that. Many a triggerfish has tried to take most of my hair out when I'm diving and bounced up against my mask, but I had a -- It's more of a comment than a question, and I can't tell you what slide it was, and it was probably about eight or ten slides back, but I was thinking your numbers are six figures or so, and they are fairly variable, depending on what you're using as a measure, and you're using, of course, your raw numbers to run your equations on and so forth.

I was going to suggest, just for kicks, to try taking your raw numbers, and I'm looking at one here of 305,300, and using a log transform on your numbers. I think you'll find that your data on your graphs is not quite as variable as it might appear at first. Also, if you used logs of those numbers, and you pump them through your equations, and then, after you get the number you're looking for, back-transform it, I think you will find it fairly similar to the ones you're getting using the raw numbers.

The main thing about it is it would give you a -- It gets rid of a lot of the noise, so you can see some sweet trends in the data without the bounce, and it's a fun exercise, and I'm just suggesting it, to give it a go and see how it goes. Thank you.

CHAIRMAN POWERS: Thank you. Luiz.

DR. BARBIERI: Thank you, Mr. Chairman. Matt, thank you. Great presentation. My head is still spinning a little bit, because this is a lot of information to take in, and so I'm trying to kind of think my way through this.

If you don't mind going back to Slide 4, in a nutshell, basically, I think what we are trying to do is use an index-based approach to scale the ABC value there, the 305,300 that has been in place since 2012, but it's based on data from 2010, which was the last year of data into the assessment, and to scale that forward, right?

MR. SMITH: Yes. That's 100 percent correct.

DR. BARBIERI: All right. Wow. I mean, I have been thinking about this, and I see the value of these interim analyses, and I guess usually it has been Skyler that came over and gave us presentations on those, but they are really sort of done to kind of update the data in between assessments, but usually you don't have this long time period.

Like, if you go now to your Slide 14, because, really, yes, we have the index there, and, of course, this is an index-based approach, but we really know nothing else about the dynamics, what might be driving the dynamics, of this stock, since the assessment was conducted so long ago, and the terminal year of data is 2010.

I am just trying to digest that this -- It's quite the leap of faith, and it's nothing to do with the process that you followed here, Matt, and I think that this is straight-up well done, but I just wonder if we are not pushing the intent of the interim analysis here beyond what would be its reasonable capabilities, and so I'm going to just stop there and let others discuss some points as well.

CHAIRMAN POWERS: Thank you, Luiz. In a sense, and I don't know if Skyler -- We went through actually a SEDAR process for data-limited, in which we used either index or average catch, weighted average catch, or something like that, and, in those particular cases, you still had to kind of come to an agreement about what to assume what the initial conditions are for a completely data-poor.

Conceptually, the way I interpret this is going on, is you are using essentially those data-poor methods, but you're defining those initial conditions based on something from an assessment, the 305,300, and so, in essence, you are essentially defining this as a completely data-poor, no stock assessment sort of situation, but you are limiting it a little bit by what the assessment said in 2012, and, conceptually, that's, I think, in essence, what is going on. Is there somebody that disagrees with that? If not, David.

DR. CHAGARIS: Thank you. I guess a little bit of follow-up to maybe what Luiz was getting at, and that is that I think one of the downsides of this approach is that it is really completely disconnected from the population dynamics, and it seems like it would be a big jump, if you've already gone through the process of extending the index, and you have the catch data for the interim years, to actually put those values back into the assessment model and keep a bunch of parameters fixed, but then estimate what you need to to project through those years of data.

Especially when you have a long time period, such as this, I don't know if it's possible, because -- I may be incorrect, but I think the index shown here for the interim analysis was not in

the previous assessment, and so that could be an issue.

Then the other point to kind of bring up is that this does assume strong proportionality between the index and the stock size, and, I mean, it is a fisheries-independent survey, and so that's good, but that's definitely something that I think should be evaluated, and so I wonder if you guys looked at the performance of the interim analysis under different assumptions about proportionality.

MR. SMITH: To a certain extent, yes, and, ideally, those comparisons will be made within the MSE process, when that's fully operational, and so, like I said, we did do some runs, and we basically only had one performance metric in those MSEs, and that was looking at SSB over SSB 30 percent, to compare, but we did, in the process, a variety of different averaging of the buffering approaches, of the smoothing approaches, and we used a number of different reference values, possible candidate reference values, and then we looked across all of the indices we had available and ran numerous simulations for each scenario and plotted out the uncertainty and the bias potentially associated with the different runs.

We used those to guide the decisions that we came to, to the extent that we could, given the limitations of the MSE and its early stages right now, and I don't know if that answers your question.

Other than that, we definitely understand that you're making a pretty strong assumption by assuming that the abundance follows the index, and we're hoping that the MSE will be able to provide the quantitative support for future versions of this, as it started to for this current one, to allow us to say, definitively one way or the other, that one of these achieves the management objectives that we're trying to achieve better than the other, or, if it comes down to a few candidates, that then we can bring those options to the SSC and they can weigh the tradeoffs between catch stability or probability of overfishing or becoming overfished or whatever it is that we deem to be the most important.

CHAIRMAN POWERS: Thank you.

DR. CHAGARIS: Thank you, Matt. That does answer my question, and, if you're not aware, you might want to take a look at the Gulf menhaden MSE that Doug Butterworth was working on for the last year or so, and I think that had a pretty robust management strategy evaluation around that, and it's very similar to what

you guys are looking to do.

CHAIRMAN POWERS: Sean.

DR. POWERS: Thanks, Joe. I guess I am really concerned, obviously, about this assumption of proportionality, and the index doesn't seem to give you as much contrast as you would think with the stock as low as we thought it went, and I have two questions. One is this index is only from a certain section of Florida, correct?

MR. SMITH: That's not entirely correct. This index now encompasses three different video surveys that essentially extend from the Gulf of Mexico all the way to -- Not quite the tip of Florida, but pretty far down the West Florida Shelf, and so it's the FWRI index, which operates pretty much off of Tampa, the Panama City index, which encompasses the Bend, and the Pascagoula survey, which is deeper waters, but it encompasses almost the entire eastern portion of the Gulf of Mexico.

DR. POWERS: My understanding is the FWRI is new, and so that wouldn't help us in the very long time series, and the Panama City is the most relevant one, because it's got the highest abundances on the video, and the deeper Gulf-wide one really doesn't pick up that many triggerfish. Is that an unfair characterization?

MR. SMITH: No, I don't think it's an unfair characterization of the video surveys.

DR. POWERS: That's what my point was, that it's mainly the Panama City video survey that's driving it.

MR. SMITH: I guess it has most of the positive results, yes. They are not combined naively, and they are combined through a model-based approach that takes into account habitat and individual surveys, to try to account for those differences in the survey, but you are correct that most of the positive observations came from the Panama City Lab, but I don't think that comes at the expense of the other two surveys.

DR. POWERS: I am not criticizing the survey. I mean, it is what it is, and I think you guys have done a fabulous job getting it to an index, and I am just trying to wrap my head around the limitations of why it wouldn't be necessarily proportional.

The other one is did you all try to see what the index value was

with the other indices, just to get a range? I mean, I don't think the other indices -- This is the one that I would have chosen, if I had to choose an index, but I was just wondering what the range would be if you chose another index.

MR. SMITH: We did not, as part of this exercise, and part of that has to do with time constraints, and part of it has to do with the spirit of these interim assessments in general, and this kind of plays back into what Dave had said before about kind of creeping this into a larger stock assessment.

These are meant to be produced quickly and regularly, and it's possible that we'll be up to a point, in the not-too distant future, where we'll be doing one of these for almost all, if not all, of the stocks that are managed, on an annual basis, and so we're very cognizant, at the Science Center, about avoiding mission creep on these, which, if we're going to start running every possible index, to see what they look like, that's not a ton of extra work, but it is extra work, and it will start to add up and chew into analysts' time for other tasks.

The short answer is, no, we did not do that for this, and we are certainly open to considering combination of indices in the future, and that's one thing that we've talked quite a bit about, in terms of running these through the MSE, is, rather than just doing individual indices, to try combinations of indices, to see if there are some advantages to going down that road, but I think I would caution against pushing towards trying to do this for every available index for every species and then allowing subjective decisions to be made based off of the result of those.

We're hoping to get to a situation where the MSE can be conducted separate from the advice process, and thoroughly reviewed, and then we settle on an index and a harvest control rule, and then advice will be produced annually, or as demanded, from that point on, until such time down the road, whether that be five years or ten years or whatever time period, where we decide again, as a group, that we need to revisit the index harvest control rule combination, and then we would conduct the MSE again.

It's all in the spirit of streamlining this process, so that we can provide as much advice to the council as we possibly can in the time that we have, with the limited staff.

DR. POWERS: Okay. Thanks. One more clarification. What is the years for the FWRI? Is that 2017, 2018, and 2019?

MR. SMITH: The FWRI component of the survey goes from 2010 through 2019.

DR. POWERS: Thanks.

CHAIRMAN POWERS: Ryan.

MR. RINDONE: Thank you, sir. I just wanted to remind the SSC that the purpose of the interim process, or the interim analysis process, is to provide advice to the SSC to consider for the council in between assessments, and it's not intended to replace the other parts of the actual SEDAR stock assessment process.

If you guys -- I know that we had issues with SEDAR 62, and we're working on getting a research track lined up for gray triggerfish in the future, but, in the meantime, this is a tool that can be used to try to take a glimpse at what's going on with the stock and to help the council to revise catch accordingly, if it's appropriate to do so, but this is not meant to take the place of an operational assessment. Those would still need to be considered and scheduled by the council, with input from the SSC at appropriate intervals, like they would for any other species. Thank you.

CHAIRMAN POWERS: Thank you. Carrie Simmons.

EXECUTIVE DIRECTOR CARRIE SIMMONS: Thank you, Mr. Chair. I just -- I guess I wanted to make it clear, and maybe reiterate what Matt said, that we did have an approved stock assessment, and it was in 2015, right, Matt?

That did include the last terminal year of data was 2014, or 2015, and then the council did put in a rebuilding plan for triggerfish, and they decided to stay with the 305,300, and that was implemented in January of 2018, and so it's not that old. It was a conscious decision by the council to keep that ABC of the 305,300, and so we have a more recent stock assessment that was approved by the SSC, I believe in 2016, early 2016.

I did have a question for Matt. In the SEDAR 43 that was done, was the Panama City index included in that assessment, the visual survey?

MR. SMITH: I would have to go back and check, but my guess would be that, if a video index was going to be included, it would have been the Pascagoula survey. We typically don't include, or haven't included, in the assessments that I have

worked on, multiple video indices.

EXECUTIVE DIRECTOR SIMMONS: Right, and so I was thinking that it might be the Panama City one. I will look it up. I thought you might know. Thank you.

MR. SMITH: I did not. Sorry.

CHAIRMAN POWERS: Thank you. Again, we are being asked to provide ABC advice, and an option for approaching this has been presented here. If we did nothing, presumably the 305,300 would remain as our determination of ABC. What do you want to do?

DR. POWERS: Joe, that 305,300 -- Based on what Carrie said, it sounded like the council had some room to increase that, because some of our subsequent ABC recommendations were higher in the series, and did I hear that correctly, Carrie?

EXECUTIVE DIRECTOR SIMMONS: Yes, that is correct. I believe the eight-year rebuilding time series was a little bit lower, but the nine and ten were higher, and the council went with no action and kept the ABC of the 305,300. They made other management changes, and I think they increased the recreational minimum size limit to fifteen. Within the twenty-reef-fish bag limit, they reduced it to one fish, and they closed it in January and February for the recreational sector.

CHAIRMAN POWERS: So what's the will of the SSC? Essentially, the way I kind of interpret this, there was a decision made, an analysis made, that originally established this reference level of 305,300 pounds, and that becomes sort of the standard to which we're kind of comparing.

There is a process of adjustment that has gone through a fair amount of analysis, and particularly in the context of the data-poor limitations for SEDAR and the efforts that Skyler has done, and, if you did that and scaled it to what we thought we knew in 2012, then you would go through this adjustment to 456,000.

There have already been discussions about how well the index might provide support for that increase, and, in essence, is that index indicative of the changes in the stock, proportional to the stock, and so that's kind of where we land.

MR. RINDONE: Looking at our SEDAR schedule, we have a gray triggerfish research track scheduled to begin in 2023, and this is tentatively scheduled, and so the SEDAR Steering Committee has accepted the SEDAR cooperator requests for 2023, but we

still need to finalize all the scheduling with the Science Center before we can say that that's nailed down, but it is on the schedule.

You figure the time it takes to complete a research track, followed by an operational assessment, and it could be 2025 before the council gets management advice, and so using these interim analyses is something that you guys should consider.

