GULF OF MEXICO FISHERY MANAGEMENT COUNCIL

GULF SEDAR COMMITTEE

The Tremont House Galveston, Texas

OCTOBER 23, 2019

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The Gulf SEDAR Committee of the Gulf of Mexico Fishery Management Council convened at the Tremont House, Galveston, Texas, Wednesday morning, October 23, 2019, and was called to order by Chairman Phil Tom Frazer.

ADOPTION OF AGENDA
APPROVAL OF MINUTES
ACTION GUIDE AND NEXT STEPS

CHAIRMAN TOM FRAZER: We will convene the Gulf SEDAR Committee. The members of that committee are myself, Lance Robinson, Martha Guyas, and Paul Mickle. The first item is the Adoption of the Agenda, and if I could get a motion to adopt the agenda from one of the committee members.

DR. PAUL MICKLE: Motion.

CHAIRMAN FRAZER: Motion by Paul Mickle. Do we have a second? Second by Mr. Robinson. The agenda is adopted, unless there is any other additions. Seeing none, we'll adopt the agenda. The second item on the agenda is Approval of the June 2019 Minutes. Is there a motion to approve those minutes?

MS. MARTHA GUYAS: So moved.

CHAIRMAN FRAZER: It's moved by Ms. Guyas. Is there a second? It's seconded by Paul Mickle. Is there any opposition? Seeing none, we'll move right into the Action Guide and Next Steps, and, Dr. Simmons, if you want to walk us through that.

REVIEW OF GULF STOCKS SUITABLE FOR INTERIM ANALYSES

EXECUTIVE DIRECTOR CARRIE SIMMONS: Thank you, Mr. Chair. I was planning to do this one item at a time, because we have several things to cover, and so, just really briefly, we're going to start with a review of the Gulf stocks suitable for the interim analyses, and this was presented to the SSC, and I am going to read just a little note that we got from them, so that Dr. Barbieri doesn't have to come up, and Dr. Porch is going to go through that presentation. Just recall that the council requested this in June of this year.

The SSC did review it, and they didn't have a whole lot of comments, but they did recommend, and this is on page 9 of the report, becoming familiarized with this process and that the user input should be used to fine-tune observations. With that, I will send it over to Dr. Porch.

DR. CLAY PORCH: As Dr. Simmons said, I'm going to tell you a little bit about these interim ABC analyses that we've been planning and how they will work and the species they can be applied to.

As all of you are now painfully aware, although stock assessments represent the best scientific information available, an enormous amount of work goes into it, not only on the part of lead analysts like you just saw from Skyler Sagarese, but a whole army of people, from state and federal offices and academia, et cetera.

A lot of work goes into them, and they use the best data that we have, even if it's not always perfect data, but the problem is they are usually two to three years out of date by the time they even get to the council, and so there's a couple of ways forward. One, we could try to do annual stock assessments, but stock assessments are expensive, and very time consuming, and, honestly, we just don't have the manpower to try and do annual assessments for all these assessments.

Even if we did, they're still going to be about a year out of date, because it takes that long to process all the data, and so what we have been doing is forecasting from the last year of the assessment, and we have to make a number of assumptions, and we just saw a presentation where Skyler went through some of that.

The problem is we can't really predict things very well. As the old Danish proverb said, prediction is hard, especially when it's about the future, and we saw, with red grouper, what we had was a big red tide event that was in 2018, and it spilled into 2019, and, of course, we couldn't foresee that in our projections, and so the projections are a bit optimistic. Before that, they were optimistic because of that glitch in the data input in this historical catch history.

Of course, you have other environmental disasters, and you might have a recruitment failure, and you might have a big pulse in recruitment that we couldn't predict, manmade disasters, et cetera, and so we have a hard time forecasting things, especially when you're talking about several years into the future.

An alternative way of going forward in between assessments is this so-called interim ABC analysis, and, just to take the mystery out of it, all we mean by interim ABC analyses is any quantitative method where you're adjusting the catch advice for a stock between full stock assessments, and so, in order to be

called an interim ABC analysis, in the way we're using it here, a completed and accepted stock assessment is required, because that's sort of the hinge point. We're going to get ABC advice from that and then adjust it up or down, based on trends in the most recent reliable data that we have.

Ideally, we would also want easily updated data, like a survey abundance trend, where it's a scientific survey and we can process it very quickly. In some cases, we may be able to use mortality rate information, and there's a whole slew of potential ways of doing an interim ABC analysis. I am going to show you one.

We would also like it to be relatively simple to explain, and we would like it to account for some measure of uncertainty, because none of the data we have is perfect, and, ideally, we would vet it through management strategy evaluations, because, basically, if you come up with this interim harvest control rule, and it doesn't work well in simulations, it's probably not going to work well in the real world.

The example that I'm going to show you is about as simple as it gets. It's as close to button-pushing as you can get in a stock assessment, and, yes, I am showing an equation, but this is, again, about as simple of an equation as you can use, and the idea here is that you have an ABC from a reference year, which could come from a full stock assessment, usually the last year in the stock assessment, and then we want to give catch advice for the next year, and so, instead of doing projections and making assumptions, what we do is get a survey index for that year and we look at how much the survey has changed relative to what the survey value was in the reference year, and so that's that ratio. The I is the observed index of biomass, and I_{ref} is the reference year, and I_Y is the observed index of biomass in the year you're interested in.

You just look to the extent that that index has gone up or down, and you decrease your ABC by that same amount. The advantage of this, of course, is -- Obviously, it's as simple to explain as you can get, and it uses the most current data, ideally something that we can update quickly.

Now, this formula, however, does not account for uncertainty, and it hadn't, as yet, been vetted through management strategy evaluations, and so we've done a little work, where we actually have a paper in review where we've done the management strategy evaluations, and this is a slightly different version of this formula.

You see the ABC in any given year that you're interested in would be the reference ABC times a slightly different ratio. You still have the index in year Y and the index value during the reference year, but you have that -- Well, I was told to emphasize that this is the beta sigma factor and not the BS factor, but the idea here is that S is the standard error of the index, and then B is a buffer, and you might determine that buffer by how much you want the catch to change from one year to the next.

The idea here is that, if you have a big standard error of the index, and if it's going up and down a lot, because you have low sample size, then you probably don't want the catch to go up and down as rapidly as the index does, and I will show you an example of that, to make it a little bit clearer.

Here now, we're using the most current data, and it's still pretty simple to explain. It accounts for uncertainty, and, as I will show, we vetted it through some management strategy evaluations.

Now, just to give you kind of a conceptual feel for how it works, if you look in this graph, you see this orange line that says "forecasted biomass", and that big dot would be say the last year of the value, or the last year of the assessment, and the top graph is fish biomass, and the bottom graph would be an ABC, and so, typically, what we do is we have the situation in the last year of the assessment, and we make some assumptions that basically the fishery will operate similar to the way it has in a few years, and recruitment will be similar to what it's been in the last few years.

Then we project out what the fish biomass would be and what the ABC should be, and, in this case, if you look at the bottom, those little squares in orange would be the ABC, and basically it's FMSY times the biomass and then decremented for scientific uncertainty. Just for simplicity, I am not including P* in all of this, but the reality is the true trend, in this case, was actually increasing much more rapidly than we forecasted. Of course, we don't know the true value. God knows it, but he hasn't told me, and so all I have is this orange line to go on, at the moment.

Now, let's suppose that I have an index of abundance, and so this index doesn't count every fish, but it counts how the fish population has changed from one year to the next, because it's impossible to count every fish out there, but, if you can get

representative samples, you can see how the density has changed from one year to the next.

If we have an index like that, in this case a perfect index that tracks the relative abundance of the stock, then what we can do is -- In the graphs in the right, you will see the index. In the graph below it, we're applying the formula to find out what the ABC would be, and you can look -- If you look in your personal versions, you can tell there's a black dot in the middle of that blue square, and the point is it gives you the exact answer. It gives you the exact true ABC.

The next year, 2022, we get another index value, and then we calculate -- We apply this formula and calculate the ABC, and it goes up, and, again, it matches what the true value is, and we just keep doing that year after year, and so, in principle, if we had a perfect index, we could apply this approach and get the actual ABC, taking into account whatever is really happening in the environment.

Now, the problem is that our surveys aren't perfect. It's impossible to get a perfect survey, because, again, you would have to count every fish out there, and it would cost more than the fisheries are worth, and so we would have an index that maybe looks more like this green line, which actually would be a really good survey, if you were that close to the true trends.

Then, if we apply our formula in the graph below, you would get those green dots for ABC recommendations, and you can see it actually works pretty well. It's following the true blue line quite closely, and it's definitely performing better than our projections did, in this case.

