

GULF OF MEXICO FISHERY MANAGEMENT COUNCIL
 SUSTAINABLE FISHERIES COMMITTEE

Opal Key Resort & Marina and Virtual Key West, Florida

June 24, 2021

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2 Peter Hood.....NMFS
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4 Kelly Lucas.....MS
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7

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1 The Sustainable Fisheries Committee of the Gulf of Mexico
2 Fishery Management Council convened on Thursday morning, June
3 24, 2021, and was called to order by Chairman Dale Diaz.

4
5 **ADOPTION OF AGENDA**
6 **APPROVAL OF MINUTES**
7 **ACTION GUIDE AND NEXT STEPS**
8

9 **CHAIRMAN DALE DIAZ:** I would like to call the Sustainable
10 Fisheries Committee to order. The members of the committee are
11 myself, Dr. Stunz, Mr. Schieble, Mr. Anson, Ms. Bosarge, Mr.
12 Donaldson, Ms. Guyas, Mr. Riechers, Mr. Strelcheck, Mr.
13 Swindell, and Mr. Williamson.

14
15 Before we get started, I want to take just a minute to recognize
16 that we have a former council member in the audience, Dr. Kelly
17 Lucas. It's nice to have you back with us, Dr. Lucas. She's
18 going to be presenting later on in the committee.

19
20 The first order of business is the Adoption of the Agenda. Are
21 there any additions to the agenda? Seeing none, is there any
22 opposition to adopting the agenda? Seeing none, the agenda is
23 adopted.

24
25 The next order of business is the Approval of the January 2021
26 Minutes. Are there any corrections to the minutes? Seeing
27 none, is there any objection to adopting the minutes? The
28 minutes are adopted. Next up is the Action Guide and Next
29 Steps, and Dr. Diagne is going to take us through that one-by-
30 one, as we get to each of the agenda items. Dr. Diagne.

31
32 **SUMMARY REPORT FROM THE JOINT COUNCIL SECTION 102 WORKGROUP**
33

34 **DR. ASSANE DIAGNE:** Good morning, Mr. Diaz. We can go ahead and
35 get started. Good morning, everyone. The first agenda item is
36 a Summary Report of the Joint Council Section 102 Workgroup, and
37 Mr. Rindone, Ryan Rindone, is going to lead the discussion, and
38 he will essentially summarize the Joint Council Section 102
39 Workgroup that took place on June 3, and it was a webinar. I am
40 going to stop here and turn it over to Mr. Rindone. Thank you.

41
42 **CHAIRMAN DIAZ:** Thank you, Dr. Diagne. Before Mr. Rindone takes
43 over, I do want to mention that we're fortunate to have Mr.
44 Chester Brewer with us here. Mr. Brewer has been participating
45 in this Joint Council Section 102 Workgroup for the South
46 Atlantic, and I appreciate it, and we're fortunate to have you
47 here, Mr. Brewer.

1 **MR. CHESTER BREWER:** Thank you, Dale.

2
3 **MR. RYAN RINDONE:** Thank you, Mr. Chair. The Section 102
4 Workgroup is working on the component of the Modernizing
5 Recreational Fisheries Management Act of 2018 that addresses
6 alternative management strategies for recreational fisheries.
7 This is the third time that the group has met via webinar, and
8 we met on June 3, for just a couple of hours, to try to get our
9 bearings on our next steps.

10
11 The first thing of business that was discussed was the NMFS
12 allocation and use of about three-and-a-half million dollars
13 that was budgeted for addressing the Modern Fish Act, and Dr.
14 Cody went through where those funds came from and how they had
15 been directed.

16
17 Then the second item was discussing flexibility under the
18 Magnuson Act for alternative management approaches, and Mr. Russ
19 Dunn from NMFS went through and answered a whole bunch of
20 questions from the committee about the sorts of things that the
21 committee could explore, and we had actually identified that
22 there were several of them that the councils were already doing,
23 things like setting ACLs over multiyear periods. There are
24 several of the committee members here, and so, if they would
25 like to speak to any of this in particular, I would encourage
26 them to do so.

27
28 Lastly, we talked about recommendations to the councils on
29 alternative management approaches, and the committee members
30 thought that it would be best to try to figure out the things
31 that they were already doing, versus the things that still had
32 some potential, and they also agreed that they could probably
33 make some more headway on this if they could meet in-person at
34 their next meeting, which we'll try and plan for some time later
35 this year, and we can probably do it in Mr. Brewer's office, and
36 I'm sure he won't mind.

37
38 We'll get the workgroup together again, and staff will help
39 create a list of all the things that the councils are doing that
40 are in line with things that are viewed by the Act as being
41 alternative management approaches, and, also, some things that
42 have been talked about during the workgroup's meetings that may
43 be worth exploring. Mr. Chair.

44
45 **CHAIRMAN DIAZ:** Any questions for Mr. Rindone about the
46 workgroup activities? Seeing none, I did notice that step-downs
47 was one of the things that you all discussed, Mr. Rindone, and
48 we did talk a little bit about step-downs yesterday, as

1 something to potentially consider for red grouper, and so these
2 things come up from time to time, and so we appreciate your
3 group's work, and we hope that you continue to work and keep us
4 informed as we go forward.

5
6 Seeing no questions for Mr. Rindone, we're going to move on to
7 the next item. Dr. Diagne, will you talk to us about the SSC
8 Recommendations on the Acceptable Biological Catch, and that is
9 going to be Tab E, Number 5.