CHAIRMAN POWERS: What's on the screen? I am not sure what is there, and can you make it bigger, so that I can actually see it?

MR. RINDONE: This is from Reef Fish Amendment 46, which characterizes the gray triggerfish rebuilding plan, and what you see on the screen is Action 2, which established the annual catch limits and catch targets for gray triggerfish, and the council chose the no action alternative, which is Alternative 1, which maintained an ABC of 305,300 pounds. Then you can see how that's divided up between the commercial and recreational sectors, which have 21 percent and 79 percent of the stock ACL allocated to them, respectively.

CHAIRMAN POWERS: All right. Thank you. Carrie, did you have a comment?

EXECUTIVE DIRECTOR SIMMONS: Thank you, Mr. Chair. I think Ryan covered most of it, but I was just going to point out that I think Dr. Powers, Sean Powers, asked about the council had an option to increase the catch levels from the last assessment, and they decided to keep status quo, and that just shows what the options were under the various rebuilding plans after SEDAR 43 in 2015. That's what we were bringing up. Thanks.

CHAIRMAN POWERS: Thank you.

MR. RINDONE: So that would be the 225,333, 403,333, and 551,667 values, and those were all in pounds whole weight.

CHAIRMAN POWERS: Thank you. What's the wishes of the SSC? David.

DR. CHAGARIS: Just a quick question. Does somebody know what percent of the ACL has been landed in the last few years?

MR. RINDONE: Hold, please. For 2019, the recreational sector landed 129 percent of its ACL, using CHTS data currency, and was closed in May. The commercial has been under pretty regularly,

as Matt had said, but I will look up 2019 data. 98 percent of its ACL for the commercial sector.

Then, if we go back, and you can find all this stuff on the Southeast Regional Office's ACL monitoring webpage, for those that want to dig through it at home. Historically, for the commercial sector, for gray triggerfish, in 2018, they were at 102 percent of their ACL, and then this is going 2017, 2016, et cetera, but 98.7 percent, 93.3, 74.9, 63.8, 115, and 113. On the average, they have been under their ACL, if I were eyeballing that.

Then, recreationally, historically, the ACL has been exceeded every year since 2015, the most of which was in 2017. 313 percent, almost 314 percent, of the ACL was landed. That was due to an overage in the previous year.

DR. CHAGARIS: Thank you for that, Ryan.

CHAIRMAN POWERS: All right. Thank you. What I would like is a motion, some sort of discussion to move ahead, and I think that there are several options. We can basically say the ABC is the 456,000, in essence saying that this methodology is appropriate, and we might do that and say that this is appropriate just for two years, three years, five years, and we might take the option that, while this might be appropriate at some point in time, we're unwilling to buy off on it now, in which case you leave it at the 305,000.

Those are the range of things that we are talking about, and so, obviously, in a data-poor situation like this, the reason we have difficulty with decisions is because it's data poor, and so you have to kind of build in there that you know you're going to be wrong a fair amount of the time. David.

DR. CHAGARIS: It's not a motion, but I'm just wondering if there's any way that we can lean on our P* decision criteria to use this approach, but reflect our uncertainty. I mean, essentially, we're treating the index like a stock assessment, and we would typically go through some process of incorporating our uncertainties into the decision process, and so I wonder if there's a way to think about that.

CHAIRMAN POWERS: Well, in essence, what you're doing here is saying that this is a data-poor stock, which effectively would reduce it -- It would reduce the tier you're trying to deal with it for, and so it would be part of the control rule, but not necessarily going through the whole P* sort of situation.

That's essentially it. To me, this certainly is consistent with the data-limited approaches. Shannon.

DR. CALAY: I was just going to lend a little bit of support. I do realize that this is quite a data-limited approach, particularly given that the management advice we're adjusting is from an assessment that is quite old, but the balance of information that we've received indicates that the stock has increased in recent years, and the MSE basically supported this index that's shown on the screen as the most reliable index.

The whole point of using a moving average is to attempt to not adjust too strongly based on one annual estimate, and so it is a way of attempting to acknowledge the uncertainty in the annual estimates, and so I did want to say that, even though, obviously, a full stock assessment would give us better information, or even -- Well, certainly a full stock assessment, but I do think that, even though the stock has experienced some recent overages, the indices suggest the stock is increasing, and so I'm fairly confident that we could adjust the ABC somewhat to reflect that increase, and that's essentially what we've done in this approach.

CHAIRMAN POWERS: Again, if we take that approach, you can -- We could specify that it only occurs for two years or five years, and then suggest that, if there was no interim analysis that was done in three years, for example, then it would revert to the 305,000. I mean, I think there's some flexibility there. We need to move on this. Sean.

DR. POWERS: (Dr. Powers' comment is not audible on the recording.)

MR. RINDONE: Sean, you sound like you have the worst laryngitis ever.

DR. POWERS: (Dr. Powers' comment is not audible on the recording.)

MR. RINDONE: He sent a motion. Jess will pull it up. **Mr. Chair, Sean's motion is on the board.**

CHAIRMAN POWERS: Okay. Is there a second?

SSC MEMBER: Mr. Chairman, I will second that.

CHAIRMAN POWERS: All right. Thank you. This is where, for those of us that are kind of edgy about this, we might put in --

Not necessarily in this motion, but in a subsequent motion, say, after 2023, the ABC should be X, unless another interim analysis is done. I mean, the frequency of interim analyses -- If this were voted for and accepted, would there be an interim analysis required in 2023 or 2024? That's a question. Ryan.

MR. RINDONE: Thank you, Mr. Chair. You guys can recommend to the council the frequency with which you think you should be reviewing interim analyses, be that annually or biannually or what have you, and we, of course, would have to try to work with the Science Center and their workload to find ways to accommodate whatever the council ultimately decides to request.

The way that this is set up, it's such that -- Again, it would stay at 456,900 for 2023 and subsequent years, and that's the way that would be written into the regulations, and so basically until changed.

MR. GILL: Mr. Chairman?

CHAIRMAN POWERS: Yes. Thank you. Go ahead, Bob.

MR. GILL: Thank you, sir. You're getting to the friendly amendment that I wanted to see if Sean would accept, and that is, after "2023", we add the words "and interim analysis for 2024 forward be conducted at that time".

MR. RINDONE: Mr. Chair?

CHAIRMAN POWERS: Go ahead, Ryan.

MR. RINDONE: Just a couple of points. It probably would be good to mention the species in the motion and to note that the -- The SSC recommends an ABC for gray triggerfish.

DR. NANCE: I would put it up as based on the gray triggerfish interim analysis.

MR. RINDONE: There you go. Just somewhere. Then, after the "456,900", to put "pounds whole weight". Then, to address Mr. Gill's edit to the motion, I think it's important to remember that we have to send a letter requesting the work be done by the Science Center, and they would figure out who is going to do it, and you never know. Matt might win the lottery and decide to buy himself a small island in Panama and just that's it for him, and so they will have to task somebody to do it.

They will have to go through and evaluate the analysis

internally and then bring it to you guys, and you guys will have to review it, and then the council has to look at your recommendations and initiate council staff to do a thing. The council staff will have to do that thing, and then that gets sent to NMFS, and then that gets made into a rule.

By then, what we have started at the end of 2023 and the beginning of 2024 is dusty, and so some consideration of the time it takes to go from science to management to law would probably be a good consideration to make.

CHAIRMAN POWERS: That was one of the reasons -- A way to kind of get at this the same way was to say, in 2024, the ABC would revert to 305,000, unless information indicated otherwise, and that would kind of force the issue. How the timing went on and everything else would be left to the intricacies of the agencies. Doug.

MR. GREGORY: With all due respect, Ryan, I think you made it way more complicated than it is. My memory is that we were told, in the beginning of this whole concept of interim analyses, that we could virtually get them annually, in lieu of updates and standards and operational and research tracks, and I think we ought to -- We the SSC, and not at this meeting, but at a future near meeting, set our own schedule.

Let's look at the SEDAR schedule for stock assessments, and let's develop a maybe even longer schedule, and I know Ryan has done this for the council in the past, and go beyond what the SEDAR timeframe is, but to give us a roadmap, and we can include -- We can identify when we want interim analysis of different species, and even identify why, and that will help us, because this is supposed to be kind of a quick-and-dirty assessment, to let us let the council have some insight as to where they can go from year to year, or every two years, at the longest period of time, and so I don't think we have to worry about getting another interim analysis in four years. It will happen. Anybody can request it. I see Shannon just popped up, and so I said something wrong.

CHAIRMAN POWERS: Let me go first with Ryan and then Shannon.

MR. RINDONE: Thank you, Mr. Chair. It's the ultimate goal of the Science Center to be able to host the method for doing these interim analyses online, such that the council could request one digitally and basically just -- I may be oversimplifying this, and I'm sure that Shannon will correct me if I do, but go to a drop-down menu, pick your species, say give me an interim

analysis, and the MSE runs in the background, and the updated catch advice and all the tables and figures that are requisite for it are automatically produced.

The SSC could decide that it's going to review certain species every year at certain times of year, or every other year, or whatever the pleasure, and the council is actually going to have a discussion about these interim analyses and their timing and use and management at the October council meeting.

What I described that Doug said was probably too deep of a dive, is the way that the process exists currently, but it is the Science Center's desire that the vast majority of this process be automated to increase throughput and to provide better flexibility to the councils for when they request these and how they use them. Thanks.

CHAIRMAN POWERS: Shannon.

DR. CALAY: Yes, certainly we are investing heavily in the automation that will be required to run these things more frequently, and we do envision a day when we would be able to run many of these each year.

The complication right now is that, in order to test which of the available indices is most appropriate, that does require MSE work, and so it won't initially be that fast, but I do agree that we can certainly look at the available time as part of our process of writing our calendars and workplans for each year, and we could set aside a certain amount of time to do some of these interim assessment approaches. The trick would be prioritizing them, because there is MSE work required to ensure we're using the most appropriate index.

CHAIRMAN POWERS: Thank you. John Mareska.

MR. MARESKA: I think, in this time of transition, I think it's important that this also be indicated that these units are in CHTS, if I heard Ryan correctly, so that, in a couple of years, when we look back on it, there is no confusion.

I think it's important that we look at this again in the near future, because I think, this year in particular, in 2020, with everybody going fishing as an alternative for COVID activities, I think we're going to see that we're going to have some really unusual numbers in this year, and so we may want to address this perhaps sooner than 2024, particularly if we see something very interesting, by 2022, that happened during this year. If Sean

would accept a friendly amendment, I would like to add "CHTS" into that motion.

CHAIRMAN POWERS: What's that the acronym for? It's for the Household Telephone?

MR. RINDONE: The Coastal Household Telephone Survey. John, where did you want to put that?

MR. MARESKA: Can we put that behind the "whole weight"?

MR. RINDONE: Just put, in parentheses, "MRIP-CHTS"?

MR. MARESKA: Yes.

MR. RINDONE: Is that what you're thinking?

MR. MARESKA: It is.

MR. RINDONE: Okay.

MR. MARESKA: Ryan, while I've got you, do we need an OFL? I know that's in our statement of work, to have an OFL as well, and so --

MR. RINDONE: If you guys choose not to -- I mean, that information wasn't presented to you today, and the ABC that is being discussed in this motion is still below the OFL that's codified in the regs, and so you do not have to address that at this point. I think the OFL is like 1.2 million pounds-ish. It's 1.22 million pounds, and so you still have a fair bit of separation between the current OFL and the proposed ABC in this motion.

CHAIRMAN POWERS: One other question. Do we have to have some sort of statement that says it's the best available data?

MR. RINDONE: That would be good to add, I think, if that's what you guys feel about the interim analysis.

MR. MARESKA: So, after "the SSC recommends", can we add "is suitable for management", "and an ABC". That's it. Thank you.

CHAIRMAN POWERS: Thank you. All right.

MR. RINDONE: So I'm reading this, and -- The SSC recommends that the gray triggerfish interim analysis is suitable for management, and --

DR. NANCE: Ryan, I think it should be "the SSC finds the gray triggerfish interim analysis suitable for management and recommends".

MR. RINDONE: There you go. Then delete "based on". It suitable for management and recommends an ABC.

CHAIRMAN POWERS: Thank you. Is everybody happy with that, all the proposed motioners and all the seconders?

DR. NANCE: It looks good.

DR. POWERS: Yes.

CHAIRMAN POWERS: Ken Roberts.

DR. ROBERTS: Just a question. I don't know what the MRIP and the CHTS have to do with that, in parentheses. What does that add to the motion?

MR. RINDONE: Ken, the 456,900 pounds is in the data currency commensurate with the data generated by the Coastal Household Telephone Survey, which was the old effort survey used by MRIP, as opposed to the Fishing Effort Survey, which is the new effort survey that has been used for the assessments of red grouper and vermilion snapper and cobia that you guys have already seen, and the FES is the one that has been showing increases in the estimates for catch and effort.