Now, keep in mind that this is all hypothetical examples, but what happens when we get a more realistic case, and, very often, our surveys actually look like this. They might get the overall trend right, but they're going up and down a lot from one year to the next, and it's largely because of sampling issues. We just can't sample enough out there, and so, if we have a highly variable survey, and we try and apply this formula, the simplest version of the formula, with no buffer for uncertainty, then our ABCs are also going to go all over the place.

On average, they are tracking correctly the true ABC, what the ABC should have been, but, in any given year, they're going up and down like that index is, and so do you want a fishery where one year you may say that catch is going to be really low, and then the next year it flies up, and so that's why you might not

want to use this formula when you have a highly-variable index. You want to use some buffering for uncertainty.

Now let’s use our buffer formula, and the way this formula is written is, again, that B is a buffer quantity. For those of you who are into statistics, it’s inspired by confidence intervals, and so a B of two corresponds to something like a little over 95 percent confidence interval, but the point is what you’re saying is, with this buffer up at two, that you don’t want to change your catch quota too much, unless you’re really pretty confident in the trend.

When you plug these numbers in now, the comparison I want you to see is in the graph on the left, and that’s with no buffer, and the graph on the right, where you actually have a buffer, and you can see those green dots don’t go all over the place.

Now, actually, their average is slightly less, because if I made that buffer say 100, it would be a straight -- The ABC would be a straight line from the reference ABC, and you wouldn’t be allowing it to change at all, but, in this case, I am allowing it to change some, and there is some ups and downs that you’re going to get, but it’s tracking much closer the total trend without giving you totally wild fluctuations in catch, and so that’s the sorts of things we can do.

If we wanted less fluctuation from year to year, we raise that B factor to three or something like that, and that’s where management strategy evaluations come in, because you can talk with stakeholders and figure out how much change from year to year they are willing to live with, and then you adjust that B accordingly, and you can do that through simulations, to find out sort of what is the optimum value of B.

This graph, I won’t go into all the details of it, but the vertical axis is just the simulated biomass trends over the biomass at MSY, and the red is basically depicting what happens when you do a forecast approach, and it’s a fixed TAC, but it’s based on forecast, like what we do, and then the black would be if you had an annual assessment, an annual unbiased assessment, and so that’s as close to true as you can get, and those blue lines are basically versions of what I just showed you.

What you can see is this interim assessment approach tends to track annual assessments really well in the simulations, and so, mathematically, it works, and it seems to be an appropriate way to interpolate in between one assessment to the next, and, in fact, in this case, the assessments are five years apart, and we

have made some other runs with the assessment, ten years apart, and the interim approach, again, worked almost as well as having an annual assessment, and so it's a much cheaper way to give catch advice in between stock assessments. I think the key point here though is that you need a good survey index of abundance.

There are many other types of interim ABC analyses, and I didn't want to go into it and hit you with tons of different formulas. In fact, one of the examples that Skyler showed for lane snapper could be retooled to provide an interim analysis approach, and so there's many ways, and which way you choose would depend on the type of information that you have and what you can process quickly.

In this case, I am showing you one with a survey index of abundance, where, ideally, it would track the biomass that's vulnerable to the fishery, since you're giving direct catch advice from it, or, if you had a recruitment survey, then you would need to account for the time lag, how long it takes for the recruits to get into the fishery, and so it's a little more complicated formula, but still maybe not too bad.

We don't want the index to be too, too noisy, because, if it's just all over the place, it doesn't matter that I'm going to have to have a huge buffer or a huge variance, and then it's just going to be a constant catch, and so you need a meaningful survey.

Ideally, we simulation test all of that, because each survey has its own nuances, and the ecology of the animal has its own nuances, but we could move forward with even just what I've shown you, and it's probably going to be better than forecasting.

Then, finally, in general, survey-based indices are best, because of the most direct indicator of what the population trends are, but, in certain situations, we might be able to use a catch per unit effort index, and that's what we're using for the index-based approach in the lane snapper example that Skyler showed you.

The trick there is getting a catch per unit effort index that really tracks abundance, and, as you know very well, fishermen are smart. When abundance goes down, they adjust their way of fishing, and so their catch rates don't go down as fast as abundance, and we call it -- In our lingo, they are hyperstable, and it's hard to get around that. It's hard to disentangle

fishing behavior from what's actually going on in the fish population, but, in some cases, we may be able to get something that's suitable, like the headboat index for vermilion snapper.

Just getting into timelines here, how long does it take us to process this information, the bottom longline survey is probably the fastest. From the time that we complete the last survey, the last vessel trip, it takes us a month, or maybe two months, to process the data, at the outside. The reef fish video survey takes us about a year, because of reading the video, and it's very manpower intensive. There is lots of pictures, where you've got to count and identify fish.

The reef fish diver survey is a bit faster, because they're already recording species ID when they're on the bottom, but that's only applicable to a couple of species, where most of the catch is in the Keys and the Florida east coast.

We have our trawl survey, and that takes about two months to process. We have a larval fish survey, but that takes about eighteen months, because they've got to sort all the plankton, and we ship it over to Poland, where it's cost effective to do so, and then fishery catch per unit effort is kind of variable, but, typically, it takes us around six months, by the time the fishing is completed to actually processing all the data and running it through our standardization approach.

For any given species, and we went through this exercise, to find out which indices seem to be -- Which surveys might be most representative. For red snapper, it's pretty clearly the bottom longline and video surveys that are most representative. Vermilion snapper, believe it or not, we get a fair number of adult-sized fish in the trawls, and so it would be either the video survey or the trawl.

Gray snapper, the video survey or the diver-based survey. Red grouper, it would be the bottom longline and video. Gag grouper, it's only the video, and the same thing with scamp. It looks like we only get enough fish in the video survey. Yellowedge grouper, it would be the bottom longline, and greater amberjack is the video.

Gray trigger, the jury is still out. We're doing some work there, and we think we might be able to get a good enough index from the video survey. King mackerel, the only options would be the larval survey, which we treat as a survey of spawning biomass or fisheries CPUE, and we're still looking at that, but, then again, if it's the larval survey, that's eighteen months,

and so it’s not as advantageous for an interim analysis. Then, for something like yellowtail snapper, it would be either the diver or the video survey.

What does this translate to then in actual months? I will go back and look at this figure, and so, for red grouper, and remember we did an interim analysis last year for red grouper, using the bottom longline survey, again, it’s a processing time of about a month, and that survey typically ends around September, or sometimes into October, and, of course, you’ve got the holidays coming up, but we should be able to deliver data with 2019 information by January of 2020, the full interim analysis.

The reef fish video survey, this would be a few species, like amberjack, and there’s going to be at least a twelve-month time lag, and so the next time we could update that would be May of 2020, because that’s typically completed around May or June. When you’re looking at something like gag grouper, again, that’s going to be -- You have 2019 data in May or June of 2020, and the same thing for scamp.

Yellowedge grouper, being bottom longline, that’s going to be available in January as well, and so a number of them we can have -- Anything that says bottom longline, basically we can have this January of 2019 data. Anything that relies on the video is going to be like May or June of 2020, to have 2019 data. It's still much, much faster than a full assessment, and that’s all I have, and so any questions.

CHAIRMAN FRAZER: Thank you, Dr. Porch. Dr. Mickle.

DR. MICKLE: Thank you, Dr. Porch. That was a great presentation, and I think it’s really valuable, and I appreciate the information. My question is, and I think it’s on Slide 10, when you talked about I guess identifying B and letting that drive the ABC, as far as its variability, and so, inherently, B is the variability, right, because that’s what you’re driving into the equation there.

You mentioned a little bit about what the decision factors are behind identifying the metric for B, and I think, with recruitment, or species that are highly variable in recruitment, if you’ve got a big wavy ABC, and recruitment is doing everything else, then everything is just crazy, and the Type II error becomes very high.

My question is, when you look at your timeline, and I think I

know why the larval isn't brought in, because the timeline is so long on it, but just you touched a little bit on what drives the metric of B, but would you tell a little bit more of really what maybe all could go into there, or I know you talk to the fishermen and everything else, but just elaborate on what drives the identification of how you determine the number of B.

DR. PORCH: Sure. The variability actually is characterized by that S, and that's the standard error of the index, and so that's how much it's -- That basically measures how much it goes up and down from one year to the next, just due to sampling variability, because you don't have an infinite sample size, and you couldn't count every single fish.

The B is basically your tolerance for that variability, and so it scales how much you are willing to change from one year to the next. Let's say you have -- In this case, this actually was based on an index with a coefficient of variation of about 0.5, which is on the high side for some of our surveys, but we do use data that have CVs that high.