10
11 **SSC RECOMMENDATIONS ON ACCEPTABLE BIOLOGICAL CATCH (ABC) CONTROL**
12 **RULE**
13

14 **DR. DIAGNE:** Yes, Mr. Chair. For this agenda item, Dr. Lorenzen
15 will summarize the preliminary discussions in exploring the
16 council's ABC Control Rule, the SSC discussion. Without saying
17 too much more, we will just turn it to the Acting Chair of the
18 SSC, Dr. Lorenzen.

19
20 **CHAIRMAN DIAZ:** Dr. Lorenzen, if you would.

21
22 **DR. KAI LORENZEN:** Thank you. We were discussing, or started
23 discussing, a revision of the ABC Control Rule. The current
24 control rule has been in place for over a decade, and we've made
25 various attempts, over the years, to revise the ABC Control
26 Rule, and so we're doing that again, with the help of the
27 Science Center.

28
29 As background, obviously, the ABC Control Rule is used to create
30 a buffer between OFL and ABC, to reduce the risk of overfishing
31 in light of scientific uncertainty, and it requires
32 characterization of scientific uncertainty, which is basically
33 an SSC issue, and it requires the definition of the risk policy,
34 or risk tolerance, which is a management issue, and therefore a
35 council prerogative. The ABC Control Rule is proposed by the
36 SSC, but adopted by the council, in a fishery management plan.

37
38 The aims of the revisions that we're looking to undertake are
39 threefold. One is to better characterize scientific
40 uncertainty, and the background to that is that most of our
41 assessments underestimate scientific uncertainty, and,
42 therefore, the true risk of overfishing, at a given ABC, and the
43 reason that they do that is that we often have to fix certain
44 parameters and assume them to be known without error, and we
45 also have to cap the variance in certain data series and all
46 that, to allow the models to converge and give us a sensible
47 answer, but the downstream effect of that is those models then
48 tell us the uncertainty is lower than it is.

1
2 Secondly, we want to clearly separate the characterization of
3 scientific uncertainty from the risk policy. At the moment,
4 what we do is, if we feel that the scientific uncertainty in an
5 assessment is not well characterized, we effectively change the
6 risk policy, and so we lower the P^* to account for the fact that
7 we think that the uncertainty is not really well characterized,
8 and so we're kind of mixing up two somewhat separate things, and
9 so what we are trying to do here is to separate that and have
10 one risk policy and then one characterization of uncertainty,
11 and, if we think the uncertainty is not well characterized, we
12 have to improve that characterization of the uncertainty, rather
13 than change the results.

14
15 Finally, we are considering making the buffer dependent on stock
16 abundance, and the idea there is that, presumably, it's good to
17 have a bigger buffer when the stock abundance is already low,
18 and so, if we are in the territory where we're in an overfished
19 state, or approaching that, then probably we should be more
20 precautionary than when the abundance is high, and so those are
21 the objectives.

22
23 I want to talk about these two issues, the characterization of
24 uncertainty and making the buffer dependent on stock size,
25 separately, and so I will start with the characterization of
26 uncertainty.

27
28 Basically, what we get out of our stock assessments, and,
29 basically, we're talking, both today, here, and in the SSC at
30 the moment, mostly about our Tier 1 control rule, and so we're
31 looking at assessments, age-structured assessments, or data-
32 rich, where we get an estimate of the probability density
33 function of the overfishing limit out of the model, and so this
34 is an example.

35
36 We get the OFL, which is the catch that would be taken at the
37 current abundance using the maximum fishing mortality threshold,
38 or the F at MSY, or its proxy, and we get a distribution for
39 that that characterizes the uncertainty. Now, we know that,
40 typically, uncertainty is underestimated, and so the true
41 uncertainty would look more like this, but we don't know what
42 the true uncertainty is. Otherwise, we would just use that.

43
44 How do we get at the true uncertainty? One way of doing that is
45 to look at the way in which our estimate of abundance changes
46 with successive assessments, and so say we did an assessment in
47 2010, and we had a biomass estimate at the end of that period
48 for 2010, and then we do another assessment in 2013, and we look

1 at how has our estimate of the biomass in 2010 changed with the
2 new assessment, and then we do another assessment in 2016, and
3 we do the same again, and so, because we're looking at how our
4 estimates change as we add more information and do new
5 assessments, that gives us a reasonable idea of how great the
6 uncertainty really is.

7
8 The approach that the Science Center, and to, an extent, so far
9 the SSC, has proposed is to base our estimate of true
10 uncertainty on a meta-analysis of stock assessments that was
11 done by a team on the west coast who goes by the Ralston method.

12
13 That produces -- Based on this meta-analysis of many stock
14 assessments, it produces a probability density function and
15 estimate of uncertainty that we believe is fairly representative
16 of what we should find in a typical stock assessment done in the
17 same way as the assessments that are used to do that meta-
18 analysis, and so part of the proposal for the revision that came
19 from the Science Center is to adopt that Ralston method and to
20 have a default sort of minimum uncertainty estimate that is
21 based on a meta-analysis.

22
23 Now, that would be modified in the light of the assessments that
24 we have, and so Ralston did that for west coast groundfish, and
25 the Science Center would essentially eventually redo this
26 analysis for the stock that we're looking at in our region, and
27 the result might be slightly different. Generally speaking, our
28 data are less good, probably, than what they're using for
29 groundfish on the west coast, and so it will be a little more
30 uncertain than what we're getting out of the Ralston paper, but
31 the idea is to adopt this methodology. I want to look at what -

32 -

33
34 **CHAIRMAN DIAZ:** Dr. Lorenzen, do you mind taking a question now,
35 or would you rather wait until the end?

36
37 **DR. LORENZEN:** Absolutely.