DR. ROBERTS: I understand that, but I just don't understand why the telephone survey is --

MR. RINDONE: It's like the difference between specifying it in terms of pounds or yen or dollars or what have you. It's the currency in which the data were collected and the catch estimate is provided.

DR. ROBERTS: I thought the telephone survey was not going to be used in the future.

MR. RINDONE: Until we have another stock assessment, it's the data currency in which we have to operate, because we don't have other data that have gone through an accepted assessment yet.

DR. ROBERTS: I thought the telephone survey had been evaluated and found not to be very strong, so to speak, and I'm trying to find out -- Is that going to be used in the future, even though

we know there's some lack of faith in the strength of that procedure?

MR. RINDONE: Effectively, what's happening now is the catch and effort is being recorded using the Fishing Effort Survey and, using a ratio adjustment, it's back-calculated into the Coastal Household Telephone Survey data currency, and so, in effect, it isn't being used anymore, but we have a method for converting back to that data currency, for comparison, if you will, and for being able to provide catch recommendations in situations like this, where the SEDAR 62 assessment was stopped, and that's what would have ultimately changed us over, for gray triggerfish, from CHTS to FES.

CHAIRMAN POWERS: So, effectively, when this gets applied at the management level, another conversion will take place, correct?

MR. RINDONE: Well, in effect, it already has taken place.

CHAIRMAN POWERS: Okay. Kai.

DR. LORENZEN: It was on the same point, and it's clear now, because this interim analysis essentially starts off from that previous assessment that used MRIP-CHTS, and so it's the same currency, but it doesn't mean that the telephone survey is actually being used, and, of course, it's not even conducted anymore.

CHAIRMAN POWERS: John Mareska.

MR. MARESKA: You and Ryan addressed my comments.

CHAIRMAN POWERS: Shannon.

DR. CALAY: I think my comment has been addressed. I mean, essentially, the important thing is to know that this recommendation is in the CHTS currency, because we're adjusting the ABC on the books, and so a -- The conversion could be applied to change currencies, but that typically is not applied by the Science Center. Typically, that is applied when management occurs.

CHAIRMAN POWERS: Thank you. Harry.

MR. BLANCHET: I'm sorry. I raised my hand trying to get unmuted.

CHAIRMAN POWERS: All right. If there's no other discussion,

then let me take a bold leap of faith here. **Are there any objections to this motion? If not, then the motion carries.** That concludes the section on the interim analysis. We do have the Something's Fishy document.

MR. RINDONE: I will go through that. This iteration of Something's Fishy was completed for SEDAR 62. Since we completed the work on it, we'll just go ahead and present it to you guys, really quickly.

We'll go real quick through this. Again, this is a tool that we're using to collect input from active fishermen on trends or unusual occurrences, and so responses were collected for gray triggerfish from April 16 to May 10 of last year.

There were a total of 132 respondents, and you can see here that they were mostly private anglers that made up the respondents, followed by for-hire and then the commercial sector. The manual response sentiment indicated a largely positive trend, followed by neutral and negative, and the automated analysis also showed a trend towards positive comments.

The majority of responses came off of Alabama through central Florida, with a very large majority of them coming from the Panhandle area. This is the word cloud that shows the word association, with the words showing up in black being the negative and then the orange being the positive, and so there are lots of folks talking about there being large numbers of large fish in large abundance, and we had to move "nuisance" from negative to positive.

Folks were saying that triggers are larger than they've been in the past, and there's so many of them that they're doing harm, that they're eating up other fish, and smaller triggers are more abundant. We heard that there were less triggerfish now off of Texas, but they're more abundant off of Florida, and we've heard that the rebuilding of red snapper and greater amberjack could be harming triggerfish and that some of the triggerfish have a strange chemical smell, which was a comment from the northern Gulf. That's it. Any questions?

CHAIRMAN POWERS: Any questions or comments? Ken.

DR. ROBERTS: Thank you, Mr. Chairman. I don't want to slow things down, but a clarification for me. The for-hire or charter boat side, or the response, those are the captains of the vessels or the people who use that as a method to catch the triggerfish?

MR. RINDONE: The way that they're identified is as captains, or operators.

DR. ROBERTS: Okay. Thank you.

CHAIRMAN POWERS: All right. Thank you. Any other comments on this?

DR. SAMMARCO: A question, please. You mentioned that some of the respondents had mentioned a chemical smell to the queen triggerfish, and do you recall whether that comment was across the Gulf, or was it centered in one area of the Gulf, in like Galveston or Pensacola or whatever?

MR. RINDONE: Emily is really the better person to answer that, and she had to step into another call, but I recall it being a northern Gulf comment, when I was talking to her about it last, but I can circle back on that.

DR. SAMMARCO: Okay. Thank you.

CHAIRMAN POWERS: Thank you. If there are no other comments, then let's take a five-minute break right here, and then we're going to move on to Agenda Item VII, which is the gray snapper terms of reference, and so let's take a five-minute break.

(Whereupon, a brief recess was taken.)

CHAIRMAN POWERS: We're on to Agenda Item VII, Review of Gray Snapper Terms of Reference. Ryan.

REVIEW OF SEDAR 75: GULF OF MEXICO GRAY SNAPPER TERMS OF REFERENCE, SCHEDULE, AND PARTICIPANT SOLICITATION

MR. RINDONE: The terms of reference that were based on the scope of work that you guys had approved for gray snapper are up on the screen, and they are Item 12a, and you guys should have had an opportunity to go through these and see if there were any additions or modifications that you wanted to make. I think that Doug had an edit that he wanted to make.

MR. GREGORY: If I may, Jessica, I sent in a draft motion this morning, if it went through. Basically, we had some lengthy discussions last year over the scope of work and some of the reproductive stuff. The Gulf Council, on September 30 of last year, wrote a letter to the Science Center with the draft terms of reference, or scope of work, that the SSC had approved.

In that letter to the Southeast Science Center, based on the conversations we had with the Science Center and among ourselves at that earlier SSC meeting, the council letter had this phrase "consider SEDAR 51 recommendations and any new information for reproduction".

The terms of reference that came back from the Science Center had deleted this phrase, and I would like to reinsert it in the terms of reference. I mean, we have a commitment from the Center, from last year, and I have it on the record, that they could do this with no trouble, as a sensitivity run.

If you remember our discussion last year, it had some confusion, and I was asking for a base run, or an alternative run, and I didn't realize what that involved, and so, if there's any objection to this from the Center, I think now is the time to hear that, and, if not, I would like to have this included in the terms of reference, like it was in the letter originally submitted by the council.

CHAIRMAN POWERS: All right. Thank you. Is there a second?

MR. GILL: I will second for discussion.

CHAIRMAN POWERS: All right. Then discussion. I remember we went through the discussion, and I don't remember all the details about the letter, but I do remember the discussion. Shannon.

DR. CALAY: I also remember this discussion. I don't think there is any particular concern about adding this term of reference. I recall at least a conversation about a specific mortality function, or maturity function, and my apologies, and we hesitate from writing specific formulations into terms of reference, because that's not really the way it should work. We should review the information and decide what the best available science suggests.

I don't have any particular concern about this term of reference. The only thing I would say is that, as our operational stock assessments get closer to a benchmarking procedure, the length of the calendar might need to be increased, and so there must be some assessments that are nearly mature that could be done more quickly, but the gray snapper stock assessment is a fairly elaborate set of terms of reference, and that just may have to be reflected in the ultimate calendar for that stock assessment. It may take us

longer to be able to do more work.

CHAIRMAN POWERS: Thank you. Are there any other comments on this motion?

MR. RINDONE: Dr. Powers, I do. Doug, under which term of reference would you like to have this motion apply? At first blush, I would think Term of Reference Number 2 would be an appropriate home for it, but without speaking for you.

MR. GREGORY: I think this is exact wording that was in the letter from the council, and so just insert it after the other two "considers", just like in the original letter of request from the council.

MR. RINDONE: Okay. Julie, if you're listening in, we would put it after the first "to" and before the last "consider" bullet under Term of Reference Number 2.

DR. NEER: Ryan, could you put up the terms of reference, so we can see, just to make sure that everyone is in agreement on where that's going? You just had it up there a minute ago.

MR. RINDONE: Jess will pull it up. Hold on.

DR. NEER: Thank you.

MR. GREGORY: It was after the phrase "consider SEDAR 51 recommendations for growth", after that insert, and I think it was the second-to-last insert under 2.

MR. RINDONE: So recommend natural mortality and then growth, and then the next -- It will become the second-to-last bullet, is essentially what we're saying, for Term of Reference Number 2. Doug's motion would become the second-to-last -- We're not going to delete that one, and we're going to add another one.

CHAIRMAN POWERS: All right. Then was there any other discussion about this?

MR. GILL: Mr. Chairman, as previously noted, the TOR does not identify what kind of assessment this is, and I think that needs to be determined and added.

CHAIRMAN POWERS: Because Doug chose to do this in a formal motion, let's get rid of the motion, and then we can go on for further discussion about the terms of reference.

MR. GILL: My apologies, sir.

CHAIRMAN POWERS: Okay. No problem. **Is there any objection to this motion? If not, then it will be included in the place rendered.** All right. Bob, returning to you.

MR. GILL: As previously mentioned, the TORs, as currently written, does not identify what kind of assessment is being conducted, and I think it needs to be determined and added.

MR. RINDONE: Mr. Chair, I will add in that it's an operational assessment, underneath the header. It will say "Operational Assessment Terms of Reference", just for clarity for that. Will that do, Bob?

MR. GILL: That's fine. Thank you, sir.

MR. RINDONE: Okay. Then we had a motion also from Steven Scyphers that was sent in, Mr. Chair.

CHAIRMAN POWERS: Okay. While she's pulling that up, Carrie, did you want to make a comment?

EXECUTIVE DIRECTOR SIMMONS: Thank you, Mr. Chair. I just wanted to confirm with Julie, Dr. Neer, that this is the last operational assessment that we have, that is scheduled, where we would not indicate, in the letter to you all, that we want a topical working group, because this actually has an assessment panel, and is that correct?

DR. NEER: Carrie, I'm not going to say for absolute 100 percent sure that this will be the last one, but that is our intent. This is our -- We are supposed to be transitioning to using operational assessments with topical working groups starting in 2022, but some are starting earlier and some are starting later, and so, yes, but I'm not going to say for sure that we won't have one that will show up somewhere in between that we'll have to adjust in that transition period of moving from assessment panels to topical working groups. I believe this will be the last assessment panel for an operational assessment for the Gulf of Mexico Fishery Management Council. I believe.

EXECUTIVE DIRECTOR SIMMONS: Okay. Thank you. I just wanted to make sure that we don't need to think about working groups now, and just remind us when we need to do that, because it's a new process for us, or it's a different process for us. Thank you.

DR. NEER: Yes. Absolutely. The statements of work will be

written differently as well, to account for the topical working groups, and we'll have to modify the ones that were already done for 2022, and Ryan and I have been working on that already, but I will make sure it is clear when we send the briefing materials, or request for approval for briefing materials.

CHAIRMAN POWERS: All right. Thank you. **This was a motion that was just brought up, and who did this?**

MR. RINDONE: Steven Scyphers. Steven, do you want to speak?

DR. SCYPHERS: Sure. Thank you, Mr. Chair. This is just a small proposed addition, and it's very similar to a terms of reference from SEDAR 64 on yellowtail snapper, which was -- That's basically just notes that I included in the email, if you would like to delete that part.

I thought it could be something that we could include, in addition to the efforts that the council has been doing with their tools and stakeholder engagement, and it could just provide a broader umbrella for any potential social science or economics data that could be brought forward in the context of the assessment process, and that other terms of reference also included that, as practical, in it. Thank you.

CHAIRMAN POWERS: Okay. Thank you. Any comments on this? **Any objection to this? If not --** If you have further suggestions, and I don't think we have to go through a motion process, and it's more recommendations, and so just bring them up, and we don't necessarily have to do it through a motion, I don't think. Are there other things on the terms of reference? Anything else?

MR. RINDONE: Next would be the schedule.

DR. NEER: Ryan, could we get a motion to approve the terms of reference, please?

MR. RINDONE: Sure. Yes. Mr. Chair, please. So to approve as amended.

CHAIRMAN POWERS: The terms of reference --

MR. GREGORY: I so move.

DR. NEER: For SEDAR 75, Gulf of Mexico gray snapper.

CHAIRMAN POWERS: Do we have a second?

MR. GILL: Second.

CHAIRMAN POWERS: Thank you. Is there discussion? **Any objections? None, and the terms of reference will go forward as amended.**

MR. RINDONE: Next is the schedule, and that is Item 12b, and it's up now. We are approving the terms of reference and the schedule now, and --

DR. NEER: We need participants too for this one.