In that case, you can kind of -- Just from this, you can see the effect of it. If we said, look, we don't want to buffer it at all, we would be telling the fishermen that, any given year, you can go up tremendously up or down, based on just sampling variability in the survey, and we don't know how much of that up and down is real or not. Like I said, it may get the overall trend over time, but, in any given year, some of it is population trend, and some of it is just the vagaries of not having enough samples out there.

This would be a discussion that the council could have, as far as how much do they want to follow an index like this, follow each annual trend, when you know there is some sampling variability in it, and it's not all population, and it's really a measure of, again, what is your tolerance for changing catch limits from one year to the next, because we don't have the luxury, in this case, of just saying, okay, we're going to set the catch for three years out and just use the average, like we do with projections a lot of times.

We will just average across it, but, here, you don't actually know what the catch advice is until each year, when you do the interim analysis, and so the way you mitigate against changing too much from one year to the next is just specifying that B parameter, and, again, it's really up to the council on how much change they're willing to make, and what we can do, any time we do an interim analysis, is we can say -- We can calculate that

value of S, and then we can show you what the trends would be, theoretically, or even just looking historically.

If we had applied this approach in the past, and so we actually are looking at past index trends, what would the catch have been, and how variable would it be? Then you could kind of decide that, okay, maybe we don't want to change as much as this each year, and so we'll specify that B parameter so that it dampens down the year-to-year changes. Again, we can't -- It's really a choice at the council level of how much do they want to allow these catch limits to change from one year to the next, and so it's hard to give advice beyond that.

It really needs the council feel for what do you want to do here. If you wanted to be constant, you just set B to a huge value, and it's going to be the reference level of ABC from the last year of the assessment for the whole time period.

CHAIRMAN FRAZER: Paul.

DR. MICKLE: Thank you. At least the question of, if S is so high, is there a tipping point where you don't use B, or -- That's what I'm getting at. When does the biological, or the life history, show up to say that maybe B is uninformative?

DR. PORCH: If S is much bigger than -- Well, this is a scale where the index values are around the order of one, because of relative trends, and, if S is on the order of 0.5, or higher than 0.5, you probably wouldn't use the index.

It's just too variable, and it might give you long-term trends, but it's not going to be informative from one year to the next, and so that's why I said that, whatever index survey we use, we want it to be a relatively stable survey, in the sense that you get enough sampling size that you're really tracking abundance, and so we'll do that screening first, but, even so, even if you have a survey with a CV of 0.3 or 0.4, there is a couple of things that could happen.

You still have sampling variability, and so do you want -- It may mean the catch advice could vary from one year to the next by a factor of 50 percent, and do you want to allow that? If you don't, you just raise this B value, and, like I said, we can look at the historical trends in an index and give you an idea of how variable the catch might be, and then you can scale B according to how much you want to allow that change, but, beyond that, it's hard to give concrete advice on what B should be, because it's really up to the council on how much they want to

allow the catch to change from one year to the next.

CHAIRMAN FRAZER: There's a couple of people, and I just want to follow-up real quick on Paul's question. It seems to me, if you're going to do an interim analysis, or take that approach, you almost have to commit to it year after year after year, right, because -- Every year. All right. Cool. Kevin.

MR. KEVIN ANSON: I have several questions, if I can. To that topic or point, I am just curious as to whether or not it would be possibly better to not do it in year-one, but maybe do it after year-two, and get kind of a backtrack, an average, of the previous year and then go into that year, to maybe help smooth out that line, at least at the year-two point.

Then is this iterative? If you had the opportunity where there were two defensible surveys that everyone felt comfortable with doing, would you just add that in addition to the second variable there, or the second computation, on the right-side of the equation?

DR. PORCH: You can combine two surveys, and it could be an average of two surveys, or a weighted average, and so you wouldn't -- In other words, that I_Y might be something like Index 1 in Year Y plus Index 2 in Year Y, and then I_{ref} would be Index 1, something like that. You can certainly do that, and maybe, for some indices, that would be advisable, if they are highly variable, and you do some sort of weighted average.

Of course, if one index takes one month, and the other index takes a year, then that means it's going to be a year lag between when we can do the analysis and when the data was collected.

CHAIRMAN FRAZER: One more, Kevin.

MR. ANSON: Last one. The idea of defensible, I guess, in light of choosing a survey and such -- Defensible would be one that provides a comprehensive or significant coverage of the range of the species of which it's prosecuted, as well as occurs?

DR. PORCH: Yes, absolutely. You don't want a precise index that precisely measures one reef. It really needs to be representative of the whole area that you're applying the ACL to.

MR. ANSON: Or one side of the Gulf and leave out the other side of the Gulf, right.

DR. PORCH: Unless you were doing something like red snapper, where we actually explicitly are given catch advice for the eastern and western Gulf.

CHAIRMAN FRAZER: Mr. Dyskow.

MR. DYSKOW: Thank you, Mr. Chair. Dr. Porch, I think you're on to a really great solution to our dilemma of how do we get accurate survey information on every species in the Gulf with 100 percent accuracy all the time. It's impossible, and so this approach gives you some information that we can use to make decisions on that is achievable within your resource, both human and dollar.

I come from a business background, and I can assure you that, in business, forecasting is a key part of what we do. We know the past real well, and we have some indication of the future, and we apply a formula, and that allows us to forecast, and, in the business community, money is perhaps more precious even than fish is to us, and so they get pretty good at this, but, ultimately, no formula-driven forecasting tool is ever going to be 100 percent accurate, and you have to rely, at some point, on the intuitive insight of the person analyzing it.

In other words, you can look at this and say, well, the fishery is not going to -- It can't possibly vary by 30 percent in a year, and it can't, and so you have to use your insight to say what is probably happening here, and how can we adjust this outcome to make it more reasonable, and so there's a human element that has to be part of this process, in order to have it be statistically valuable to us as a council, for example.

I don't think the formula is going to -- Just by your example there, and, obviously, those kinds of variations probably won't exist in the real world, and you might have to make these adjustments throughout the process, to get closer to reality.

CHAIRMAN FRAZER: Clay, do you want to respond to that?

DR. PORCH: Certainly there is some truth to that, although I would say that red tide has knocked stocks down by 30 percent before, and so sometimes it does happen, and so sometimes -- You know, you could actually get trends -- Normally, you don't see populations trending the same way as this more extreme example that I showed here in the green, although, occasionally, it does, and some populations are highly variable, from especially short-lived populations, from one year to the next, but the idea

here is at least you're using the most recent, most reliable data to give you more current updates than waiting from one assessment to the next and where you're making a lot of assumptions, and it doesn't account at all for something like a red tide event.

CHAIRMAN FRAZER: Phil, did you want a quick follow-up?

MR. DYSKOW: I just want to comment to that. Obviously, any forecasting tool you have is going to operate within some parameters that you set on the frontend. Red tide is not within those parameters, probably, nor would be a heavy storm season that would prohibit people from fishing, and so those pluses and minuses have to be adjusted at some point with the human element. You have to use your best insight into what's causing this to happen.

Elements outside of your parameters are going to occur all the time, and so I'm just saying that, at some point, someone has to use their own sense to adjust these numbers appropriately, or you're going to be making decisions with wildly inaccurate results, and the only way you can correct that is with some human insight, frankly.

CHAIRMAN FRAZER: Dr. Stunz.

DR. GREG STUNZ: Thank you, Mr. Chairman. I am not on your committee, and so thanks for recognizing me, and I will save some of it for I guess Full Council, but I just want to get my two-cents in here, as a fisheries scientist.

Clay, I am really supportive of this, and I think it's great, following this adaptive management paradigm or whatever we're talking about, but it allows us to be most responsive to the fishery, and these are just clever, analytical ways to move us down the road, so we're not constrained by this three-year timeline or more or whatever it is for these assessments, and so I would fully support it if we move on, and I would definitely encourage the committee to look heavily at these methodologies.

CHAIRMAN FRAZER: Ms. Bosarge.

MS. LEANN BOSARGE: I will be quick. Thanks. Clay, I just wanted to say thanks a lot for this. I know, under you reign, I guess we would call it, you came in and spearheaded this idea of having research assessments and operational assessments and then supplementing those with these interim assessments, and we really weren't sure how that would work until we finally used

one, and we used it for red grouper, and it was wonderful.

With red grouper, we kind of knew what we wanted to do, but, because not everybody around this table is a scientist, we were just starting at each other and saying we know we want to go down, but how much do we go down, and so you all prepared that MSE for us, and you gave it to the SSC, and they were able to come up with a quota and said, hey, this is probably about where you want to be.

Once we had that threshold, that ballpark, to look at from them, we said, okay, well, let's go slightly lower than that, and let's use last year's landings, but that really helped us hone-in. Otherwise, it was just a blank slate for us.