38
39 **MS. LEANN BOSARGE:** That meta-analysis, we would do that by
40 species? Is that how that plays out? Like you would do a meta-
41 analysis for gray trigger and all the assessments in the past
42 for gray trigger, and work on that PDF? Do you do it by
43 species?

44
45 **DR. LORENZEN:** Initially, yes, you do it for each stock, but
46 then you also combine that across stocks. Otherwise, you would
47 end up with like three values for gray triggerfish, and that
48 wouldn't give you a very good estimate, and so you also have to

1 integrate that across stocks, but one would do it for say our
2 data-rich stocks, and it may be for the reef fish stocks
3 separately, and so those are, I think, decisions that have to be
4 made in the analysis.

5
6 **CHAIRMAN DIAZ:** Mr. Anson.

7
8 **MR. KEVIN ANSON:** Thank you for taking questions as you go
9 through. You made a comment that the Gulf stocks would be less
10 uncertain than the groundfish stocks out west, and is that
11 because we have multiple sectors, or user groups, or is it in
12 the data, or where is the uncertainty coming from?

13
14 **DR. LORENZEN:** It's more uncertain, and I think it's a little
15 bit all of the above, and we have very large recreational
16 components that are less well estimated, but I think, generally,
17 we deal with a wider range of stocks and less good data, in a
18 lot of them, but, still, even if we use the west coast estimate,
19 it would suggest that the uncertainties, on average, are much
20 larger than we're getting out of the assessments, and so that
21 would already push us in the right direction, in terms of
22 characterizing the uncertainty.

23
24 I wanted to briefly talk about the implications of that, and so
25 what you see here is the probability of overfishing, which is
26 basically the cumulative probability distribution, and, at the
27 OFL, the probability of overfishing, by definition, is 50
28 percent, and what we're trying to do with the ABC Control Rule
29 is to reduce the catch limit in the light of scientific
30 uncertainty, so that we have a lower probability of overfishing.

31
32 Then I will focus in on that central part of this graph, and so
33 you have the red-dotted line is what we get out of the
34 assessment, and then you have the Ralston estimate, and you have
35 the true uncertainty that we don't actually know, but we expect
36 to be more closer to the Ralston method than to what we're
37 getting out of the assessment directly.

38
39 If we are applying our current control rule, we go into that
40 control rule worksheet, and say we determine a P^* of 0.01, and
41 then we go to the cumulative distribution here and intersect
42 that with the distribution curve that comes out of the
43 assessment, and then, where that drops down on the X-axis, that
44 is our ABC, and so there we go. That would be our ABC
45 determined using the uncertainty estimate that comes out of the
46 assessment.

47
48 You can see that, if that is the case, we actually are

1 underestimating the true probability of overfishing at this
2 point, because that's more represented by the other two curves
3 there, and so you can see that, as we switch from using the
4 uncertainty estimate that comes directly out of the assessment
5 to something that is more realistic, like Ralston, it tells us
6 that the true probability of overfishing at this ABC is a fair
7 bit higher. In this case, it's about 47 percent.

8
9 The de facto risk of overfishing is higher than we think, in
10 this case about 47 percent, and so now we can do two things. We
11 can accept that higher probability of overfishing as what we are
12 actually doing, or we can say, no, we want to stick with our 41
13 percent, but the consequence of that is we'll have to go a tad
14 bit to the left, and so we'll have to create a bigger buffer,
15 and so this is one of the things that we did want to bring to
16 the council's attention, that, as we go through this revision,
17 we will have to have a new look at the risk policy and that we
18 apply basically the current risk policy to those more realistic
19 estimates of uncertainty that will result in bigger buffers.

20
21 There was SSC discussion about the Ralston method and the
22 alternatives, and, basically, the SSC was interested in using
23 the Ralston method, and so, basically, defining a minimum
24 uncertainty derived from that meta-analysis of stock
25 assessments, and there were also some on the SSC who wanted to
26 further explore other conceptually-different approaches for
27 creating a buffer, and the argument there was mostly we have
28 continued uncertainty about how big the actual uncertainty
29 really is, and so some SSC members felt that it was better to
30 essentially pick a buffer, rather than arrive at the buffer
31 through these probabilistic arguments.

32
33 The two are really just different ways of looking at the same
34 problem, in a sense, and so, if you're doing what we just
35 described, it has a basis in probability and risk, but it
36 results in a buffer that will be applied, and so the alternative
37 approaches are starting with the buffer.

38
39 An example that you may be familiar with is the idea of 75
40 percent of the F at MSY that we sometimes use and sometimes
41 describe as a sort of rough estimate of OY, and so, basically,
42 so far, the SSC has not made a decision, and we have asked the
43 Science Center to keep both of those ideas of the Ralston
44 methods and others on the table.

45
46 The second thing that I wanted to talk about is that change in
47 the buffer with stock size, and so this is what we refer to as a
48 harvest control rule in fisheries. The background to that is

1 that, traditionally, typically, the minimum stock size
2 threshold, and so from where we declare a stock to be
3 overfished, was at the BMSY minus one minus M, or times one
4 minus M, and so, basically, it was set below the BMSY by the
5 unit of -- One unit of fishing mortality in that stock.

6
7 That resulted in an overfishing threshold relatively close to
8 the BMSY, and so, basically, we would be using a maximum fishing
9 mortality threshold as the F that is used to determine OFL up
10 until the minimum stock size threshold is reached, and then,
11 below that, the stock is overfished, and it would require a
12 rebuilding plan. In that rebuilding plan, we would set an F
13 rebuild.