MR. RINDONE: Yes, and we'll need participants as well, and so, guys, be taking a look at when things are occurring. If you think you would want to participate, and all the data deadlines and everything are all in here, and hopefully we'll be able to have a workshop in-person, if we don't get COVID-ed out of it, and then there will be a series of assessment webinars following that, and the goal is to have a completed report submitted to the council in November, which you guys would probably see the following January, unless the council wanted a special meeting convened.

DR. NEER: Just a note that these were submitted for approval prior to Jeff Isely's retirement from the Science Center, and so it will be Nancie Cummings who will be the lead analyst, and I will make sure that is updated on the schedule. I apologize.

MR. RINDONE: Any edits to the schedule, Mr. Chair, or concerns?

CHAIRMAN POWERS: Not from me. Anybody else?

MR. GREGORY: I would just note that this is taking over a year, to do an operational assessment, and so I don't know how much time savings we're accumulating by dropping the benchmark and doing this, where this is supposed to be more like a standard or an update. I have a feeling we're just going to have mission creep all along this.

CHAIRMAN POWERS: Perhaps. Perhaps. Ryan and then Shannon.

MR. RINDONE: Thank you, Mr. Chair. To Doug's point, there is a lot that we are trying to accomplish in this operational assessment beyond just turning the crank, and so that's part of the reason why there's more time built into trying to handle everything.

The migration to FES from CHTS will be more burdensome with gray snapper, due to trying to reconcile some of the difficulties with looking at the shore component of the private recreational sector, and then there's some other aspects related to the life history that we've already touched on that will take some time to look at as well, and so that's part of the reason for there being more time budgeted for this one. Thank you.

CHAIRMAN POWERS: Thank you. Shannon, did you want to --

DR. CALAY: Thanks. I mean, that's exactly the point. An operational assessment now can be anything, from a strict update to something much closer to a benchmark, and this one, the way the terms of reference are written, is much closer to a benchmark assessment and will require more time than a strict update, and that's why there is flexibility.

It's intended, so that we can address concerns that arise or new information that arises in a stock assessment, but the reality is that you can't get -- You can't get a benchmark assessment in a shorter timeframe. It's just not possible for the analytical team to turn it around more quickly, and so, if you do want more throughput, then we have to do more interim assessments, and we need to do things that are closer to strict updates.

I also wanted to mention that we need a little bit of flexibility on assigning a lead analyst for this stock assessment, because we are undergoing, currently, a restructuring, and we will, ultimately, be dividing the Gulf and Caribbean group up into a Gulf group and a Caribbean group, and, right now, Nancie Cummings is assigned to the Caribbean group, and so it's likely we'll have to put in a different lead by the time the stock assessment is actually conducted, and it could well be Adyan Rios, and Katie will get back to you with a final designee soon, Katie Siegfried.

DR. NEER: I hope it's soon, because we start in November, and I'm sending the doodle poll out on Monday.

DR. CALAY: Well, internally, we've discussed this, and I think we are pretty confident that we'll be putting Adyan Rios in that spot for the time being.

DR. NEER: Okay. Katie can let me know.

DR. CALAY: Sure. Thank you.

CHAIRMAN POWERS: Thank you. Any other comments on the

schedule? Do we have to have a motion about the schedule?

MR. RINDONE: Please.

CHAIRMAN POWERS: Use the same terminology there and just say, instead of "terms of reference", say "the schedule".

DR. NEER: Project schedule.

CHAIRMAN POWERS: You don't have to say "as amended".

MR. GILL: So moved, Mr. Chairman.

CHAIRMAN POWERS: All right. Do we have a second?

DR. NANCE: I will second.

CHAIRMAN POWERS: Any other discussion? **If not, any objection to this motion? The motion carries.** The next thing was solicitation of people to do this, to be a part of this, to be part of the team.

DR. NANCE: Joe, I will put my hat in there.

CHAIRMAN POWERS: Ryan, how many people are you looking for?

MR. RINDONE: We can have eight participants and four industry observers. Typically, we appoint three to four SSC members, but as many as would like to volunteer can do so, and then the council will select from those that have volunteered to participate.

CHAIRMAN POWERS: A lot of names are being given here, and are these names of people that are volunteering or people that want to talk? We have Jim Nance who volunteered. Kai Lorenzen, are you volunteering?

DR. LORENZEN: Yes, I am.

CHAIRMAN POWERS: Okay. Jim Tolan.

DR. TOLAN: Yes, I am. I would like to see this one through to the end.

CHAIRMAN POWERS: Okay. Doug Gregory.

MR. GREGORY: I would like to participate, definitely.

CHAIRMAN POWERS: Steven Scyphers.

DR. SCYPHERS: Yes, I am, too. Thanks.

CHAIRMAN POWERS: Jim, did you want to discuss anything more?

DR. NANCE: No, and I was just making sure I was on the list, Joe. Thank you.

CHAIRMAN POWERS: Okay. Then that's an adequate list, is it not?

MR. RINDONE: That is adequate, and I will go ahead and have Joe Powers on there as well.

CHAIRMAN POWERS: Okay. All right. I think that's it for this agenda item.

MR. RINDONE: Yes, that takes care of gray snapper.

CHAIRMAN POWERS: Okay. Good. Moving right along then, carryover in the ITQ, the red snapper ITQ.

MR. RINDONE: Dr. Stephen, are you available? That's right. Dr. Powers, we were -- She is on. Okay. Let's see if she's available.

DR. JESSICA STEVEN: I'm here.

MR. RINDONE: Perfect. Okay. Dr. Stephen, we will pull your presentation up.

DISCUSSION OF CARRYOVER IN THE RED SNAPPER INDIVIDUAL FISHING QUOTA PROGRAM

DR. STEPHEN: All right, and so I just wanted to go through -- This is a presentation that we updated from a previous council meeting, and we'll probably update it again for the next one, and, during kind of the presentation of what we were seeing in the IFQ for the pandemic, it became suggested that we should present this to the SSC as well.

I just wanted to let you know what we're going to go through, and there are a lot of species in IFQs, but we picked our three main primary species to go through, and we looked at red snapper, gag, and red grouper. We did a couple of different ways of analyzing the data, and we looked at the landings data from 2020 and compared it to 2019, as well as compared it to the

average of 2017 to 2019, and I just wanted to let you know that we were looking at the pounds landed, and we had a trip proxy, and so IFQ doesn't report trips, but we looked at each landing transaction as a proxy for trips, knowing that it's fairly similar, though not exact.

The other things we looked at were the ex-vessel total value and the average ex-vessel price. What we did is we had all the 2017 to 2019 set to the 2019 standards. 2020, we left the way it is without an inflation adjustment, because the 2020 data is still changing fairly rapidly, and it's a little bit hard to figure out what will be the end inflation adjusted for that year.

I also have allocations, and, here, we're just comparing 2020 to 2019, with the total value as well as the average price per pound for allocation, number of pounds transferred, and number of transactions. Then I will finish up with just a little bit of carryover considerations, and this might be where the SSC comes into play.

All of the graphs are set up in a similar fashion. This is red snapper in the upper-left-hand corner, and you see the trip count, with the light-blue line representing 2020, and so you can see that 2020 is lower than 2019, the black-dashed line, or the average of 2017 to 2019, which is the gray line, but we are starting to see that it's within the bounds of what we've had, looking at variation over time, and you do see that where it started to deviate was around Week 9, which is right about when social distancing first started really taking a large part in the Gulf region.

If we look at the pounds landed, we see that 2020 really started to diverge quite a bit around Weeks 15 and 16 to 18, but, as we're getting up here closer to Week 32, we're starting to see it converge back closer to a normal pattern. Similar things can be seen here in the total ex-vessel value.

Now, when we looked at the weekly average ex-vessel price per pound -- Keep in mind that this information is a little bit more dynamic, and weeks aren't always the same, and so kind of ignore Week 1, where we have a very low price, and that's because it wasn't a full week in each calendar year, but you can look here, and we dipped really low around Week 15 and 16 in average ex-vessel prices, way beneath what our upper and lower bounds were, and now we're seeing that it's coming back a little bit more similar to where we were for past years.

The same set of graphs, but this time we're looking at gag

instead, and you will see oftentimes a similar pattern. I do want to take note that the pounds landed for gag in 2019 were higher than usual, and so you see that 2019 value up there, but, if we're looking at 2020 and the pounds landed, we're, again, converging back close to the average of 2017 to 2019.

When you look at ex-vessel price, we are noticing that we're actually curving above the average of 2017 to 2019, and then, looking at the weekly price per pound, we were much higher initially, before the pandemic, and so gag was set to have a fairly strong average ex-vessel price, but you can see, once the pandemic hits, the average ex-vessel price drops fairly low, and then it becomes close to the average mark.

A similar process is going on with red grouper. We're seeing that trips overall are a little bit lower than in past years, and, when we look at pounds landed, we see here that we're fairly similar to 2019. Now, keep in mind there was a pretty dramatic quota shift in red grouper, and that's influencing the 2017 to 2019 average pounds landed compared to the 2019 and 2020, and so, here, you want to really concentrate on the 2019 to 2020, and it's a little bit more of an apples-to-apples comparison.

Similar with the total ex-vessel value, and red grouper started like gag, a little bit greater in the beginning of the year, and the pandemic hit, and it didn't initially affect the total ex-vessel value, but, as you see, when we get really into the pandemic, in Weeks 15 and 16, and we start seeing a decrease, and now we're seeing a little bit more of an uptick. A similar pattern can also be seen in the weekly average ex-vessel price, where we start at above average, and then it dropped, but it always remained somewhat above the average for 2017 to 2019.

Now I'm going to switch to the allocation, and so, for the allocation, we're looking at the pounds of allocation transferred and we're looking at the average prices transferred. In the upper-left-hand corner, what we see is the cumulative weekly allocation total values, and that's overall, and we're just summing up the different allocation prices for the transfers over time. You can see there's not a strong difference, really, between 2019 and 2020, minus that little dip, again, in the weeks that we saw before, around Week 16.

When we look at the cumulative weekly allocation pounds transferred, we see that actually 2020 was transferring more pounds than 2019. Now, this could be due to some people transferring it and then transferring it back if they weren't

able to fish, and so there might be other reasons that are driving in, and that increase, of course, started early in the season, prior to the pandemic, and so the pre-pandemic is shaded in light blue in these graphs.

In the lower-left-hand corner, we have the cumulative weekly allocation transactions, and that's how many transactions are going on within the system. Keep in mind that not every allocation transaction is equal to another one, and so someone could transfer five pounds or 5,000 pounds, but we're just looking at the number of transactions.

Then, when we look at the weekly allocation average price per pound, we can see that there were some differences early on, pre-pandemic, and we dropped, again, with the orange in 2020, and coming on in Week 10, and we stayed pretty low, but, right now, we're averaging, in these later weeks, fairly similar to what we have in past years.

This is a similar set of graphs, and we're just looking at gag instead, and you can see here that gag, in general, in 2020, had less total allocation value being transferred, and that widened the gap as we got further on, and so the pandemic potentially was influencing that as we moved along.

If we look at the cumulative weekly allocation in pounds transferred, and so how many pounds were transferred each week, we see a similar pattern, in that 2020 is lower than usual, but, coming up towards the later weeks, it's getting a little bit more similar to where we have been before, and so it looks like they're making up for some of that lost ground.

Looking at the cumulative weekly allocation transactions, there's not a large amount of differences here, and, in the later weeks, we're pretty much dead-on to what we've seen in past years, and then the average allocation price per pound, again, was significant lower initially, starting here for gag pre-pandemic, and then it jumped up a little bit, and, right now, we're still lower than we would have expected at this point in time in the year.

Red grouper is a very similar pattern here to gag going on, and, again, you see a much lower weekly allocation total value, and the pounds transferred are lower, again, in 2020, even though the number of transactions we have are roughly the same. Allocation price per pound hasn't changed that dramatically throughout 2020 as a whole, and this might be a little bit more influenced as well by the lower quota that is occurring and its

effect on allocation price.

What I wanted to do is kind of give you guys a comparison of where we are up through July, and so this was done a little bit in advance of this meeting, and so we looked at, in July, each of the share categories and where we were in landings compared to previous years, and so you can see that, while we are somewhat lower in some of the share categories, we're not that far off from where we have been.

I do want to point out that red grouper, in 2019, we see this 16 percent, and, again, this is being driven because it's a percentage of the quota, and the quota changed dramatically in red grouper, and so that's some of the information to keep in mind as you're looking at this. The percentages might not tell you the entire story.