I say that to say that, you know, if we do go into this buffering, I think it would probably be helpful for us, although it may be a council decision, to have it go through the SSC and let them take a look at it and give that buffer some feedback for us, maybe give us a ballpark and say, between this and this, this is what we think that buffer ought to be, and then we'll have a starting point to figure out where it would be, if we go that route.

DR. PORCH: Thank you for that, and maybe "term" is better than "reign", but I also want to give credit where credit is due. I have a lot of talented people to work with, and so they have all contributed to these discussions, but thank you.

CHAIRMAN FRAZER: Okay. We're going to go ahead and move on to our next item on the agenda, and that will be the summary of the August 2019 SEDAR Steering Committee webinar, and that would be NOAA's recommended use of the current Gulf of Mexico surveys of marine recreational fishing in stock assessments, and, again, that's Dr. Porch, and so that will be Tab I, Number 5.

SUMMARY OF AUGUST 2019 SEDAR STEERING COMMITTEE WEBINAR: NOAA'S RECOMMENDED USE OF THE CURRENT GULF OF MEXICO SURVEYS OF MARINE RECREATIONAL FISHING IN STOCK ASSESSMENTS

DR. PORCH: There's not really a presentation, and so she's just bringing up the so-called white paper, but more like the white album. I didn't intend to talk about this too long. I think you guys were -- Unless somebody was living under a rock, you know that we have had some major changes in the recreational fishing statistics, two major ones that I will highlight here.

One, MRIP, the Marine Recreational Information Program, has gone

from a telephone survey, the old CHTS, Coastal Household Telephone Survey, to a mail survey, where they get a lot better response rate, and, after much review, it's been determined that it's a much less biased approach. When they do the fishing effort survey, based on a mail survey, they get much higher estimates of fishing effort, about twice as high in the private boating sector and several times higher for the shore mode than the old CHTS estimates.

When you multiply your intercept data by higher effort estimates, you're going to get higher catch rate estimates from this new FES survey.

At the same time, as you know very well, several states have implemented their own programs, and some of them are supplemental surveys, like Alabama Snapper Check, that just focuses on landed red snapper, and it doesn't worry about discarded red snapper or any other species, and then you've got some like LA Creel, which focuses on all the species, and so it's, in many ways, kind of like MRIP, and then you've got Florida GRFS, which is also similar, but it focuses on certain reef fish species and not all the species that are caught.

I won't go into all the details of the surveys, but MRIP did -- The Office of Science and Technology has certified those other programs, but I just want to remind folks that certified isn't even a judgment of whether the survey is good or bad, but it's saying, if all the assumptions the survey makes are met, if, and it hasn't evaluated all of the assumptions, but if those assumptions are met, and the survey is executed properly, then it's a valid survey, but what has to go into it further is evaluating some of the specific assumptions.

One that I can think of off the top of my head is almost all the surveys assume that the intercept information, the catch rates of different species, for the fraction of the fishing effort that comes out of people's homes, private dock sites, et cetera, is the same as what they're getting when they go to public dock sites, and it's because it's hard to sample everybody's house. You can't just go to everybody's dock and sample.

A lot of the surveys make that assumption, and there's a number of other assumptions, and, depending on the method, they make different assumptions. Whether they are all equally valid, that's something that still remains to be evaluated, and so I just wanted to make it clear that, when MRIP certifies a program, they are not actually making an explicit judgment that it's good or bad. It's just saying, if all the assumptions are

met, and it’s executed properly, then it would be a good survey.

Obviously, you’ve heard this before, and so I don’t want to spend a lot of time on it, but we’ve had a lot of peer review of the new FES estimates, and so we endeavored to put together this white paper, to sort of chart a way forward, recognizing there is still a lot of work to be done to figure out why these state surveys are getting different estimates than the MRIP survey with the FES, and those differences, as you know, are pretty large. In many cases, for the private recreational fleets, the catch rates -- The catch estimates from the MRIP FES are twofold higher than the catch estimates coming from some of the state surveys.

That’s a pretty big difference, and we definitely want to understand why, and, as Richard Cody here can attest, we are trying to work with the states to understand why those estimates are so different, but, until we do, we reviewed several different options.

Option 1 is our preferred option at this point, from the National Marine Fisheries Service point of view, where we’re using a time series of catch estimates that are fully calibrated back in time, and we’ve put a lot of effort into trying to calibrate the new FES survey to the estimates from the old Coastal Household Telephone survey that go back to 1981.

That survey exists, that calibration exists, and we have FES-calibrated estimates all the way back to 1981, and so we propose that those estimates, having been heavily reviewed and are complete back in time, be used for the time being in all of our stock assessments.

We can’t use the state estimates for that, because they’re not calibrated back in time. They just started, and we don’t have any way to calibrate them back in time, whereas, with the FES survey, what they did is look at things like cellphone use and how it has changed. I mean, that’s one of the reasons that we moved away from the Coastal Household Telephone Survey, is it’s gotten to the point where most people use their landlines just to screen calls, or they don’t even have landlines anymore.

When the phone rings at my house, and it’s the landline, I don’t pick it up. I wait to hear the answering machine and see if it’s somebody that I want to talk to, and this is a common phenomenon, and it’s gotten to the point that only I think a small group of retirees answer their phone anymore, and so your sampling universe has changed quite a lot, and so it’s really

not a valid approach anymore.

That has been the agency's position, is that, for the time being, we'll use these FES estimates in our stock assessments. There is an Option 1B there that, once we get the calibrations from FES to the various state currencies, if the council wants to manage using the state currencies, we'll do the assessments with FES, but, if the council wants to manage using the state currencies, we'll get these calibrations and convert our FES-based ACL into the various state currencies, but we have to get those calibrations, and I think the timeline has been moved a little bit, but we expect it to be available by -- Richard, is it now towards the end of 2020, or can we get it a little sooner?

DR. RICHARD CODY: (Dr. Cody's response is not audible on the recording.)

DR. PORCH: So it might be mid-2020 that we'll have the calibrations available. Then there's an Option 1C, and this might take a little bit longer, but this is where we hope to find a way to integrate all the various surveys, and so LA Creel -- Well, LA Creel, I think, is the only game in town now, and so there's still the calibration factor that has to be developed, but, for GRFS, for instance, we have MRIP and GRFS going on at the same time, and so what's the best way to integrate those two surveys, and we probably could integrate some of the other supplemental surveys, like Snapper Check, and so there's work that still needs to be done there, and the timeline isn't exactly clear. I know the states are meeting and trying to think about how they want to move forward on that.

We did look at other options of rescaling the MRIP time series to various state surveys, and some had suggested just continuing on with the old CHTS estimates, which tend to be much lower than the FES estimates, but the problem is, like I said, the CHTS, the Coastal Household Telephone Survey, is now sampling a very limited frame, basically some older people that still use a landline, and it's just not valid anymore, and so, really, the only way forward at this time is to use the FES in the assessments, and then we will keep moving towards trying to integrate all the surveys, to have one estimate, instead of all these different ones, but that remains to be seen.

That is where we are with regard to the white paper, if we want to talk a little bit about the Steering Committee meeting that we had in August, where I basically said the same thing as I just said now.

CHAIRMAN FRAZER: Dr. Simmons, real quick. Hold on, Clay.

EXECUTIVE DIRECTOR SIMMONS: Thank you, Mr. Chair. Bernie, could you please pull up Tab I, Number 5(a)? That's the August 2019 webinar report. I think you want to go to page 5.

DR. PORCH: Yes, exactly. I laid out basically the same spiel that I just gave you, and the gist of it is the committee appreciated receiving a clear path forward, regarding how we move forward with the recreational landings in the short term, and it really is the only defensible approach at this time.

Several folks raised some concerns that the report doesn't go far enough, in the sense of not providing clear direction for developing a plan to integrate the different Gulf of Mexico state surveys, and, honestly, that wasn't the intent of the report.

The report was really focused on the short term for how are we going to move forward with assessments, and I was one of the ones pressing that we needed an answer, because we have all these assessments coming up, and we can't have each different working group making different decisions of what statistics they want to use, and so we really need to decide what the best statistics are.

On the other hand, we do need to move forward, and I know the Office of Science and Technology and our end and various state personnel have been meeting and trying to figure out how we can reconcile these surveys and understand, again, what the differences are, and the reality is that we don't have a true estimate. There is no way to know exactly what the catch is. They are all surveys, and they are all estimates, but, until we can employ satellites to spy on every single individual at every moment to find out when they're fishing, we're not going to get the exact effort in catch estimates. I am not sure we want that.

Other things that came up during the Steering Committee meeting was that the group did encourage that those efforts that we're making with the states to try and reconcile these surveys continue. There was a discussion about a workshop that was, at the time, being planned for September, between Florida and MRIP, to figure out how to integrate GRFS, and I think that's been postponed a little bit, and it's still in the planning stage, and there was some discussion about the impact that these current MRIP estimates will have on allocations, just like we've

been having just yesterday.