14
15 The concern is that the council has since changed the minimum
16 stock size threshold for many of our stocks to a lower level, to
17 not 0.5 times BMSY, which means that, basically, you can be --
18 You can get quite far into a depleted state before you
19 technically declare the stock to be overfished, and, in
20 conventional fisheries parlance, we would pretty much consider a
21 stock to be overfished by the time the biomass is below BMSY,
22 but the technical definition here of overfishing only makes us
23 define a stock as overfished once it's very, very much below
24 BMSY.

25
26 The problem with that -- Well, the benefit is that you can keep
27 fishing at the MFMT well into that sort of state of a relatively
28 depleted stock, and so, in the short term, that's good, but, in
29 the long term, once you get into the overfished status, you are
30 quite far away from where you want to be, and so you have a long
31 and arduous rebuilding ahead of you.

32
33 One of the ideas here is to actually change the harvest control
34 rule and to start ramping the target, or limit fishing mortality
35 down before we get to that MSST, and so it's something like
36 this, where, actually, you are starting to reduce the fishing
37 mortality that you use to set the ABC, once the stock is below
38 BMSY, and so you don't have this very sudden control that kicks
39 in only once you're at half BMSY, but you start ramping that
40 down earlier, and you could also then, towards the low end here,
41 have a threshold where basically you stop fishing altogether,
42 and so you are setting the fishing mortality to zero.

43
44 Basically, the advantage of this is that it should give you
45 faster return towards BMSY. Even the current rule will
46 eventually return you to BMSY, and it's constant, but it will
47 return you there, but it may take a long time, and so what this
48 would do is it would speed that up, but, of course, the short-

1 term cost is that you have a bigger buffer and a lower fishing
2 mortality and a lower ABC.

3

4 **CHAIRMAN DIAZ:** Mr. Strelcheck.

5

6 **MR. ANDY STRELCHECK:** Thanks, Kai. Maybe I am missing
7 something, and so the Magnuson Act requires us to end
8 overfishing immediately, and we do, obviously, have situations
9 where the biomass would fall below BMSY, and get closer to MSST,
10 and I appreciate that in not all circumstances that might be
11 because of overfishing, but it seems like we are, in practice,
12 implementing lower fishing mortality rates that are different
13 from kind of how it's being shown with kind of the MFMT level
14 being across-the-board from 0.5 to one, and so am I missing
15 something?

16

17 **DR. LORENZEN:** No, and we are implementing the MFMT there, and
18 so just the F at MSY, or its proxy, but that will result in --
19 Like, when you apply that to the lower stock level, it will
20 result in lower catches, and it will result in the stock
21 returning towards BMSY.

22

23 Also, the overfishing definition, of course, is based on the
24 maximum fishing mortality threshold, that we're not exceeding in
25 any case here, whereas it could be overfished, but it wouldn't
26 be undergoing overfishing, if that makes sense. I think, Clay,
27 did you want to --

28

29 **CHAIRMAN DIAZ:** Dr. Porch.

30

31 **DR. CLAY PORCH:** Thank you. The exception to that is when we
32 have a rebuilding plan in place, and then you're using F
33 rebuild, which is typically less than MFMT, and so one of the
34 questions that has come up is could this replace the need to
35 calculate a rebuilding plan every time, and I think we would
36 have to do some research to see that it actually demonstrates,
37 if we implemented something like this, does this obviate the
38 need to go the extra step to calculate F rebuild and all that,
39 and we haven't done that work yet. It's something we need to
40 look at, and there's also the legal question of whether it would
41 replace it, because, in some -- Although other councils do this,
42 in some sense, the concern is, is this just sort of an extra
43 step that doesn't really do anything if you have to implement F
44 rebuild anyway.

45

46 There is both a legal question and a practical question of
47 whether this would achieve the same thing as calculating F
48 rebuild in setting up a rebuilding plan, and so would this get

1 us out of having to designate rebuilding plans.
2
3 **CHAIRMAN DIAZ:** You can proceed, Dr. Lorenzen.
4
5 **DR. LORENZEN:** I think we have a few more.
6
7 **CHAIRMAN DIAZ:** Sorry. Go ahead, Mr. Strelcheck.
8
9 **MR. STRELCHECK:** Thanks. I guess a follow-up, and I would
10 certainly be interested in the SSC's input with regard to
11 setting MSST at 50 percent of BMSY, versus some other level, and
12 I know, for a number of stocks, we've set it lower, because we
13 wanted to avoid the bouncing around of uncertainty in the
14 assessment, in kind of triggering an overfished condition, when,
15 in reality, the stock is just kind of naturally fluctuating
16 potentially near BMSY.
17
18 **DR. LORENZEN:** To that point, I think there are actually
19 analyses that have been done that suggest it's very rare that
20 you will end up at that low level, just by natural fluctuation,
21 but, from that perspective, I would say, from the SSC
22 perspective, that's a bit low.
23
24 **CHAIRMAN DIAZ:** You can proceed, Dr. Lorenzen.
25
26 **DR. LORENZEN:** Thank you. Okay. This is all in terms of those
27 graphs that I wanted to show, and, as I said, we're discussing
28 this, and we're already discussing it in this forum too, and so
29 this is not -- We are nowhere near a decision on this.
30
31 What we have done is -- Well, we had a discussion about this,
32 and, overall, the SSC is interested in exploring a range of
33 options for this harvest control rule, and, on the whole, the
34 SSC was strongly in favor of simplicity and robustness, and so
35 not too many hinge points or opportunities to tweak that rule,
36 so that we have a really clear rule on the books that we would
37 use, so that we don't then, every time we want to use it, we
38 have to get into a discussion and do we have another hinge here,
39 and do we do something there.
40
41 This is what we have basically given back to the Science Center,
42 and, as I said, this is a cooperative endeavor, and so they will
43 come back to us with more information and exploration of these
44 things.
45
46 We also made specific requests to the Science Center to help us
47 evaluate the performance of alternative ABC control rules, and
48 so we are looking for information on the past performance of our

1 existing rule, and so, basically, would we have done better with
2 a different rule, or how well did we do, in terms of avoiding
3 getting into the overfished state, past performance of
4 deviations from the existing rule, and then we wanted to look at
5 simulation performance of potential alternatives and
6 implications of alternative rules for ABCs of the Gulf stocks,
7 and I know that is something that the council will be
8 particularly interested in.