Then, if we look at the percentage of quota landed annually, here's another one of how we typically see landings throughout the entire year, and so 2017 to 2019 are full-year landings, and the 2020 is the year-to-date that we had up through August 13, and so it does not represent the entire year.

Typically, with red snapper, we see 99.6 or more percentage of the landings, of the quota landed, and, right now, we're at 59.4 percent, and so we're probably a little bit behind where we would have been, but we might still make high into the ninety-nine percentages by the end of the year, and you can see, in the other categories, that we have some variations as well going through.

I will take any questions first on the data presented, and then I'll get into what are some of the potential issues that we might look into for considering carryover, and so I'm just going to pause here for a second.

CHAIRMAN POWERS: Is there any questions? Carrie.

DR. MACLAUCHLIN-BUCK: I have a question about this last slide with the year-to-date. As you said, you're a little bit behind, and so you've been able to kind of compare where everybody was in like the same time in past years, and so you know there should be like a fall bump coming, or it doesn't look like you're going to get it, get close to those past year percentages?

DR. STEPHEN: Some of the share categories are a little variable over time, and like shallow-water grouper is one that we

typically don't have a high percentage, and so you can see we've gotten, in the past, 38 percent, 34, 26, and we're at 20. Other ones, like red snapper, we typically land the entire thing.

If you go back one slide, this is the slide that kind of shows the same point in time, and it happens to be July instead of August at this point, and so this is the end of July for each share category for each year. Here you can see, for red snapper, we're at 55. Last year, at that same point in time, we were at 58 percent. I'm going to skip red grouper, just because it's really unusual with the quota change.

For gag, we're at 36 percent. In past years, we were at 35, 31, or 44 at the end of July, and so this is what the indication is, looking at these, that we're not too far off from where we were in past years, simple due to the pandemic, and so I'm going to ignore things like the drastic quota change in red grouper, which would affect things like this. Does that help?

DR. MACLAUCHLIN-BUCK: Yes. I have one more question, but I will get in the queue again.

CHAIRMAN POWERS: All right. Ken Roberts.

DR. ROBERTS: Thank you, Mr. Chairman. Do you have any idea of what the number of quota holders on red snapper are participating in the transfers, compared to previous years, during the pandemic compared to the previous years? Not just the number of transactions and pounds and value, but the percentage of the people who are actually utilizing transfers.

DR. STEPHEN: No, I have not dug into that data, but we can look into that and get back to you, if you would like some more information on it. When it comes to kind of allocation transfers, looking at that data, I would be curious to figure out how much that has to associate with people who own shares or don't own shares and what effect that might be having, and so I would assume, in the pandemic, that that might be some of the differences going on.

DR. ROBERTS: The other thing in there, if I could continue, is the distinction between the people who are making the transfers who don't fish, or maybe never have fished, and, if you could delve into that a little bit too, I think it would be useful to find out the number of participants and not just the number of pounds and whatnot.

DR. STEPHEN: That's one of the analyses that gets a little bit

trickier, because of, in the IFQ system, we have a lot of what we call related accounts, and so somebody might incorporate a company in the same name as their vessel and then have another vessel and incorporate the company in that vessel's name, yet they might store all their allocation and shares in an account that doesn't have a permit, and so trying to figure out who is actually fishing and not fishing, with the related account aspects, makes it a little bit trickier of an analysis.

When we look at it just straight out, it gives typically an impression -- Red snapper is one I know a little bit better, and we typically have what we call about 30 percent of the accounts without permits that are owning shares and potentially transferring allocation. When you dig into the related accounts, that percentage drops dramatically.

DR. ROBERTS: Thank you. I appreciate that very much.

DR. STEPHEN: Yes.

CHAIRMAN POWERS: Thank you. I would return to Kari.

DR. MACLAUCHLIN-BUCK: Thank you. I think that this will be important, at least for me, in thinking about the carryover discussion, and can you talk a little bit about the impacts of the pandemic on the industry, even if it's just anecdotal?

DR. STEPHEN: I am not quite sure how much I can contribute to this. We had a lot of discussions early in the pandemic, when the restaurants were being closed down, that we were hearing that this was the largest impact in the fishery, if you think of our fisheries are often more kind of fresh product, and they are frequently selling to the restaurants, and so it does differ a little bit by what state you're in and what the state is doing for each of the different social distancing requirements coming through.

What we did find is that there were a lot of dealers that just weren't accepting fish at a certain point in time, and there were dealers that were getting a little careful about how they did it, making sure that they were able to move that product and not have it just stored in the freezer or go bad, and a lot of them started to get a little creative in how they were selling, and so opening up for the public to come straight to the dealer to get it.

My guess is that didn't come in anywhere close to what their normal business practice is, and so we don't, in the IFQ system,

collect a lot of that information, and most of it is word-of-mouth, when we're talking to the fishermen on the phone, and so, in general, I would say it varied by state-to-state, and it also varied by whether the restaurants were open or closed and how they were selling things and that process.

Also, with economic kind of problems, selling fresh seafood to stores might have also become another issue, where they weren't doing as well as in the past, and that's all purely anecdotal, and I have no data on that, just to be clear.

DR. MACLAUCHLIN-BUCK: Okay. Thank you.

CHAIRMAN POWERS: Thank you. Ryan.

MR. RINDONE: Thank you, Mr. Chair. Just to pile onto the anecdotal side of things, some fishermen that we've talked to have said that there were some examples of them taking turns going out, when you had groups of fishermen that were all selling to the same fish house, because there is only so much that the fish house could actually buy and store and move, based on what the restaurant scene looked like at the time.

I know that -- I don't know if Leann is still on, but I think she had said -- She is. I think there has been some brief conversation about vessel-of-opportunity sorts of situations for the shrimp fleet, saying that they could be available to help with carrying some of the surveying load, and I forget which meeting I heard that mentioned at last, but, basically, some of the fishermen are basically looking for alternative ways of trying to bring in revenue when fishing was down, but, as restaurants have opened back up more, and people have started visiting those establishments more, the fishermen are seeing a little bit of a turnaround, but it's still not what it was pre-pandemic.

CHAIRMAN POWERS: Thank you. Andrew.

DR. ROPICKI: Along those same lines, at the University of Florida, me and some colleagues at the Food and Resource Economics Department did some COVID surveys, and we had a number of the commercial fishermen tell us, and it was specific to grouper and snapper, that the fish houses in Florida were asking them to bring in smaller fish. They wanted retail fish, as opposed to restaurant fish, things they could sell through their fish market.

The other thing we heard, or found, was, when we surveyed the

fish houses, the wholesale dealers, as you would expect, the restaurant business was well down, but they were actually doing better, the ones that had their own affiliated retail market, where they sold seafood through it, and that was kind of a saving grace, but I don't want to get us too far off topic, and I just wanted to throw that out there.

CHAIRMAN POWERS: Thank you. Okay. Then you were going to continue on with the presentation?

DR. STEPHEN: All right. If we can just go one more slide, this is a little bit of kind of information. Currently, our IFQ system is in the middle of a migration to a new database and frontend, and our old software is end-of-life, and hopefully we will be transitioning in the fall or winter of 2020, and so keep in mind that any potential carryover changes might be slightly inhibited, due to the change in the catch share system as we're migrating, and so I just wanted to make sure that was at the forefront of everyone's minds.

Thinking about potential carryover timelines, if carryover is decided as an option, we would have to calculate the remaining amount of carryover on December 31, 2020. For those of you unfamiliar with the catch share system, we're up 365 days a year, but, on December 31 at 6:00 p.m., we shut down the system. Typically, what happens is we take back all the allocation, because it is considered annual, and we don't open the system back up until 2:00 p.m. on January 1.

Any calculation would have to occur during that point in time, and, of course, if we are going to do any carryover, the SSC needs to approve a new ABC with the carryover of pounds, and that can have no negative impact on the SSB or rebuilding time, and it must consider any buffer between ABC and OFL. If approved for a carryover, the disbursement most likely would have to happen in the first quarter and not on January 1, like when we distribute the rest of the allocation.

These were just some of the 2020 management values for you. Keep in mind that the IFQ system is in gutted weight, but the red snapper quota is set in whole weight pounds, which is why I showed them both here, showing here the difference between the commercial quota, the commercial ACL, and then the difference between the OFL minus the ABC. Note that that OFL and ABCs are all sectors combined.

These are carryover questions, and they're a little bit more for the Gulf Council, but I did want the SSC to be aware of some of

the questions that would be occurring with the Gulf Council, if they decide to move over, and some of the questions is whether carryover should occur in all of the share categories or just some of them, and keep in mind something like shallow-water grouper.

Typically, at the end of the year, it wasn't getting much more than 30 or 40 percent of the quota landed to begin with, and so that may not be appropriate for carryover, versus red snapper, which traditionally got close to 99 percent of the quota landed.

Whether we could do a full or partial carryover of the remaining allocation, and this might be for those share categories that fall in the middle, that typically get maybe up to 80 percent landed, and how much of that do you want to carry over, and then, of course, the questions the council will have to answer will be who gets -- The recipients of that carryover, and do we give it to the shareholders, the way we do allocation at the start of the year, or do we look at who the allocation holders were at the end of the year, or do we only distribute to those people who had landings during the year? Then, of course, how do we go about that? We'll have to think about things such as proportional or equal distributions.

Then the impact that that might have on multiuse, and so this is another question I think the SSC needs to be aware of. We have gag and red grouper multiuse that are calculated by formulas between the difference in the ACL in the quota between the two different species. If we carry over one species and not the other, we'll have to think about what those implications are, and maybe we might have to adjust the formula, moving forward, or maybe we implement a carryover that does not have a multiuse component.

Typically, if multiuse is available in both species, people who have shares in red grouper get allocation of red grouper, as well as allocation of red grouper multi. Allocation of red grouper multi has to be first used in red grouper, and then it can be used in gag. Likewise, the opposite is true for the gag. That might be the last slide.

CHAIRMAN POWERS: Yes, it is.

DR. STEPHEN: I would be happy to answer any questions here, too.

CHAIRMAN POWERS: Thank you. From the SSC perspective, one should be aware of all of this, but, also, some issues in terms

of how to adjust the ABC accordingly, and I think that's something that we're going to have to think about. Kai.

DR. LORENZEN: I was reminded that we explored a lot of these things recently, one or two years ago, in the context of the recreational fisheries, and, if I remember -- Not questions to do specifically with IFQs, obviously, and the IFQ internal allocation problems that were brought up here, but in terms of impact on rebuilding timelines and so on, and I was wondering whether you have looked at these analyses, because I think they answer some of the questions to do with the ABCs and so on.

CHAIRMAN POWERS: Thank you. Did you want to respond to that?

DR. STEPHEN: I will say that we did raise those points to the council and looked at some other amendments that we had that were starting initially to look at this, but, in both of those, IFQ was not considered at that time, and I think it has some added dimensions to it that made us a little bit more cautious in moving forward.

CHAIRMAN POWERS: Okay. Andrew.

DR. ROPICKI: I just wanted to note, with regard to a couple of these carryover questions, the recipient of carryover question -- I mean, I guess I just want to get this on the record, but I feel like it should be the allocation holder. It should be whoever holds the allocation at the end of the year, because we would guess that they purchased it from a shareholder, if they don't own shares. The same thing with the distribution calculations, and it seems, to me, like that one should be whatever the remaining allocation is associated with each account, but I just wanted to throw those two things out there.

CHAIRMAN POWERS: Thank you. Anything from anybody else? If not, then thank you very much for this presentation.

DR. STEPHEN: Thank you. Then I'm assuming -- This will go in front of the council at the abbreviated council meeting coming up, and, if there are decisions made, my guess is it would come back in front of the SSC again.

CHAIRMAN POWERS: Okay. Thank you.

MR. RINDONE: Dr. Powers, your excitement was overwhelming.

CHAIRMAN POWERS: Excitement about what? No, and I started thinking ahead about 6:00 p.m. and that sort of thing, and I

would like to get as much done today as we can, and I'm sort of shooting for at least to be able to get through, on this agenda, IX and X, the discussion of the research track and the allocation review procedures, and then leave tomorrow for gag spatial management and sex change and the habitat research and the red snapper supply chain.

Part of this is I'm sort of guessing that the Louisiana people might not be available tomorrow, or might not be available now, and so, anyway, let's plan on trying to get through IX and X here, and so let's move on to SEDAR 74, discussion of the research track, Ryan and Julie.

MR. RINDONE: First, I think Carrie wants to say something.

CHAIRMAN POWERS: I didn't see that. Sorry.

EXECUTIVE DIRECTOR SIMMONS: Thanks, Mr. Chair. Sorry to sidetrack us, but I think, at the end of the meeting, we probably should talk about whether this group should convene tomorrow or not, and I would leave it up to you all, but it is a Category 2 now predicted, and it's moving east. It looks like it's going to hit Alabama and Mississippi pretty hard, and so I don't know what the group's feeling is about trying to meet tomorrow, but I appreciate everyone's hard work in getting through all these agenda items today. Thank you.