Ideally, I think the group felt an approach would be developed for updating and modifying allocations across multiple species, and so you have the same sort of rationale and then not have to make plan amendments for every single species, but you come up with a rationale for specifying what those allocations should be that would apply to not one species at a time, but multiple, and that was it. It was a relatively short Steering Committee meeting, I think just a couple hours long, and so I don't know, Carrie, if you wanted to add anything.

EXECUTIVE DIRECTOR SIMMONS: No, thank you, but we could have Dr. Barbieri come up and discuss the SSC recommendations, and then the committee could probably ask questions.

DR. LUIZ BARBIERI: Thank you. Good morning, everybody. I have just one slide, and this is an issue that is of great interest to the SSC, because it involves data that goes into stock assessments and is then used to manage the stock and provide catch advice to the council, and so this is something that the committee is really interested in.

I gave a presentation to them at this last meeting that basically summarized what Dr. Porch just talked about, about the white paper and then what came out of the SEDAR Steering Committee, and we recognize, the SSC recognizes, all the limitations that are on the table with use of the state surveys for stock assessments immediately, and that, right now, the only option, really, is Option 1A, for the most immediate situation.

However, it is disappointing, because there was nothing in place, that we could tell, that clearly identifies a path. We have a lot of effort and a lot of resources being spent by a lot of states and organizations in collecting vast amounts of data, and we know how much additional data can help our stock assessments and help our management of species, and so the committee was a bit disappointed that there wasn't really a clear path identified in this report to let us know what are the timelines for making this data in a way that can be integrated into stock assessments.

There are some ideas there in Option 1C, but those ideas are projected to be completed in the future, and no clear path was identified, and the committee had concerns about that.

Obviously, there are concerns that remain about how do we handle the different currencies that now exist between what is being

used for monitoring the landings and the catch level that is in place. It's difficult for us to understand, really, how those relationships work between what's being collected by the different states, in terms of quota monitoring, and what the catch advice is.

I think, because the SSC is charged, under NS 2, National Standard Guidelines 2, to really identify what is the best scientific information available that can be used for stock assessments and management, this is something that was of great interest to us.

We have then discussed this issue that having these discrepancies resolved, having some way to get to this bottom line, is needed, and we would like to request an accelerated process to the Office of Science and Technology and the Office of MRIP, the MRIP staff program, that they can continue working with us in trying to address and understand better what are these differences in results that are coming out of the different state surveys and MRIP.

We have, since the report, the white paper, we have been discussing this with NMFS, and they are really committing themselves to work with us and get this issue resolved, but this is something that we would like to see, moving forward. Then, finally, the committee made that motion that we would like to have an in-person workshop that would bring to us the MRIP program staff to kind of give us an overview of the survey as a whole, both the APAIS and the FES components.

A similar workshop was presented to the South Atlantic SSC, and it was very productive, and the committee was very appreciative of that, and it has a much better understanding of how the survey works. By having this workshop, it will also help us better evaluate how these different types of data that are in these other surveys can also connect into the MRIP.

We made that motion, and I am hereby requesting that you support that request from your SSC to have the MRIP program schedule, at their convenience, a meeting that they can come and organize with us to give us an overview of the new MRIP program and how that ties -- Really give us an update on how that ties into the different state surveys that are collecting, in some situations, information, data, just on red snapper, and, in other situations, on a variety of species.

CHAIRMAN FRAZER: Thank you, Dr. Barbieri. A couple of things. I mean, we can certainly make that request on behalf of the SSC

to address the broader issue. I think, for the purposes of today, what I would like to do is -- I mean, the obvious implication here is for state management and what's going to happen in the short term, and, if I can, I will put Roy on the spot a little bit. Give me your thoughts on where we might go.

DR. CRABTREE: The issue of the different currencies and how to deal with that is a very important issue, and we've talked about it on a number of occasions, and I agree with Dr. Barbieri that there is an urgency for us to resolve this as quickly as we can. At the same time, given the importance of red snapper to our constituencies and our fisheries and the council, the states, we want to make sure that we have a sufficiently rigorous calibration model that has been fully peer reviewed, so that we have confidence that we are doing this with the best information that's available.

We kind of want to get through this issue one time, and we don't want to have to chip away at it. Given Richard's comments, we expect to see these calibrations at some point next year, and, depending on the timing of that, we may be able to address this next year, or it may be too late in the year in order to do that, and then it could be the 2021 season, but I think everyone should be expecting that, at some point, we're going to take the state allocations and convert them into the currency of that state's state survey, and that's what these calibrations are designed to enable us to do.

I would think we would certainly address this issue prior to the 2021 season, and, depending on when get the calibrations, we can perhaps deal with this next year, and then, depending on the delivery of the assessment, we may be able to deal with all of this at once, or we may deal with getting the currency issue resolved prior to the assessment results, and I just don't know at this stage how the timing is going to be worked up, but we are going to have to resolve it, and we're going to have to deal with it in as timely a fashion as we can, and so this is a real priority, and I just want everybody to be thinking about it.

I appreciate the efforts by the MRIP folks and Richard and the Science Center and Dr. Barbieri to bring everybody together, and we want the states to take a look at some of these calibrations, and we want everybody to be in agreement that what we had is the best that could be done, and then we'll come in and resolve this issue.

CHAIRMAN FRAZER: Okay, and so, just to recap here, I think, as Clay pointed out, moving forward, using the FES approach is the

only really defensible way, as we move through the new assessments. Until we get that assessment, obviously, we're going to have to deal with a status quo situation, but we'll make an expedited effort, or every effort, to get the calibrated data in place. We may get that for 2020, but, if not, certainly for 2021.

DR. CRABTREE: Yes, I think that's correct, and it may be that we address the currencies before the assessment results come in, because I think that could be done once we have the calibration models, and so we'll see how that all works out, but as quickly as we can I think is the key issue.

CHAIRMAN FRAZER: Thanks, Roy. Dr. Mickle.

DR. MICKLE: I have two questions, and they are very different from each other. The first one is I guess the protocol for NS 2 -- I'm glad that you brought up National Standard 2, because that's the charge of the SSC, and it's a great charge, but what is the need for a calibration?

Let's say you have a really good survey, and I don't know which survey is really great, but let's say we have a great one, and, if there is not a need for a calibration and the best available science is deemed by the SSC as a certain survey, is there a reason that we have to do a calibration? Does the SSC have the ability to identify a survey as best available science and not a need for calibration, because that is a fast way of doing something.

CHAIRMAN FRAZER: Dr. Barbieri.

DR. BARBIERI: Well, that's a good point. I mean, all these questions are on the table. I mean, you may remember, from what Dr. Sagarese presented yesterday, that it was a fishery-independent survey that integrates the underwater camera survey that FWRI conducts off of parts of Florida with what NMFS conducts off of the Panhandle, the Panama City Lab, and then what the Pascagoula Lab conducts for other parts of the Gulf, and a model has been developed, a statistical model has been developed, to be able to integrate those types of data and generate just one data trend there that is informing the model.

Again, in this time of limited resources and the need of data, I think that whatever we can put on the table that, having gone through rigorous scientific review, and a process to appropriately integrate this data into the assessment and management, I think it would be a benefit to the process, and so

that is on the table.

CHAIRMAN FRAZER: To that point, Roy?

DR. CRABTREE: I think part of the key here though is, for assessment purposes, you have to be able to reconstruct the historical time series of catches, and so, when you change to a new survey method, even if you decide that new survey method is perfect, then you've got to go back in time and calibrate the historical time series to adjust it so that they are in sync with your new survey method.

That is part of the issue that we have, and I don't know if we'll ever be able to say that this survey is perfect and these are sub-perfect, and I don't know how that will work out, but you do have to reconstruct that historical time series in a way that is consistent, in order to do the assessment. I believe that, and, Dr. Barbieri, would you agree?

DR. BARBIERI: Yes, and that is correct. That's one approach that can be used, and it is used often, but, statistically, when you look into this, there are ways that you don't have to use either or. You can use a combined approach. Now, still, you have to find some calibration factor, to be able to scale your retrospective time series of data into the future, but there are ways to integrate multiple sources of data that takes -- It makes the best of having several sources of data that are pulled together to generate the most information possible.

That approach, this is like -- For the fishery-independent surveys, an actual statistical model was developed that was able to integrate those things and calibrate both retrospectively and integrate the data, different types of data, going forward. Those discussions need to be had, yes.

DR. CRABTREE: So I think the last word is yes, and that was the answer?

DR. BARBIERI: Yes.

DR. CRABTREE: Thank you.

CHAIRMAN FRAZER: Thank you, Luiz, for that very concise yes answer. Did you have another question, Paul?