9
10 I did explain that there would be implications for larger
11 buffers, if we apply the current risk policy and a better
12 characterization of uncertainty, and so clearly that will
13 generate some interest.

14
15 We also asked for information that should help the council to
16 consider its risk policy, because, as I said initially, part of
17 this is science, and part of this is the council having to
18 decide what risk policy it's comfortable with, and so,
19 eventually, after probably several iterations of this in the
20 SSC, we will take it to the council, and we will want inputs as
21 to what risk policy you find acceptable, and so the sort of
22 information that we want to bring, and a lot of this will
23 ultimately come from the Science Center, is to look at risk of
24 overfishing versus fishing opportunities foregone.

25
26 Then costs of overharvesting to stocks and stakeholders,
27 considerations of phase-in, of changes to catch limits, and
28 social considerations for management buy-in that would come from
29 implementing particular risk policies, because some of those are
30 harder, in the short term, than others, and that's where we are,
31 and so are happy to get feedback, and we don't need any
32 decisions or anything, and this is really just for information
33 only. Thank you.

34
35 **CHAIRMAN DIAZ:** Thank you, Dr. Lorenzen. Are there questions
36 and feedback for Dr. Lorenzen? Mr. Anson.

37
38 **MR. ANSON:** Thank you, Mr. Chair. Thank you, Dr. Lorenzen, for
39 your time and the presentation today. Going back to the first
40 section of your presentation, when you were discussing the
41 characterization of uncertainty, you mentioned that the analysis
42 that the Ralston method -- That it would require or utilize some
43 of the previous assessment OFLs and PDFs and such.

44
45 I'm just wondering, does the -- Does the impacts, such as
46 changes in recreational data streams, does that have an impact
47 on those prior assessments? Would those have to be rerun, or,
48 basically, are you starting from scratch with no information,

1 since those were calculated using the old data stream, and did
2 you all discuss that?

3
4 **DR. LORENZEN:** We have not, and this is an interesting question,
5 I think. If you're looking at sort of a more narrow sense of
6 uncertainty, you would want to do this on assessments that are
7 done on the same data streams, but, of course, the reality is
8 also that we have had changes in the data streams, and so one
9 could argue that that actually implies some greater uncertainty
10 here, but I would let Dr. Porch comment on that.

11
12 **CHAIRMAN DIAZ:** Dr. Porch.

13
14 **DR. PORCH:** All right. Thank you. I wanted to clarify a couple
15 of things, at least as the proposal came from the Science
16 Center. Initially, we would actually use the Ralston analysis
17 straight up, because they did an extensive analysis, and,
18 granted, it was west coast assessments, but, as Dr. Lorenzen
19 said, those assessments, in general, are probably more certain
20 than ours are, just simply because they have fewer datasets and
21 longer time series of information, and so it makes sense that
22 those assessments would be a little more certain, but they're
23 looking across the entire time stream of their assessment
24 history, and so it implicitly includes things like different
25 people in the room making different decisions, because the true
26 uncertainty in an assessment is not just how well the assessment
27 model is fitting the data that you put in front of it, but it's
28 which data you're incorporating, other decisions that are made,
29 like natural mortality.

30
31 When you look back across the whole suite of assessments, you're
32 getting a better sense of that overall uncertainty, but, as Dr.
33 Lorenzen said, it's not perfect, but it's probably a better
34 characterization of uncertainty than what we've been giving the
35 SSC recently, and so that's what we would start with.

36
37 Now, one project, and it would be a massive project, is to go
38 back through all the historical documents in the Southeast
39 Region and redo the Ralston analysis, conditioned on our own
40 stock assessments, and that's something we've been talking about
41 doing for years, and we haven't done it yet, just simply because
42 we're swamped with other things, for one just completing
43 assessments, but that would be the next step, is to try and do
44 it for the Southeast, and we would start though with the number
45 that's already been published, and so just to make that clear.

46
47 One other thing I wanted to raise, when I had the mic, is the
48 beauty of that approach is it does sort of allow this separation

1 of church and state, in the sense that it separates the roles,
2 as Dr. Lorenzen said, where the council specifies the
3 probability of overfishing that they are comfortable with for
4 this particular fishery, given all the things that are at risk,
5 and I will come back to that in a second, whereas the SSC
6 focuses on how uncertain the assessment is, which is a
7 scientific consideration.

8
9 Right now, it's I think even a little grayer than you so
10 eloquently put it, because the ABC Control Rule, as it stands,
11 allows P^* , the probability of overfishing, to be adjusted
12 commensurate with the level of uncertainty the SSC feels is in
13 the assessment and things they didn't consider, and so it
14 actually, depending on it's interpreted, you could end up having
15 a very, very low P^* , because you feel like the assessment didn't
16 characterize the uncertainty very well, and so it does get kind
17 of muddy, and so I like this separation of roles.

18
19 The missing piece, however, is that we typically talk about the
20 probability of overfishing apart from the notion of risk, but
21 risk actually means that it costs you something, right, and we
22 haven't done a good job of giving you an analysis that -- What
23 is the risk? What are you losing if you're overfishing?