CHAIRMAN POWERS: That was sort of my thing. The business-related items, which are less interesting scientifically, I think we can get through today, which is going through IX and X, and then we'll kind of see it from there. Ryan, the research track and red snapper terms of reference.

REVIEW OF SEDAR 74: RED SNAPPER RESEARCH TRACK

MR. RINDONE: All right. These terms of reference were developed by the planning team for this research track assessment, and this is the opportunity for you guys to take a look and to make modifications, as you think are appropriate, and so, with that, and without going through each of these things line-by-line, I will open the floor for any comments or edits, et cetera.

CHAIRMAN POWERS: Are there any comments, edits, et cetera? Doug.

MR. GREGORY: I don't have any edits, and this is quite extensive, but I don't recall seeing a scope of work, and so

maybe we don't get scopes of work for research tracks.

MR. RINDONE: Doug is right that we do not get scopes of work for research tracks, and that's because we have dedicated planning teams that evaluate what was done in the previous assessments and what the past research recommendations were. Given the data available and the time being budgeted, they develop this proposed terms of reference, using all of that information, and so the planning team consists of SEDAR, council, Science Center, and an SSC member. We have teamed up to present this to you guys, as you see it, and so, if there's anything that you think has been left out, or anything that's a step too far, or in between of that, just let us know, and we'll make those edits.

CHAIRMAN POWERS: Bob, go ahead.

MR. GILL: Thank you, Mr. Chairman. A question for Ryan. On Reference Number 3, the fourth bullet, is it intended that that includes a commercial index for the 2007 through current, or something close to it, timeframe as well, or is that not?

MR. RINDONE: We talked about that, and the goal is to look at the post-IFQ years also, and we have more post-IFQ implementation CPUE for red snapper than we do for any other species, since it was the first one, and, as you have insinuated through your question, this is something that has kind of dogged us for a whole, and I will defer to folks from the Science Center, specifically Matt, if he's still on, to speak more specifically about this, but, yes, the goal is to investigate this again.

CHAIRMAN POWERS: Thank you. Doug.

MR. GREGORY: I have a question. On Item 9, I don't know what "CMS" is. Develop an updated CMS recruitment index.

MR. RINDONE: CMS stands for connectivity modeling system, or simulation, and it's a product that Mandy Karnauskas and her team created a few years ago, and they have published a few papers on it, and it's a useful tool for recruitment forecasting. It's actually pretty neat.

MR. GREGORY: I just wanted to say to spell it out the first time it's used.

MR. RINDONE: You're right. We can do that.

MR. GREGORY: Thank you.

CHAIRMAN POWERS: Thank you. Any other comments? Benny.

DR. GALLAWAY: Is there -- I can't see the entire thing, and I don't have it in front of me, but is there -- Will this assessment address density-dependent, or independent, mortality? It's been recommended in each stock assessment, and I just wondered if it was going to be covered.

MR. RINDONE: We don't have that listed as a specific term of reference here.

DR. GALLAWAY: Am I in error that it's been recommended by each of the last three or four reviews that it be addressed?

CHAIRMAN POWERS: Okay, and, Benny, can you kind of explain what it is that you're talking about here?

DR. GALLAWAY: Sure. It's been suggested that juvenile mortality, in addition to being quite high, is actually density dependent, with recruitment inversely related to fecundity, or they are high natural mortality, right, and, the higher the number of age-zeroes produced, the higher the natural mortality rate. It's been suggested that that would have an impact on the significance of bycatch mortality and that it should be examined, and it's been recommended by the review panels, but it has not been addressed, to date, to my knowledge.

CHAIRMAN POWERS: Yes, and it also affects how you calculate the catch during a period of -- The catch equation during a period of density-dependent mortality. To that point, Kai?

DR. LORENZEN: I wanted to support that. I'm with Benny there, and I think it has been flagged before, and also from analyses that I've been involved with, and it seems that the size of the shrimp trawl bycatch is in the sort of range where you would expect density-dependent mortality to occur, and so it would be good to get that on the terms of reference.

CHAIRMAN POWERS: Okay. Where would be a good point for that?

DR. LORENZEN: I would have to get out of this screen and get the big picture, but I'm sure we can find a place.

MR. RINDONE: Benny, you're right, in that that's been recommended in the past, and I am looking at the SEDAR 52 stock assessment report, and, at the tail-end of the assessment

process report, it's mentioned there. It says to further explore the relationship among shrimp bycatch and juvenile red snapper mortality with an investigation of incorporating the potential for density-dependent juvenile mortality. If you like the way that language reads in here, and I can show it on my screen --

DR. GALLAWAY: At first blush, it sounded fine to me.

DR. LORENZEN: It seems to me that it should be probably -- I mean, it has two components, right, and we have to find a way to describe it, and that would maybe fall under life history, and then the implications would be explored later on.

DR. GALLAWAY: I agree.

MR. RINDONE: Can you guys see that?

CHAIRMAN POWERS: Okay.

MR. RINDONE: If you guys like, then we can put that -- Kai, where did you say to put it, under Number 2 or 3?

DR. LORENZEN: I would say under 2, because that's where we deal with provide appropriate models to describe populations and stock-specific growth and maturation and fecundity, and so it's sort of to provide a different mortality model, in a sense, that accounts for density dependence in the early stages.

MR. RINDONE: I will deal with formatting that later.

CHAIRMAN POWERS: Okay. Steven Scyphers.

DR. SCYPHERS: Thank you, Mr. Chair. I am actually going to make the same suggestion, and it doesn't have to be a motion, but that I made for gray snapper, to potentially include one on social and economic data, if it's appropriate, and I actually don't have thoughts on where it fits best, and it seems kind of stand-alone.

CHAIRMAN POWERS: Okay. I see no problem with that.

MR. RINDONE: I have got that noted, also.

CHAIRMAN POWERS: Paul Sammarco.

DR. SAMMARCO: Thank you. Under Number 9, which mentions ecosystem and climatic events as they relate to population and

fishery parameters, I don't know whether it would be of interest or not, but there have been hotspots, over the years, in the tropics and sub-tropics, where there has been mass mortalities, which is indicators of well above normal temperatures for reasonable periods of time.

There may be fishery data, which exists and has been published and so forth, from those same areas, which may relate to this, and it may be of value, and I don't know, and I'm just bringing up the idea, and they're around the Galapagos, for example, and the Great Barrier Reef and the Caribbean, but these are not isolated events. Thank you.

CHAIRMAN POWERS: Thank you. I think that's sort of the things that would be covered under Item 8, I believe. All right. Any other suggestions for Ryan about this? If not, then this terms of reference will go to the council for the next meeting?

MR. RINDONE: No, and it will go to the Executive Director and the Chair for approval, and so, if you guys wanted to make a motion to the effect of the one that you made for gray snapper, saying that these are approved, as amended, that will do a great deal for them.

CHAIRMAN POWERS: Okay. Great. If we can go to the list of motions and just copy the gray snapper terms of reference motion.

MR. GILL: So moved, Mr. Chairman.

DR. NANCE: Second.

CHAIRMAN POWERS: Any further discussion? **If not, then the motion is approved.**

MR. RINDONE: Mr. Chair, Ms. Bosarge has a question.

CHAIRMAN POWERS: Okay. Leann.

MS. LEANN BOSARGE: On that agenda item before the red snapper scope of work, when Dr. Steven was talking about the carryover of the IFQ, this one is a little time sensitive, because the council would need to have all the nuts-and-bolts in place for that for the first quarter of next year, and so let's just say January.

I was wondering if you could have a quick discussion as to, if the council did a carryover, on red snapper specifically, would

it be a pound-for-pound carryover, or would those pounds need to be discounted for mortality?

I remember you all talked about that, I don't know, a year or two ago, and just get into that just a little bit, so the council has an idea of what they're looking at in a carryover, and we can maybe work out a few of those details. We don't need to worry about what species we would carry over and who gets it, and the council can deal with that, but we need you all to tell us if it's pound-for-pound or not. Thank you, sir.

CHAIRMAN POWERS: As I recall, there was some simulations done that would suggest that pound-for-pound was okay, but I'm not sure about that. Kai.

DR. LORENZEN: I recall the same, and we had quite extensive discussions about that, and I can't remember whether there was a cap on -- In the simulations, there was a sort of maximum percentage that they had looked at, but I do recall that the conclusion was that pound-for-pound was okay, as long as you carried over both overages and underages, and I think that's where, in the end, the council decided not to move on that with the recreational sector. I think, as long as you carry over both, it should be pound-for-pound.

CHAIRMAN POWERS: The specifics, I don't think we're prepared to get into, but, I mean, in general, I think we're okay with that. Leann, is that helpful?

MS. BOSARGE: Yes, sir. Thank you very much. That's all I needed to know.

CHAIRMAN POWERS: All right. Ryan.

MR. RINDONE: Thank you, sir. The next thing would be the allocation review procedures, and then, after that, we should probably have a discussion about what to do about tomorrow.

CHAIRMAN POWERS: Yes, and so allocation review procedures.

ALLOCATION REVIEW PROCEDURES

DR. ASSANE DIAGNE: I will try to discuss with the SSC the allocation review procedures, and, to start, we'll begin with a little bit of background, and we'll review some of those things.

As you recall, NMFS did publish a fisheries allocation review policy, and that policy required the councils to establish

allocation review triggers. In fact, we did discuss those triggers with the SSC a while back. The council established its review triggers and published an expected start date for the initial allocation reviews, and, at the end of this presentation, just to remind everyone, we will present those dates one more time.

The council also did mention, in its policy, that it could initiate additional reviews as needed, saying that it was not bound, if you would, by those starting dates. For example, we have initiated a review, and actually a reallocation amendment, for grouper, and I think that's Amendment 53.

The council established an allocation review workgroup, and we started discussions on essentially how to conduct future allocation reviews, and most of the questions that I will have today for the SSC, and the main items that we will discuss here, would be related to the work of the allocation review working group.

A final point of background is that the General Accountability Office released a report on allocation reviews in mixed-use fisheries, and that report includes specific recommendations for the councils, mainly the South Atlantic and the Gulf Councils.

The GAO, in its report, made two recommendations, one that the councils develop documented processes for conducting allocation reviews, and two that the councils make sure that they specify how they will document their allocation reviews and including the basis for their allocation decisions, whether the fishery management objectives are met, the FMP objectives, if you would, and three was what factors were considered in the reviews.

What we are discussing today essentially would pertain to the first recommendation from the GAO report to establish a documented process for conducting allocation reviews, and, before I start this, just to mention that, in the future, we will come back to the SSC to address the second recommendation, once the allocation working group has completed some more when it comes to the content of the reviews proper.

Here, we have the series of questions, and the first one has to do with the membership of the review panel, and these are all questions, if you would, and we will collect your input, and we'll give a presentation to the council in October and get their feedback before we can write the guidelines.

In terms of the composition of the review panels, we could think

about our usual process, which is an IPT-type process that would include SERO and the Science Center and council staff, and these members typically are selected through consultation between our leadership, and, by that, I mean Carrie and John, plus the leadership of the Science Center and SERO, and then members are appointed to this I would say IPT structure.

Another way of thinking about it would be that the council may decide that, for allocation reviews, it could draft, if you would, or select, a number of SSC members, and NMFS and the council would provide support, in terms of data collection and so on and so forth.

We could also borrow something from the SEDAR, in the sense that these allocation reviews could potentially be conducted by independent experts that the council would select, perhaps with advice from the SSC, or we could think about any number of combinations from these three alternatives, and so that would be for who should conduct the reviews. I am not sure whether I should pause and have the SSC members discuss this a little bit or I should proceed and perhaps have the discussion at the end.

CHAIRMAN POWERS: Let's stop here for this discussion. My first reaction is perhaps some combination of these. I think giving it a name and introducing a planning team would be important, and it would probably also be important that -- It doesn't necessarily have to be run through the council staff, in other words take the lead of it, but, anyway, I'm open, but Lee Anderson.

DR. ANDERSON: I would just like to say that -- As Assane knows, I've been frustrated by this for the longest time, although I think he's doing the best job he can, and the things that are -- We've talked about it, and what are the basis for the allocations?

That was in the GAO thing, and then other things is we're going to look at trends, and we're going to do some analysis, and I am still completely at a loss as to what is the background, the theory, behind these analyses, but I will say that I'm willing to just be a worker on this and not to sit back and say there's nothing good about it, and so, if there will be SSC members on this allocation review panel, I volunteer to be a hard worker on that panel and work with the other people to try to answer these questions that I have put forward.