DR. MICKLE: I guess. It's massively different, like I teed it up, and so the phone survey phased out because of no landlines, and so just an observation of my generation. My generation

started to get older, and now we have new millennials, and I don't know the names of the generations coming up, but mail is starting to phase out, and there are signs of it. Even my wife and I, we don't open anything unless it is a handwritten letter that we know is from someone or it says Publisher's Clearinghouse or the IRS. That's it. Everything else goes in the firepit or whatever. I mean, is MRIP taking that into account? I guess this is towards Richard.

DR. CRABTREE: I think, to combat that, they're going to start mailing out cash, periodically, and unannounced.

CHAIRMAN FRAZER: Dr. Cody, do you want to address that, real quick?

DR. CODY: Paul, the survey, as it stands right now, there are cash incentives in the survey currently, but we have just finished a full season of looking at alternative modes for the FES, and so that includes an electronic reporting option online, and so a web-based survey, and so that's something that we are looking at.

CHAIRMAN FRAZER: Thank you, Dr. Cody. We're going to take two more questions, one from Ms. Guyas.

MS. GUYAS: My question is about the integration, and so we talked about, okay, states have been certified, and now we've got to go back and calibrate those back in time with MRIP, but now there is this other step that is integration, and so like, for example, Clay just mentioned that the Gulf Reef Fish Survey now will need to be integrated, which I have been unclear about, because our survey, by design, is integrated by MRIP, and so I guess I'm interested in what do we mean by integration, and what is that process going to be like? What's the timeline? What are we talking about here? That may be a Richard question. Sorry.

CHAIRMAN FRAZER: Yes, I think it is.

DR. CODY: Well, the consultants have already stared to look at integration as a way to combine the different estimates, and we were hoping, initially -- When we started looking at it, we looked at one method, which is composite estimation, and it's sort of like what Clay mentioned. It's kind of a weighted averaging approach for the different surveys.

Unfortunately, it didn't work out very well for our needs, and we were looking for an automated type of way that we could

combine the estimates, and so it's not off the table, and, in fact, in 1C, the Option 1C, it's in there, but integration is -- The Gulf Reef Fish Survey is integrated, in terms of its sample draw and other aspects, but the way it does its mail survey is very different from the way MRIP does theirs, and so there are things there that we need to look at, to get an idea of the differences, before we can really, truly integrate the two surveys.

MS. GUYAS: So then I guess what's the plan and the timeline for doing that?

DR. CODY: Well, the plan right now is to focus on the calibrations. I mean, that's really our primary focus. The consultants are still interested or still looking at integration approaches. I would say that that will take some time, and I would be hesitant to make any promises on when that could be completed, and certainly not by the end of next year. I think, if the focus is on the calibrations, we can get those done by the middle of the year and reviewed, but I think that it will take more time to look at Option 1C, so to speak.

CHAIRMAN FRAZER: To that point, Clay, and then we'll go to Leann.

DR. PORCH: I mean, the problem is the scale of differences. If we were talking about 10 or 20 percent, it's probably within the range of the sampling variability, and it would be a little more straightforward to come up with just a weighted average or something, but, when you are talking about twofold differences, clearly it's not just the number of samples or -- There is something to do with the sampling frame. Something is fundamentally different, and we need to understand that, and so I think the reason why we don't have a real clear plan for integration is we're still trying to figure those things out.

DR. CODY: I would add one more thing to that. That is that not all the surveys collect exactly the same data components, and so, when you're talking about integration, you're actually talking about integrating components from one survey with another to come up with a combined estimate at the state level, and so it comes with some challenges.

CHAIRMAN FRAZER: Leann.

MS. BOSARGE: Thank you, sir. I'm glad to see that we're working on the currencies, the common currencies, because that is important, if you're going to have a stock assessment giving

you something in one metric, but yet you're managing and your landings are coming in in a different metric. You have to have a conversion, and I get that, and so that's an important piece.

To me, there is something that's even more important, and so you have all these different surveys, and the state surveys, by and large, are producing numbers right around here, regardless of the species. The FES survey is producing numbers up here, by orders of magnitude bigger, right, and that, to me -- The bigger implication there is, if we don't drill down and decide which numbers we actually think are more precise, because there is an actual number, right? We are killing -- Dale hates it when I use the word "kill", but we're killing a certain number of fish. There is a number that is right. Okay?

Will we ever get to that number? I don't know, but we have surveys that are at two different levels. Which one is more accurate? To me, the importance of that is when you plug it into -- It's not our currencies and all this and measuring, but it's when you plug it into the assessment.

What scares the heck out of me is if we only plug in FES numbers into the assessment -- If they're right, that is great. If they were the more accurate survey, we are spot-on. If they're not, how is the model interpreting that? If you tell the model, in a predominantly recreational fishery, and amberjack is predominantly recreational, it's coming up. If you tell it that we have been killing somewhere between two and six-times more fish for the last twenty or thirty years than we thought, is the model going to say, well, god, we must have had a lot bigger biomass out there than we ever thought, and it was a lot bigger population? If we've been able to repetitively harvest that many fish, year after year, there must be way more amberjack out there than we thought.

If FES is right, no problem. We have raised quotas, and everything is fine. If that GRFS survey, which shows a lot lower amberjack landings, and that LA Creel, which shows a lot lower amberjack landings, which that's two-thirds of amberjack recreationally in the Gulf of Mexico, is Louisiana and Florida. The other third is pretty much Alabama, which it's on their survey now, I think, as of last year.

Anyhow, if their numbers were more accurate, and we plugged FES into that stock assessment, regardless of the allocation, we're going to have higher quotas, and too many fish are going to be harvested, and so I am ready for somebody to look at the surveys and say which one is more accurate, and, if you can't make a

definitive answer, I hope we do something like we just saw in this interim, where you buffer something, somehow, and it's what you put in the stock assessment, regardless of these common currencies. We have got to get that right. I don't want to tell that stock assessment something that is orders of magnitude off the mark.

CHAIRMAN FRAZER: Dr. Barbieri.

DR. BARBIERI: Just briefly to that point, and this is part, really, of what the SSC is asking, in terms of bringing this workshop together. We have been discussing, with Dr. Cody and other folks in the MRIP office, ways to move these things forward, and we would like to have a better understanding.

There is the calibration issue, for sure, that needs to be taken care of, but there are other issues that we would like to explore, because of the BSIA factor that weighs into this, right, because our region, as you may remember from two councils ago, our region is on the path now to develop our own plan, our regional plan, for the best scientific information available to be integrated into the national framework.

All of those things are going to actually become very relevant, and the committee is going to be put in a position that it's going to have to think about all of these issues, and so, six years ago, we got together, as the states and the MRIP program and councils and the Gulf States Commission, under the auspices of the Gulf States Commission, to start this process of developing data collection programs, in that case in support of potential Amendment 50 of state management of red snapper.

That was accomplished, and we are successfully now implementing Amendment 50, and all of this is good, but, at the same time, during that process, we should have thought about how much we wanted to develop data that can be more comprehensive than just for that purpose and be more inclusive of other species and discards, as well as landings and can actually help better inform our stock assessments and the management.

At this point, irrelevant of where we are right now, the committee is requesting that meeting, and we see the will, really, from the Office of Science and Technology and the MRIP program to come and work with us, and we would like to start reconvening the meetings that we had as a group, and that's one of the reasons why the Florida meeting was canceled, is that we do not feel that it is in the best interest of getting this issue resolved to have individual meetings with different

states.

This is a regional, Gulf-wide perspective that we want to develop, and we want to all work together at that regional level, as we originally started working six years ago, and so this is, by the way, or at least I can tell you from my perspective, not an either/or. We are not against or disparaging the MRIP program in any way. They have been instrumental in helping us develop the surveys that we have in place right now, and they have provided a lot of assistance to us and worked hand-in-hand with us, and so we appreciate that.

What we are saying is that we have now invested, and are willing to continue investing, resources in adding on additional data that can provide more precise, and hopefully more accurate, information on fisheries that, at this point, may not be well sampled by a general survey of the nature of MRIP, and so having these supplemental surveys would be greatly beneficial, and this is the process that we would like to get started, and I don't know if you want to add to that.

DR. CODY: I understand your concerns about the accuracy of the data coming out of different surveys, and the fact of the matter is that we may never know how truly accurate a survey is. We can a handle on precision, but accuracy is something that we try to work on to identify sources of bias as best we can.

I would add though that no surveys have undergone as much scrutiny or as much review as the MRIP surveys, FES and APAIS, in terms of the development of the survey itself. That said, we have certified the state surveys as valid survey designs, basically, and that does give us an opportunity to look at the differences between the two surveys, so we can get a better handle on what's making one higher or one lower than the other, and so I think that there are opportunities in this, even though it seems like it's a difficult process, and it is a complicated process, but I think that we're continuing to work on those things. Once it was certified and reviewed, we didn't just drop the ball and stop looking at MRIP. That's something that we continue to do.