24
25 If you think of it as if you were sitting at the blackjack
26 table, and you had a 40 percent probability of winning, meaning
27 a 60 percent probability of losing, but, if I'm betting a dollar
28 at a time, my risk is low, and I can afford to lose it, and it
29 doesn't cost me much. On my salary, if I'm betting a thousand
30 dollars at a time, my risk is a lot higher, and I am going to
31 change my behavior, and I am going to be more risk-averse if the
32 stakes are high, and that is the part that we're not always
33 explicitly considering here.

34
35 **DR. LORENZEN:** That's the sort of information that also we're
36 looking to bring to the table when we revisit the risk policy.

37
38 **CHAIRMAN DIAZ:** Mr. Anson.

39
40 **MR. ANSON:** Dr. Porch, that's interesting, the way you
41 summarized that, and it kind of ties in with the last slide that
42 Dr. Lorenzen had in his presentation relative to some of the
43 considerations going forward that the council needs to consider,
44 and so, as these deliberations continue amongst the SSC, and the
45 Science Center can facilitate some of their needs and wishes,
46 that goes into some of the social and some of the costs.

47
48 What is the risk of overfishing versus fishing opportunities

1 foregone, and so we've discussed, in the past here, about new
2 ways to reduce uncertainty, i.e., for the recreational data
3 stream, and what systems could be put in place if we had a
4 better idea as to maybe what the fruit is, the carrot is, for
5 folks to go to a better reporting system, and that might be very
6 helpful in some of those discussions and as the public gets
7 engaged and we have those discussions. Thank you.

8
9 **CHAIRMAN DIAZ:** All right. I am not seeing any more questions.
10 Thank you, Dr. Lorenzen. We appreciate your information, and
11 please keep us informed as this progresses.

12
13 **DR. LORENZEN:** Thank you.

14
15 **CHAIRMAN DIAZ:** Next up, we have Manna Farms, Gulf of Mexico
16 Update. Dr. Diagne, can you walk us through the action guide
17 and next steps for that agenda item?

18
19 **MANNA FISH FARMS, GULF OF MEXICO UPDATE**

20
21 **DR. DIAGNE:** Yes, Mr. Chair. For this agenda item, Dr. Kelly
22 Lucas will provide an update to the committee on the finfish
23 farm operations of Manna Fish Farms in the Gulf of Mexico. She
24 will cover a range of issues, including site requirements and
25 screening, as well as the production plan, and so we will turn
26 it over to Dr. Lucas. Thank you.

27
28 **DR. KELLY LUCAS:** There is one slide update in here, and I
29 believe they sent it out, but I will point out which slide it is
30 for you all, so that you all are aware of it, if you all have
31 already loaded the presentation.

32
33 Thank you, and so, in 2019, I appeared before the council to
34 discuss kind of the early operations of Manna Fish Farms Gulf of
35 Mexico, and I'm happy to be back to kind of update you on where
36 we are and some of the potential changes that have occurred
37 since 2019.

38
39 With that, I'm Kelly Lucas, and I'm the agent, and I work for
40 the University of Southern Mississippi. Manna Fish Farms is the
41 applicant, will be the applicant, on the permit, and Donna
42 Lanzetta, with Manna Fish Farms, is present today, and she flew
43 in from New York, and so, if we have questions, she's also
44 available to answer those questions as well. For USM, I serve
45 as the Associate Vice President for Research as well as the
46 Director of the Aquaculture Center.

47
48 This is just a basic overview here of what we'll walk through

1 today, so you have that available for you. As I mentioned,
2 Donna is here, and Mike Meeker, our COO, is also the inventor of
3 the Storm Safe Submersible Cage that we will be discussing
4 later. As you can see, if you look at all of the different
5 logos around the slide, besides Manna and Storm Safe, you have
6 USM, and you have Sea Grant for Mississippi-Alabama, and you
7 have Sea Grant Law, the University of Mississippi, and you have
8 New Hampshire and New Hampshire Sea Grant. NCCOS has been
9 extremely helpful in supplying the team with data and
10 information related to the spatial planning analysis, as well as
11 funding from the Gulf States Marine Fisheries Commission.

12
13 A little bit about Manna Fish Farms. Any time you as a
14 university, or whoever, go out to partner, you want to make sure
15 that the people that you're partnering with share your goals, so
16 that you all can easily work together and move forward, and
17 Donna certainly is committed to sustainability and transparency
18 and best aquaculture practices, and so she wants to not only
19 work with us and engage with us on research and making
20 aquaculture better, but she wants to make sure that she's
21 considering this with others, so that she can continue
22 sustainability practices, help others get in business as well.

23
24 She is working on permits not only in the Gulf of Mexico, but in
25 the Northeast, off of eastern Long Island, and so, in addition
26 to her operations with Manna Fish Farms, she also has a
27 foundation, which will work to educate people on sustainable
28 fisheries, and that's both wild capture and aquaculture, and
29 there's just a little link there, for those who want to learn
30 more about Manna.

31
32 In terms of her partnerships, like I said, she has reached out
33 across a whole breadth of people, and so working with Woods
34 Hole, doing some other work with MIT, Stony Hook Lab in New
35 York, and, in addition to that, she has recently reached out
36 with a partnership with IBM, and she has launched the Manna
37 blockchain, and she has recently opened a restaurant, and so I
38 was happy that she can join us, and she's in the middle of
39 opening this restaurant, and, across the way, she has her Manna
40 Foundation, where she will work to educate people on sustainable
41 aquaculture and fisheries.