CHAIRMAN POWERS: Thank you. I think there would be interest within the SSC, and not just Lee, and so -- I could see,

individually, where you might want to have an independent expert approach this, for an individual situation, and so, I mean, this combination of the three, and how it's balanced and everything would be very important, but I am certainly open-minded about it. Doug Gregory.

MR. GREGORY: I think the original purpose of the congressional action is to force the councils to look at allocation on a regular basis, and I don't think they cared what the reasons were or how it was done, but to make sure the councils looked at it, and that congressional action was through political pressure of stakeholders who may have felt that they were on the wrong side of the past allocation, and they want a new allocation, and so what council staff has put together, with other help, is a good process for doing that.

I know there's been some complaining that I've heard about the schedule, the timing, and I think it's important that Assane said the schedule is really up to the council, and the council doesn't have to follow that schedule if they want to do something more quickly, but it sets the stage for making sure allocations are reviewed at some point, and, yes, I understand, Dr. Anderson, what your concerns are and stuff, but I think, anytime a good reason comes up to look at allocation, the councils have the authority and can do it, but this forces them to do it at a certain time. Thank you.

CHAIRMAN POWERS: I think, also, the report is basically requiring that there should be written documentation and that sort of thing, essentially to guard against litigation, which is probably a good thing. Ken Roberts.

DR. ROBERTS: Thank you, Mr. Chairman. I see two levels here that are not clear to me. There is one that you're starting a new allocation in a fishery, and that begins from ground-zero. The other one is dealing with an allocation redefinition, or redistribution, from a fishery that already has an allocation.

I see those as two different and contrasting things, and maybe Assane can comment, or Doug can comment, or Ryan, about what was Congress's real intention. Was it to go back and look at the existing allocation and work at the margins, to refine it over time, or is this really something that is going to work, basically, for new allocations, when IFQ programs are installed? Thank you, guys.

CHAIRMAN POWERS: Thank you.

DR. DIAGNE: Thank you. I will start, and I guess there are several comments, and I will start with the last one, meaning Dr. Roberts' questions. These recommendations, as well as the review triggers and processes and so forth, all of these are to review existing allocations, essentially existing allocations in mixed-use fisheries, for example allocation between the states for red snapper, between the private anglers and the charter/for-hire for red snapper, again, or between the councils for certain species, or some of the snappers, and so forth.

These are existing allocations between sectors. If we think about the IFQs, individual fishing quotas, these are not really allocations in the same sense, if you would, because those change on a daily basis. After January 1, once allocations are distributed, people start trading, and we do not have set allocations, if you would, and the council has other avenues to review, I guess, the distribution methods, if you would, of IFQ privileges. That's what I would offer to Dr. Roberts' points.

As far as Dr. Anderson, yes, absolutely. I mean, this is a challenging process, and we have discussed this many times with him, but, today, we are looking at the first step of this, and if I may ask Jessica to go back to the slide on the recommendations, the GAO recommendations.

Here, we see that we have two recommendations. The first one has to do with the processes, meaning what are going to be, quote, unquote, the administrative steps, if you would, and who would perform the review, what type of a notice are we going to have, what type of report to be written, and so forth, but equally important, if not more important, is what Dr. Anderson talked about, which is the second thing, what criteria, what analysis, trends, data, et cetera, would be included in the review.

Our allocation review working group has started thinking about that, and, the next time we come to the SSC, our specific purpose would be to discuss those things, essentially the meat quote, unquote, if I may use that expression, of the review. Thank you. I think I will stop here. If I missed something, in answering the questions, please remind me.

CHAIRMAN POWERS: Thank you. Assane, we're getting into some of the weeds here, and would you prefer to go on with the entire presentation and revisit these things at the end or continue on with this?

DR. DIAGNE: Mr. Chair, it's your discretion. However you want

to do it, we will do it.

CHAIRMAN POWERS: Okay. We started this, and then let's continue on. Lee and then Mike Travis.

DR. ANDERSON: Thank you. I just wanted to make one small correction, and that is that somebody mentioned that this is a congressional action that this is going on, and, actually, I believe the policy was started in the Council Coordinating Committee, and we went through a lot of staff and came out, although it's a small point, but it's still a NMFS policy that came out of the CCC, and I quite agree with Doug that -- Because one of the things that I remember the guys from Silver Spring hammered at us, while we were sitting in our chairs, is how do you know you made the right decision? You should look at anything.

Again, as an economist, and I would like to think a scholar, I would say, of course, you never want to think you're perfect, but there is a problem of time and other things, and so I certainly agree that it's necessary to look at it, but, again, some of the stuff that Assane just said, like what is the basis and how are you going to do it, and how are you going to make sure that we don't spend too much time on this, and I don't even know how to define too much time on this, but we all know that we've got a full workload, but, again, I will say I will volunteer to be on that and help to get in and dig out some of that stuff.

CHAIRMAN POWERS: Okay. Thank you. Mike Travis and then Ken Roberts.

DR. MIKE TRAVIS: One point that I wanted to emphasize, just to make sure, and I think Assane covered this pretty well, but I just wanted to make sure that everybody is on the same page, is that the reviews are -- They should be seen as a steppingstone.

I don't want anyone to be under the impression that an allocation review necessarily means that the council is going to take action to change an allocation. The whole point of the review is to provide information to the council, who will then decide if there is enough information here to tell us that, yes, we need to start an amendment to look at the existing allocation.

It could very well be that, when they look at the information in the review, they decide that we don't see any reason to change the allocations, and we're going to leave them alone, and

they're done, and they move on to lots of other issues, and so that was one point.

Then this is a question, I think, to Lee about -- Because, Lee, I'm not sure exactly what your concerns were, but, with respect to external experts and the role of SSC members in reviews, or even, more specifically, with the analyses that could go into these reviews, I believe that you have direct experience in the Mid-Atlantic Council with regard to economic analyses of allocations within the summer flounder fishery, as well as the scup fishery, which those analyses were done by external folks, but were reviewed by a panel of experts as well, and so I'm rather curious as to your opinion on how that process has worked. Has that been a good and useful process, from your perspective?

CHAIRMAN POWERS: To that point, Lee?

DR. ANDERSON: Well, if you recall, Mike, the council did do a lot of stuff on summer flounder, and most of it was based on the economic equal marginal principle, where is the best allocation -- Where does the last fish go to either sector provide the highest value, and that has some value, although there is the recent research that shows that you've also got to take into account how the regulations run, because you can, theoretically, get pretty good estimates of where the highest value is, but your regulations will determine who catches it, and so you may make a basis and then set regulations to give it to other people, and so there's a lot of things.

Also, Mike, I would say that -- I'm sure that there are going to be people who will say that I want other criteria to be used, rather than the equal marginal principle, and so thanks for the nice words about the Mid, but there's a lot to be done.

DR. TRAVIS: If I could follow-up on that, I understand everything that you brought up, because I know we've discussed this before, but I was asking more about the process itself and the use of external folks, whether they are SSC members or not, or the expert review panels that have been used, and do you think that that worked well in the end?

DR. ANDERSON: Yes, and I think we got good people to do it, and I'm sure that the Gulf will do the same thing. You've got to bring the experts in, and there's going to be different views, and you've got to argue them out and see what happens, but I think, other than the equal marginal principle, which is an economic thing, I don't know of another factual basis for making

-- That's one of the issues that I think is going to have to be looked at, but, in answer to your question, I think our review process was fair, and I think a similar process could be set up in the Gulf.

DR. TRAVIS: Okay. I find that helpful, in part because, particularly with some of the more recent expert panel reviews of the analyses done for summer flounder, they were pretty critical of the analyses that were done, for a host of reasons, and so that was part of my reason for asking, but thanks.

CHAIRMAN POWERS: Thank you. Ken Roberts.

DR. ROBERTS: Thank you, Mr. Chairman. Assane, I know you indicated between sectors, and that sounds pretty simple on the surface, but it's really not, the recreational sector versus the commercial sector, and the real problems lie within each of those sectors, in my opinion, and the reason I brought up Congress is remember clearly, even though I'm seventy-six years old and I'm losing a lot, I clearly remember Congress in a buzz about the articles that came out, and I think were called fish lords, and do you remember that?

They were talking about the people who receive allocation within a sector, but don't do anything but sit on their rumps and lease it out as convenience for their own purposes and not to participate in the fishery.

I know that was a big thing in Congress, because I got several phone calls to get dragged into that by people from the Pacific Northwest and the Gulf, and I refused to get involved, but I don't think we can dispense with the fact that there are big allocation issues within each of those two sectors that you defined, and I think they're too crudely defined, because there are sub-sectors that are large enough to be sectors themselves, and I just urge the council and people to look a little broader than just sectors, because, within sectors, there is as much allocation issues as anywhere else, I think. Thank you so much. I appreciate it.

CHAIRMAN POWERS: Thank you. Assane.

DR. DIAGNE: Thank you, Mr. Chair. A couple of points. The position that Mike Travis offered is something that I should have, I guess, emphasized, but we did discuss this with the SSC previously, and so today I did not. In the NMFS allocation review policy, they make a clear distinction between an allocation review, which is essentially the evaluation as to

whether or not the reallocation amendment is needed or not, essentially.

The second step is called an evaluation of allocation options, if you would, which is what we typically do in our amendments, and what we are discussing with you today is just to the allocation review and potentially the processes by which the council, at the end of the day, is going to decide whether they are going to go to the next step and start an amendment.

As Mike said, the council can look at this and say, well, we are pretty happy with the existing allocation and let's move on, and so then we would wait for the next opportunity to do that. I mean, the difficulty comes from the fact that we haven't really formally yet conducted allocation reviews. What the council has done, up to this point, is started an amendment.

Within the justification for the amendment and the analysis, you can argue that the allocation review is embedded in it, but, I mean, using the policy, from now on, we would have a very deliberate and clear process to evaluate the existing allocation, decide whether an amendment is needed, and, if so, start an amendment, and so that is, I guess, the distinction to be made.

For Dr. Roberts, Congress has something to do with this, because the GAO recommendations that we are discussing with you, that we talked about in the beginning, those come from a specific recommendation from the Modernizing Recreational Fishing Act of I believe it was 2018, and one specific, I guess, provision of that Act was that the GAO examines the allocation in mixed-use fisheries and produce a report on those. The two recommendations we presented early on, those come from that report, which was, I guess, requested by Congress, and so Congress also has a role in this discussion.

The economic considerations and the biological indicators and social indicators and all of those things, that discussion we will have another day, if you would, but I guess our main interest right now is for the SSC to help us, help the council, quote, unquote, begin to set the guidelines for allocation review.

In preparation for this, several of us have looked at the SEDAR guidelines, for example. Without the appendices, it's a very short document, and it just essentially lays out how this is going to be done, but the meat of it, let's say the stock assessment, those things are not really in let's say the short

document, if you would, to use that analogy, if I could. Thank you, and I see another hand raised, and I will wait for that before we continue.

CHAIRMAN POWERS: I will give Mike Travis the floor in a second, but I do want to move on and finish the entire presentation, and we can return to this. Mike, a short comment?

DR. TRAVIS: Yes, and so, to Ken's points, one is the council already decided which, quote, unquote, sector allocations it intends to review, via a letter that they sent to the agency about a year or so ago, and Assane can correct me, but I thought that that letter, laying out all those allocations, was provided to the SSC at a previous meeting, and that would be one point.

Then, with regard to I guess what you would call intersector allocations, such as within the IFQ programs, we do look at those within the context of our catch share reviews, as opposed to allocation reviews, and so I don't want you to be under the impression that we just completely ignore those.

CHAIRMAN POWERS: All right. Thank you. Assane, go on with the presentation, and I won't interrupt you again until the end.

DR. DIAGNE: Thank you, Mr. Chair. Just to say that, yes, Mike is correct, and we did bring the allocation review triggers, as well as what the council discussed, to the SSC. That is number one, and, also, a comment. The council is using the avenues at its disposal to address, I guess, the distribution of shares and allocations within the IFQ program.

For example, the council has an amendment that is Amendment 36B that looks at establishing permit requirements, meaning to hold shares and transfer, et cetera, one would have to have the reef fish permits. We have alternatives there, and some of the options would call for divesting of your shares if you don't have a permit after a certain time interval. The council is working on that, but the specific allocations addressed by the policy, and, the allocations that we are talking about, these are deliberate distributions of fishing privileges to well-established groups, and so that's the definition in the policy, and these groups could be states, sectors, sub-sectors, councils, et cetera, and so, with that, I will, I guess, continue on, Mr. Chair.

The next topic and question that we would ask would have to do with the contents of the review notice, because, in our understanding, and, by our, I mean the allocation review working

group, before the beginning of each allocation review, and that's one of the alternatives, the council would publish a notice letting the public know that, for example, the red snapper allocation between the states, and I use that as an example, is going to be reviewed.