CHAIRMAN FRAZER: Thank you. One more, Clay, and then I'm going to try to rein this one in.

DR. PORCH: All right. Just to this point, just to make it clear, we've actually done some of these analyses, where we plugged in the FES numbers, and, yes, you will get a higher estimate of biomass and a higher ABC, but, if you're also --

Let’s assume you’ve got that and it turns out, in fact, those numbers were biased high, and so you’re overestimating what the ABC should be, and you’re overestimating the overall biomass.

The key is whether you’re getting the trends right, because then, when you’re doing management, as long as you’re consistent in the same currency, you’re also overestimating their current catch, and so it ends up kind of canceling each other out.

In other words, yes, the ABC would be higher, but, if it was an overestimate, if the FES statistics were overestimating catch, then, yes, the ABC will be too high, by about the same proportion, but, at the same time, when you’re managing using FES statistics, then you’re overestimating and saying they’re catching more than they are, and so it will end up -- Do you get what I mean? It kind of cancels out.

It doesn’t perfectly cancel out, because the FES calibration to MRIP ramps down in time, because, when it started, people were using telephones and all that, but there is -- It’s maybe not quite as dire as it seems.

CHAIRMAN FRAZER: I said no more, but, Susan, you had your hand up, and I didn’t see it, and so I apologize. Real quick.

MS. SUSAN BOGGS: Thank you for recognizing me. I’m not on your committee, but I have a comment and then a quick question. You know, it concerns me that we thirty-six years of MRIP APAIS and all these other data collections, and then, all of a sudden, we have two years of FES, and that’s the best available science, and it would seem to me like there should be some period in which we kind of look back, to make sure it’s tracking, because there is so much discrepancy, in my opinion, on where everything is going.

It bothers me too that we have a charter/headboat data collection program that we’re trying to get on the water, and you’re telling the charter fleet that it’s five years, at best, before you can get anything validated and useful out of that, and so that’s conflicting with me. My question is to Dr. Porch, and that is what do you see using for in-season 2020 red snapper as your dataset?

CHAIRMAN FRAZER: I think Roy -- Roy, do you want to answer that question, actually?

DR. CRABTREE: Yes, and so, in-season 2020, it depends on who you’re talking about. We will continue to use the -- To monitor

the catches the same way we have in 2019. The states will use state surveys, and then we'll use the converted back into Coastal Household Telephone Survey units for the charter boats, which is what we did in 2019.

Hopefully, in 2020, we can begin to address the currency issue, but that really is a private sector issue. We won't start monitoring the for-hire fleet using FES, I don't think, until after we get the new assessment and have the ACL and the for-hire fleet ACL in FES units.

Bear in mind that, in the timing of the charter boat reporting, FES -- We did run the surveys concurrently for three years, but the development of the FES survey took much more than three years, and they started doing pilot studies and things years ago, and so I am guessing at least a decade went into developing the new survey, and probably more than that.

CHAIRMAN FRAZER: Okay. Again, I'm just going to kind of recap here. I think what's important here is we have a plan moving forward, at least for red snapper in 2020, and I think we will go ahead and request, on behalf of this SSC, this workshop that Luiz alluded to, but, importantly, I think that these are big problems, and we recognize that there are challenges here, and everybody understands that.

Moving forward, we have issues, and how do we scale these estimates, and there are issues regarding accuracy and precision that influence what numbers that we ultimately use, but our intent is to -- There is a plan moving forward, and it's going to take longer to get to the full endpoint, I guess, but I think that we'll get there, and so, in the short term, I think we know where we're going, and this topic is not going to go away, and we will continue to talk about it at council meetings in the future.

We are going to now move forward to our next speaker. Dr. Cody is going to give us a review of the report to Congress regarding the Section 201 of the Modernizing Recreational Fisheries Management Act of 2018. Before he gets started, Dr. Simmons.

REVIEW: REPORT TO CONGRESS REGARDING SECTION 201 OF THE MODERNIZING RECREATIONAL FISHERIES MANAGEMENT ACT OF 2018

EXECUTIVE DIRECTOR SIMMONS: Thank you, Mr. Chair. Just to give a little background for the committee and council, we have been asked by Headquarters to review this report and provide comments, and the deadline is by the end of this year, and so

this is the one-time opportunity for the council to provide comments.

We are going to have a special webinar for the SSC next week, on Tuesday, and they're going to review it as well, and so, if we can get some recommendations from the committee and council, at least by Thursday, to put in that letter, that would be very helpful. Thank you.

CHAIRMAN FRAZER: All right. We'll get that presentation up on the board, Dr. Cody.

DR. CODY: I would like to thank Dr. Simmons for giving me the opportunity to follow-up on the request that we made to the councils and the SSCs and the commissions for input on a report on Section 201, which is on cooperative data collection, from the Modern Fish Act, and, as you know, there are lots of reporting requirements associated with the Modern Fish Act, and this is just one that deals with Section 201, Cooperative Data Collection.

Basically, the report is to facilitate greater incorporation of data and analysis from state and non-governmental sources into fishery management decisions, and so that's the focus of the report, and the requirement was that we do this report, which is for Congress, and there are two congressional committees, the Senate Committee on Commerce, Science, and Transportation and then the House Committee on Natural Resources.

The due date is December 31, 2019, and, as Dr. Simmons referenced, we asked for comments to be provided by the end of this year, which is the actual due date, and the focus of this is to be done in consultation, as I said, with the councils and SSCs and the commissions, and so the draft report that we provided was at a fairly high level, because it's national in scope, and so we didn't want to get into the weeds of describing each of the different programs that we have in place in different regions.

The focus was to just provide a broad overview of data collection efforts in place and cooperative data collection programs that we have ongoing and then to provide some guidance there, and so the draft report, as I said, primarily is at a high level, but it primarily references documents, other documents, such as ones that contain information on National Standard 2, the stock assessment improvement plans, and various MRIP procedures and policy directives.

Then, also, responses that MRIP has made to National Academy reviews, and so that's basically what the report is about, and then there are some brief recommendations for improvements that are provided in the draft report.

Just to give you an idea of what's in there, the report contents, as I said, it's at a fairly high level, and it includes a brief description of the current practice and guidance for incorporation of different data sources.

The report is structured by a number of different sections, and I have listed those under those bullets. The first one is the types of data and analysis, and that basically just does a summary of fishery-independent and fishery-dependent data collection efforts in place, and the inclusion of state and non-government sources is covered in the second section, and that really references the FIN, the fisheries information networks, that are set up for cooperative data collection.

Then there is a section on improving accuracy and precision of data, and this references the stock assessment improvement plans, and, as I said, the MRIP NAS reviews, and then this is followed by best scientific information available for fisheries management, and that's a separate section, and, again, that references a number of different items, National Standard 2, again, the stock assessment improvement plan recommendations, and there's some guidance in there for citizen science data incorporation and then MRIP as well that focuses on the certification and those kinds of efforts to improve data quality.

Then the recommendations are focused really on facilitating incorporation of these data sources, and there are some recommendations focused at the state and non-governmental partners, and then there are others that are focused at the NMFS level and the fisheries management councils.

As I said, it's at a very high level, and what we're looking for, really, is your input, if we have missed anything in particular that concerns you, and, also, Dr. Simmons pointed out to me earlier that she had some recommendations on the connections between certification and the use of state supplemental surveys that we can address, but that's basically what we're looking for, input that really gives us an idea -- If you have any recommendations, first of all, that you can add to what we have already in place, or if there are some omissions that you think we should address.

CHAIRMAN FRAZER: Thank you, Dr. Cody. The report to Congress is actually -- The draft report is in your briefing materials, and I'm going to go ahead and -- I know that Dr. Simmons and the staff have had an opportunity to go through the report, and I will give them a first crack at looking at some of the potential revisions or concerns.

EXECUTIVE DIRECTOR SIMMONS: Thank you, Mr. Chair. If we pull up Tab I, Number 6, I will just point out in the report what Dr. Cody was referring to and make sure the council is comfortable with us putting that in the letter and that we weren't misinterpreting the way it was written. It's the section for inclusion of state and non-governmental sources, and it's the third and fourth page.

I think what we're suggesting, and I think it's the second sentence, and I think this is really -- The incorporation of this information and data into stock assessments -- Although the second sentence doesn't say that explicitly, the part with the MRIP state supplemental surveys, it says frequently incorporated, and I think, right now, based on the white paper, there is some inconsistencies there.

I think we would suggest some changes in text, if the council is comfortable with that, and then I just had some general suggestions of page numbers and then maybe linking those policies and policy directives that you guys have cited in here, just so everyone knows which drafts you're referring to, et cetera. Thank you.