42
43 Here is how we started with the Manna Fish Farm project. We
44 originally started with just a concept of where do you want to
45 be, what is the area you're looking for, and so, when we filled
46 out the information for NCCOS, we said we want to be anywhere
47 from the Mississippi-Louisiana line all the way through the
48 Florida Panhandle, and we provided them with the information

1 between the fifty to fifty-five-meter depth contour, and that
2 was kind of a critical range for the cages, and so we were
3 looking there, and we provided information about some of the
4 biological characteristics.

5
6 What we really wanted them to do was to look at a couple of
7 ports that we had in mind and try to minimize the distance from
8 the farm to the port and try to reduce as many user conflicts as
9 possible in siting them, and still get all of the biological
10 conditions, and so a lot of information going on there.

11
12 In addition to that, we did supply a list of species, and these
13 are the top-three species that you see there listed that we
14 think are ready to go. Red drum, we actually have red drum in
15 the tanks. The brood stock are in tanks already at the
16 Aquaculture Center in Mississippi. Then almaco jack, which Mote
17 Marine Lab has been working on, and Gulf striped bass, which
18 there are local Florida hatcheries that do Gulf striped bass,
19 and so those are the three species.

20
21 After supplying that information to NCCOS, they come back with
22 this map, and what you're seeing here is relative suitability of
23 habitat in the range we identified, and so the Mississippi-
24 Louisiana line through the Florida Panhandle, and, as you can
25 see the colors in the darker blue, those are sites that are more
26 suitable to the aquaculture farm.

27
28 This is just some of the data NCCOS considers, and so this list
29 is not exhaustive, but this is data that they consider when
30 they're looking at their siting model, plus others, and that's
31 just kind of a little blurb, on the right, that shows them how
32 the siting model works, and so, if there is something that is
33 present in that area, it would be less suitable, if there is a
34 pipeline that's running underneath, if there's an oil rig there,
35 if it's a navigation channel, if it's on top of an artificial
36 reef or other critical habitat.

37
38 You have probably seen this before, and this is just the basics,
39 and so, in this case, you see a submarine cable working through
40 this grid that was created, and so, obviously, very less
41 compatible, because you can't put your aquaculture farm on top
42 of this cable, and so that's just how the model works.

43
44 In this slide, this is what we're going to call our east cohort
45 of sites, and so, originally, when we started, we had a large
46 area, and so we had both a west cohort, which is kind of south
47 of Mississippi, and then the east cohort, and so there was five
48 additional sites over in the west cohort, and then here's the

1 east cohort of sites, and so these are the five sites that met
2 several of the parameters that we had, in terms of acreage, in
3 terms of all the things that we provide, and so, in this, you
4 can see up there that they just have some of the other factors
5 that are considered, but, clearly, you see that four of those
6 sites are getting pretty close to a navigation channel.

7
8 In this one, they added on the DOD areas, and so you can see we
9 do have four sites, and only one of them is kind of encroaching
10 maybe on some of the DOD-related areas, and Site E is clearly in
11 one of those areas, and so Site E was listed as our preferred
12 site, but certainly we recognized that we needed to ask the
13 question to the Department of Defense, and so NCCOS reached out
14 to the Department of Defense Clearinghouse, to discuss this with
15 them, and they did issue us a letter saying that it was okay to
16 do aquaculture in this area and that we would just need to
17 coordinate with them as we move forward, especially in terms of
18 what actually gets put on the form in terms of recording devices
19 and such. This is just those sites listed on the navigational
20 chart for you all, so that you all can see them.

21
22 As I mentioned previously, when we looked at the sites, the four
23 sites, A, B, C, and D, that were kind of close to the navigation
24 channel, you can see that there is some lines that are going
25 through some of those sites, and so some tracks of vessel
26 traffic. As you can see, over on Site E, there is no traffic,
27 and so certainly reducing some of those user conflicts that we
28 were concerned with being close to the navigation channel about.

29
30 On this map, you can also -- What we were trying to do is show
31 you the artificial reef areas, and so Site E is very close to
32 the Escambia County, Florida artificial reef area, and so that
33 was just to give you all some images on that.

34
35 This was shrimp trawl effort, and I want to point this out,
36 because this is 2004 to 2013, and, on the next slide, you'll see
37 a little bit more of an update, and so, again, trying to reduce
38 user conflicts, and we wanted to look at where these shrimp
39 trawls may be occurring, and all five of those sites are
40 minimal, if any, traffic.

41
42 This is the slide that was updated from your previous package to
43 now, and this is 2004 through 2019, and what you were looking
44 at, the red boxes that are there, those were -- I will explain
45 it in just a little bit more detail in just a moment, but those
46 were three of the potential farm footprints, and so we had
47 selected these kind of as a secondary farm footprint site, and
48 so those are the actual trawl efforts, and that's summed from

1 2004 to 2019.

2
3 Certainly we recognize that those who are participating in the
4 electronic logbooks and all that varies, but, in fifteen years,
5 we feel like it's very much not an area where we should see a
6 lot of conflict.

7
8 Originally, when we did the first bathymetric survey, this is
9 what we were looking at, and we had selected where we -- Our
10 ideal farm site, and, when we went and did the bathymetric
11 survey, there was this ridge, and you can see the ridge that
12 runs like right through the middle of that black box, which was
13 our farm site, or what we thought was going to be the farm site.

14
15 This ridge actually contains consolidated substrate, and the EPA
16 had requested that we be 1,000 meters away from any hard
17 substrate, and so this meant that we needed to kind of go back
18 to the drawing board and do another bathymetric survey and move
19 away from that drowned barrier island, is what it is, and so
20 this consolidated substrate that's on the bottom.