Now the question is what else should the notice include? If we have a certain type of membership, should the notice list those members, and should the council also let the public know how long this process is going to take by putting a completion date in the notice and that sort of thing?

Just a note there that IPT meetings -- By IPT, I mean -- I never can remember this term, but interdisciplinary planning teams, which we use to develop amendments, and those meetings do not have to be noticed, but, in a general sense, for allocation reviews, what else should we have in the notice except the species, the starting date, the composition of the panel, and potentially the completion date of the review? I will continue, and, if the SSC has recommendations or questions, we would be glad to take those.

The allocation review working group, in our discussions, we felt that all of the species that we have are not really the same, and, by that, the allocations attached to those species could be treated differently, and what we are thinking about is to establish two tiers of allocation review, I should say.

In the first tier, we would put the species, or the species groups, with allocations that were established mainly to determine commercial quotas for the IFQ programs, and that would include the shallow-water grouper, the deepwater grouper, and the tilefish IFQ aggregates.

These are really just functional allocations, if you would, that we have to include in this process once we receive the legal advice, and, in our understanding to date, the allocation review for these species could be fairly straightforward and very simple.

The Tier 2 would include everything else, because, for everything else, you have competing user groups and very, I guess, stark interest being advocated for one side or another. Although we do not know yet what the reviews would entail, we can safely say that the Tier 2 species, or species groups -- You see here that it says only species or species, and there is "group" missing, but it would require more complex reviews, and that is to be determined, I guess, at a later stage.

Now, in terms of how should an allocation review be organized, again, in discussing this, several of us essentially just looked at SEDAR, which is a fairly, I guess, well established and involved process, and the allocation review working group is suggesting that we conduct the allocation review in stages.

For example, the first stage could be a data review stage, and, in that stage, the data sources would be identified, and we will gather the data, and then we'll have the allocation review proper, the analysis, evaluation of trends, et cetera, that are needed would be conducted, and then the report would be written, and, finally, the report would be reviewed, and the recommendations would be made by SSCs and relevant advisory panels. The draft would be submitted to the council for review and additional recommendations and, finally, approval. To date, these are the stages that we have identified to conduct allocation reviews in the future.

We spent some time, during our last meeting, the working group, looking at some of the elements that may be in the review. At the minimum, it seemed to us that we would need, in the background, to discuss the historical allocations and the methods that were used to establish those, and we will discuss the data, in a general sense, and have the body of the review and have a specific section for recommendations, and, also, it seemed important to us to have a research needs section, because it may be the case that some of the evaluations that were called for in the allocation review were not able to be completed, because something was missing

Maybe the methods were not there, or some of the data were missing, and so on and so forth, and, also, this report should have the council's conclusions, with the main conclusion as to is an amendment to revisit the allocation warranted or not, plus other conclusions that the council may see fit.

This is something that, during our discussions, was brought up. Because we have a calendar based on time intervals, because the council set time-based triggers, when should the allocation review clock reset?

Now, if the council, at the end of an allocation review, determines that there is no need to go further, that it is satisfied with the existing allocation, then the clock will have to reset once the report becomes final, but, if the council determines that a plan amendment is needed to revisit this allocation, then what we are suggesting is that the clock should

reset on the implementation date of the amendment that reallocated the resources between the user groups.

This is just, as we mentioned early on, to remind us of the time intervals that the council selected, and it goes from four to seven years, and the seven years would include all of the IFQ species, because we would like for the review of the allocation to coincide with the review of the IFQ program itself. It's more than a preference, but it is in fact a requirement that we'll have to abide to.

The important thing, as we said before, is the council can, at any time, initiate an allocation review and reallocate fisheries resources, but, if the council doesn't do anything, now it is bound, at the very least, to do that once every so often, based on these time intervals. I think this is the last slide I have, and I will try to answer questions, if SSC members have them.

CHAIRMAN POWERS: Thank you. Are there questions to continue on the discussion? Go ahead, Bob.

MR. GILL: Thank you, Mr. Chairman. Thank you for the review, Assane. Referring to the slide on the screen now, and recognizing that the allocation decisions are perhaps the most contentious thing the council deals with, and, therefore, they are a time-sink extraordinaire, have you considered, or looked into, the impact on the council's schedule that this allocation review schedule suggests?

Since taking a year to complete an allocation review may or may not occur, some of these things can seem like multi-year durations, and, as such, can have considerable impact on the council performing its normal, expected, and anticipated responsibilities, and has that been addressed and analyzed?

DR. DIAGNE: It has been contemplated, for sure. Addressed and analyzed, I would think that that is forthcoming. For one thing, in the GAO report, they do mention that, because, in our discussions with them, that was one of the things mentioned, and the workload, to put it along those lines, that this would impose on the council staff, but on also the SERO staff, as well as the Science Center staff, because, by and large, they would provide the data and work with us on the analysis and evaluation, like they do for all of the amendments and other things.

How heavy and taxing, in terms of resources, this would be would also depend on the extent of these reviews. If, at the end of

the day, to make the determinations as to whether to proceed or not, the council has a very succinct set of criteria, and then it would be manageable, but, if for each and every allocation review, we want to know everything, quote, unquote, about a particular species or species group, then, yes, starting from 2023, we would be extremely busy, on top of everything else. Absolutely, but this is a requirement, and it's a mandate, and we will do our very best, of course, to fulfill it, and, if the council needs to make adjustments, I'm sure they will.

CHAIRMAN POWERS: Thank you. Lee.

DR. ANDERSON: Thank you. I just want to agree with Assane. The allocation review process did originate in the CCC, and so, in one sense, the allocation process that came out of that beat the Modernizing Fisheries Act, because it was already in place when that Act was passed, but, Assane, you are very correct that that Act does stress more looking at that, and, more importantly, I just want to say that I appreciate all the work that you and the working group has done.

I think the process that you have set up has a very good expectation of doing the right job and getting things done, although I think the things that Bob Gill raised are important to keep in mind as well. Thank you.

CHAIRMAN POWERS: Thank you. Any other comments? I mean, this is a very difficult situation, and I think -- I mean, what you don't want is to sort of devolve into a negotiation meeting, and you do want to set some certain criteria of things that you need to look at in order to reallocate, and, again, it's providing documentation to defend whatever decisions the council might make later on. Any other comments or questions? Assane.

DR. DIAGNE: Thank you, Mr. Chair. Just to say thank you for the feedback and to emphasize the fact that, next time we come to the SSC, we have the council's, I guess, recommendations or reaction, if you would, to this, and we would also have the working group's first try at the criteria to be included in the allocations, and, if those are appropriate at that time, the SSC would let us know, and the SSC would also help us supplement the list, to be able to have a manageable, and also meaningful, allocation review, so that the council can make the decisions to proceed with amendments or say that, no, I can wait another six years, if we are talking, for example, about gray triggerfish or greater amberjack, for example, and so this is just the first step in this process, and we'll be coming back to you a couple of times before this is done. Thank you.

CHAIRMAN POWERS: Thank you. Ken.

DR. ROBERTS: Thanks. Assane, before you leave, the time intervals -- I know it's got to be dependent a little bit on staff resources and funds, but why wait four years to start the first one? I must have missed that, and so, if you could help me out, I would appreciate that.

DR. DIAGNE: Again, Dr. Roberts, it is not wait four years. Let's say, in general, the public has, or had, prior to this, no knowledge, or no inclination, to figure out where and when the council would, for example, reallocate -- I will pick gray triggerfish. The council would do it whenever they saw fit.

Now, the only thing this is saying is, if you haven't done anything, you are bound to review the allocation every six years, and so let's read it along those lines. If the council doesn't do anything, when it comes to red snapper allocation, within four years, by 2023, they will have to do it, and, if I take the example of red grouper, for example, where is red grouper on this table? Let me locate it. It should be in the seven years, because it's an IFQ species.

Normally, the schedule shows April of 2026, but, as we speak, we have an amendment, which is Amendment 53, that is looking at red grouper reallocation, because of the new information the council got due to recalibration, and that sentence is in the policy. The council can initiate allocation reviews at any moment, like, for example, when it has new information. or when it deems it necessary.

DR. ROBERTS: That's very good, and so it's flexible, is what I'm interested in.

DR. DIAGNE: Yes, and what is not flexible is the upper limits. The council cannot wait let's say more than four years to look at these allocations. If you didn't do anything by then, you now are required to revisit it.

CHAIRMAN POWERS: All right. Thank you. Are there other questions? Thank you, Assane.

DR. DIAGNE: Thank you very much, Mr. Chair.

CHAIRMAN POWERS: All right. I believe we have finished Agenda Item X, and so what are we going to do about tomorrow? Ryan, or Carrie, do you have a --

MR. RINDONE: The hurricane is strengthening rapidly and considerably, and some of our SSC members have already jumped off to take care of personal preparations and indicated that they will not be able to hang out with us tomorrow, more than likely, and so the remaining items that we have are Dr. Barbieri and Dr. Murawski's presentations and Dr. Asche's presentation on supply chains and markets and then Other Business.

One option would be to reconvene at a later date for like a half-day or so and hit these items, and, depending on the timing of the congressional review of the Great Red Snapper Count, that may be available for presenting as well, but Dr. Stunz could probably speak more to projected timing on that.

CHAIRMAN POWERS: I don't have a strong view. Basically, the recommendation is to delay the next agenda items and set up a separate, perhaps, half-day webinar to do this, correct?

MR. RINDONE: That would be my thinking, just because we're going to have folks from Louisiana through the Panhandle that may be disinclined or unable to participate, for a variety of hurricane-related reasons, and so just so that we don't try logging on tomorrow to find that there's only seven or eight of us. Out of deference for them, we can try to take these items up at a time in the near future.

CHAIRMAN POWERS: Well, because this is a webinar, it's not like people have had to travel.

MR. RINDONE: Correct.

CHAIRMAN POWERS: Doug.

MR. GREGORY: I mean, that would be doable. My thoughts, before Ryan started talking, was why don't we just meet at the starting time and see if we have a quorum? These items are informational items, and we have verbatim minutes of everything, and so the people that can't attend will have the presentations and the verbatim presentation and discussion to rely on, and there's no decisions to be made tomorrow, and, if we don't have sufficient people, then just adjourn and meet at some future time, but people have changed their schedules to be here, and so that's the main thing. I had another thought, but I can't recall it right now. Sorry.

CHAIRMAN POWERS: Ryan.

MR. RINDONE: Thank you, Mr. Chair. None of these items are urgent, and they are informational, to a degree. There are some kind of longer-view things associated with all of them, though. For instance, with Dr. Barbieri's presentation, she is going to provide a fair amount of information for the gag operational assessment, and there's probably some other implications that will come out of the work that she's doing there as well, as far as how the SSC looks at gag, and how the council does as well.

Dr. Murawski's presentation will parlay into discussions that the council has about things like essential fish habitat and our fishery ecosystem plan, and then Dr. Asche's presentation will tie into several aspects of things like carryover for IFQs and allocation and things of that nature, and so there are multifaceted components to all of these things, which, of course, is why we want you guys to provide the council with advice on all of them, but they are also things that we could push to a little bit later in the year without any damage to the council being able to move forward with objectives.

CHAIRMAN POWERS: What about for the people that are actually making the presentations? If we cancel the meeting, we don't want them to try to show up and nobody is there.

MR. RINDONE: We can reach out to them, and we can let them know, and I would expect them to be understanding, being all Florida residents.

CHAIRMAN POWERS: Okay.

MR. GILL: Mr. Chairman, I support the postponement, or rescheduling, at the earliest appropriate opportunity, given the nature of the items left there and their lack of time sensitivity and the current environmental situation.

CHAIRMAN POWERS: All right. Thank you.

DR. NANCE: Mr. Chairman, I think we need to decide today and not show up tomorrow and then decide.

CHAIRMAN POWERS: All right. Do we have a -- I think I also would support stopping the meeting now and delaying these three items, and, if I don't hear major objections to this, I think that's what we should proceed to do. All right. If that's the case, then I believe we're done. We did have the Other Business about public comment, and are we required to do something about that?

MR. RINDONE: We have been asked by the council to provide an opportunity for the public to provide comment, and so we were supposed to go until 6:00 today, and so, if you want to entertain any, I think you could.

CHAIRMAN POWERS: All right. Is there any public comment? These are people that -- I will give you a little bit of time to manipulate the webinar process. I am not hearing anything, and so we'll close that item as well. With that, I believe we're finished for the day and for this meeting. Is there a motion to adjourn?

MR. GILL: So moved, Mr. Chairman.

DR. NANCE: I will second. You guys all stay safe.

CHAIRMAN POWERS: Thank you very much. The motion is approved, and we're adjourned.

(Whereupon, the meeting adjourned on September 14, 2020.)

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