CHAIRMAN FRAZER: Okay. I am wondering if there might be any more immediate thoughts. Ms. Guyas.

MS. GUYAS: I have a number of comments on this, and I can provide those to Carrie, but, just in general, the purpose of this report, of course, is to address facilitating greater incorporation of the state data information, and I kind of feel like it falls a little bit short there.

Mostly it's a rundown of what is happening now, and there are a few recommendations at the end, but they're not really a path forward for making this better. Largely, these are things that are already happening, at least in the Gulf of Mexico, and perhaps not other places, and so that's just an overall comment.

There were a couple of specific things that we also picked up on, and one of the recommendations for state and non-governmental partners was to make sure that the sampling design

covers like the entire stock's range, and it's a long time series, and it's peer reviewed, and I just wanted to point out that, at least in the Southeast, usually that's not the case, but the SSC or the SEDAR team that's working on an assessment will recognize that those pieces of data are valid and should be used for assessment, because that's basically the best we have, the best scientific information available. That particularly is true in the South Atlantic, and maybe not the Gulf always.

CHAIRMAN FRAZER: I think, again, one of the things we might do is, if you have any particular comments, provide them to Carrie, and what we could do in Full Council is simply try to summarize those comments in a more concise way, so that we can make some efficient use of our time right now, because we're a little behind schedule. Go ahead, Dr. Cody.

DR. CODY: We will be providing the same presentation by webinar to the SSC on Monday, I think, or Tuesday.

CHAIRMAN FRAZER: Thank you for doing that, and so we'll get some additional feedback there as well. Okay. We're going to move on. Thank you, Dr. Cody. The next agenda item is the Summary of the September 2019 SEDAR Steering Committee Webinar. Dr. Simmons.

SUMMARY OF THE SEPTEMBER 2019 SEDAR STEERING COMMITTEE WEBINAR

EXECUTIVE DIRECTOR SIMMONS: Thank you, Bernie. This is Tab I, Number 7. The Steering Committee met again via webinar in September, and we had a couple of items, action items. If you go to page 4, we were asked to approve the project priorities for 2022, as shown in Table 1, and they also requested the cooperators provide scopes of work for 2022 assessments by March of 2020, which we have done that now, and then they asked for projects to be considered for approval for 2022 and beyond, and some of this gets into the stock assessment schedule.

In the Gulf, we requested yellowedge grouper, Spanish mackerel, and that's the Atlantic hogfish. If we go down to the table, during the discussion, the red snapper research track had previously only had one slot, only one analyst, but, because of the large assessment and complexity of it, it was split into two slots, and so that was discussed in the Gulf. The gray snapper operational assessment, we have completed that request and submitted our terms of reference. I will stop there for a second.

There was two other agenda items. We kept the red drum research

track, and we requested that in 2022 into 2023 now, it looks like, and that's based on some ongoing research that's being completed and whether that can be completed in time to make a useful assessment for red drum.

If we go down to Other Business Topics, there are two Other Business topics that came up. One was a request for future SEDAR committee meetings, Steering Committee meetings, that staff try to develop a way to summarize the modifications to the tables and make those available for the committee prior to discussion and deliberations, and that's just to better understand what's driving those changes and what has occurred from meeting to meeting, because we're not looking at this except every five to six months, and get a better understanding of what's occurring there.

Then there was also a request to improve communications with data providers, and this was brought up by Dr. Porch, and I don't know if he wants to discuss this any further, but we are planning to delve into this more in May, at the May in-person Steering Committee meeting. I will stop there and see if he wants to add to any of that.

CHAIRMAN FRAZER: Dr. Porch.

DR. PORCH: Sure. I couldn't help myself. I think, as many of you have probably figured out, the assessments in the Southeast are some of the most complicated in the country, partly because we get so many little pieces of data that we have to stitch together, and pieces of data from each of the states.

The processing of that data is all interdependent, and, if one link doesn't get provided, it kind of cascades down the chain and delays everything, and I think our SEDAR staff, and some of you on the council, are familiar with how frequently we have delays. A lot of times, it's because big chunks of data aren't provided, and so we need to find a way where we can coordinate a little bit better.

It's hard for me to have my staff go to all the states and say, are you going to provide data, and when are you going to provide the data, and they, obviously, can't go ride roughshod over the states. The states have their own priorities, and so, somehow, we need to coordinate a little bit better and make sure that all the data are provided on schedule, if you want them included in the assessment, and sometimes it's -- I mean, it's not even a matter of wanting to include. They might be critical data that have to be included in the assessment.

We can talk about it more at the upcoming Steering Committee, but I do think it's useful, for especially those of you who are representing states, to kind of think about how we might get a little bit better at collaborating in that way and making sure that data is provided in a timely way, because assessments are hard enough and complicated enough. If you're always waiting for pieces of data, it's really hard to get them done in a timely way. Thanks.

CHAIRMAN FRAZER: Okay. Any other questions? Kevin Anson.

MR. ANSON: Thank you, Mr. Chair. I'm not on your committee, but, Dave, isn't there already a process set up within the commission that the states provide a lot of the data that's used and requested of the assessments?

MR. DAVE DONALDSON: Yes, that's true, Kevin. I mean, we provide a clearinghouse of some of the data, but it's not all the state data, but I would suggest that we look towards the commission, since it is an organization of all the states, to see if we can't work through us to help make sure that all that data is provided.

CHAIRMAN FRAZER: Okay. Are there any other questions? Dr. Porch.

DR. PORCH: I should have mentioned -- All the challenges we've had are only going to be magnified if we go to a point where the states are all collecting their own recreational data, and so it's going to be even more important to have some sort of central clearinghouse, like Gulf States, managing that data. Otherwise, we will never finish assessments.

CHAIRMAN FRAZER: That's a good point. Again, I'm going to try to keep us as close to schedule as possible, and so I'm going to move forward now with the Review of the Gulf of Mexico SEDAR Schedule, if you're ready, Ryan.

REVIEW GULF OF MEXICO SEDAR SCHEDULE

MR. RYAN RINDONE: Thank you, sir. As you guys are aware, we're well through 2019. At this point, we have begun the research track process for scamp, and we have completed the stock ID portion, and I guess, just for the group's edification, scamp and yellowedge grouper have -- Not yellowedge, but yellowmouth grouper have been recommended to be assessed together as a sort of complex, due to the difficulty in being able to distinguish

the species apart.

Dr. Jim Tolan, who is on the Gulf SSC, did a great job trying to characterize the differences between the species, and they are minimal, and they are hard to spot, and so the stock ID group thought that this approach would be best. We have updates of cobia and king mackerel that are either beginning or underway, and the yellowtail snapper benchmark assessment being conducted by FWC is also well underway.

Moving into 2020, vermilion snapper, which is getting off the ground now, will be finished about midway through there, and we'll also get our assessments of king mackerel and cobia, and we'll start our operational assessments for greater amberjack and gag, and we'll continue our research track assessment for scamp, and we'll also receive our assessment of yellowtail snapper, and we're looking at doing a joint review for yellowtail, cobia, and, I guess, depending on the timing of everything -- Well, it will probably be just those two, yellowtail and cobia, between our SSC and the South Atlantic's SSC.

In 2021, which now should be listed as final, we will receive our greater amberjack assessment, if we haven't already received it in 2020, and we'll receive the gag operational assessment, and the scamp research track should wrap up, and we'll begin a research track for red snapper, and the operational assessment of scamp, which will give us the management advice for scamp and yellowmouth grouper. Then we have requested an operational assessment for gray snapper, and then FWC will begin and complete a mutton snapper benchmark assessment.

Dr. Simmons went through some of the things that we requested for 2022 and 2023 with you guys already, and so are there any questions at this point? Just as a reminder, 2021 is considered final at this point, and it's been the council's goal to try to lock the schedule two years out, to try and ensure that we get the things that we're asking for, because, any time we make changes, especially within two years, it costs something, and so we end up getting less.

CHAIRMAN FRAZER: Any questions on the schedule? Seeing none, Dr. Simmons.

EXECUTIVE DIRECTOR SIMMONS: Thank you, Mr. Chair. I don't want to steal Dr. Barbieri's thunder, but the SSC did briefly look at this, and they did just suggest that the Spanish mackerel assessment and yellowedge grouper assessment were pretty old,

ten years old, and so that's why you see them on the schedule. That was the recommendation from the Science Center, and the SSC agreed.

CHAIRMAN FRAZER: Okay, and so, Luiz, I think we're going to keep you from coming up. You're good, right? All right. Is there any other business to come before this committee? Seeing none, we will conclude the SEDAR Committee.

(Whereupon, the meeting adjourned on October 23, 2019.)

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