21
22 The EPA let us know this in July of 2019, and so what we had to
23 do was really start diving into the details of where can we be
24 and still be in the optimal depth for the cages, and so we went
25 through kind of a precision siting analysis to get there. The
26 other thing was the artificial reef that Escambia County
27 manages, and so EPA requested that we talk to Escambia County
28 about the offset that they wanted from the boundary of that
29 artificial reef, and they replied to us with 500 feet from the
30 boundary, and there is buffers on both their boundary and our
31 boundary, and so the distance would probably be a little greater
32 than that, but that was their request, and so we've honored
33 that.

34
35 In addition to that, as we were doing the -- We had to go out
36 and do a second bathymetric survey, and you had to contend with
37 -- Are you going to go to the north or south? Of course, you
38 get deeper moving to the south, and you get a little bit
39 shallower to the north.

40
41 At the same time, in the summer of 2019, NOAA was working on a
42 new Bryde's whale habitat map, and there is just some recent
43 developments, and I think you all have seen that, where it could
44 potentially be the Rice's whale, and we'll have to go through a
45 process, but we also wanted to move away from any known
46 sightings of the Bryde's whale, and so chose to go to the north
47 of the previous site.

48

1 You will see the box at the bottom, that doesn't have any of the
2 blue lines, is the previous survey, and so we moved to the north
3 and to the east to do the next survey, and we had kind of
4 precision-sited, based on what we knew, three potential farm
5 layouts. We do still need to be in depths closer to fifty
6 meters.

7
8 On this, this is some of the second bathymetric survey that was
9 completed. The actual multibeam was only done on those three
10 potential farm sites, since we were looking for the precision of
11 being able to lay out the anchors and all that, but the side
12 scan and everything needed for archeological and biological
13 information was completed, and so the image that you see on the
14 right-hand side is showing you that the majority of that is sand
15 substrate. The ridge is, of course, still present, and we
16 expected that to be the case.

17
18 These are the two images, side scan images, that were stitched
19 together, and so this was just to show you that that ridge does
20 continue, which is what we anticipated, where that consolidated
21 substrate is, and this was so that we can maintain that 1,000
22 meters from that hard substrate.

23
24 The Storm Safe submersible cage, this is just some information
25 on kind of how it's designed, and on the right-hand side are
26 some images of them actually deploying the cage and putting it
27 together onsite, and this is actually the layout of the farm
28 that we have selected.

29
30 Originally, when I presented to you all, we had eighteen cages,
31 and we have reduced that to twelve cages, and it fits into the
32 site really nicely. You will see that the cages are a little
33 bit more weighted, if you look towards the south and west of the
34 image, and that's because the deeper water is there, and, for
35 engineering analysis purposes, we really want to be in deeper
36 water. We can go a little bit shallower than fifty meters, and
37 you have to change a little bit of your engineering to do that,
38 but the fifty-meter depth is really so that, when we lower the
39 cage during a storm, you will have enough water under the cage
40 as well as on top of the cage, in order to maintain stability.

41
42 This image is just showing you, and I don't think it's exactly
43 to scale, but it was to show you kind of where the farm would
44 essentially be, area-wise.

45
46 Here is just some primary gear lists and deployment phases that
47 we have listed, and I will say this is draft, and the team is
48 kind of working to finalize that, and we have been in

1 discussions, and we have an engineering analysis, and we will
2 make sure that all of the components meet the engineering
3 analysis, and the engineering analysis also models for storms,
4 and they were able to use Hurricane Michael that went through as
5 part of their modeling information, so that we can make sure
6 that we maintain very tight lines and that the gear is very
7 structured and appropriate.

8
9 At the bottom, you kind of see the phases of deployments, in
10 trying to get the pens out, and, in addition to that, you will
11 see kind of the feed barge, and so, initially, when there's only
12 a couple of cages out there, we'll be going in and out of the
13 port with feed.

14
15 Over time, as you move to have more cages out there, it becomes
16 more economical, and a better fit, to have feed barges that are
17 in place, and those barges will be livable barges. Therefore,
18 somebody will be out there all the time, and what you would have
19 coming and going is you would be bringing the feed to load onto
20 the barge, as well as harvest and some other stuff, and so we're
21 still working on narrowing that down.

22
23 Here is kind of the production timeline. As I mentioned, we did
24 reduce the number of cages from eighteen to twelve, just because
25 it seemed possible for that area, and so we reduced the number
26 of production pounds, and so, originally, I think we had eight
27 million pounds, and we're half that now.

28
29 This is just some feed information for you, and, of course, feed
30 is making huge strides in feeds for aquaculture, but this is
31 what we have just listed, in terms of type, making sure we have
32 the slow-seeping pellets, 44 percent protein and 13 percent
33 lipid. We certainly recognize that feeds are making huge
34 advancements, and so we look forward to potential updates in
35 that.

36
37 We know we have three species listed, and so, of course, the
38 feed and all that varies by your species, but we did use a feed
39 conversion rate of 1.7 in all the calculations, and then this is
40 some basic information on how we intend to stock the cages, as
41 well as a daily feeding at max biomass, which is used for the
42 modeling that they do on the nutrient analysis on the cages out
43 there, and so that information has been supplied to the team
44 that will do that modeling.

45
46 For our next steps, we have not filed permits yet, and we are
47 working on all of our what we like to call best management
48 practices plan, but it's really like all the details of

1 everything that you will do, right, your operations, your
2 maintenance, how many times a vessel will be going back and
3 forth, what type of vessels, what kind of feed, how often, and
4 like all this information that goes into it.

5
6 What are you going to do for health and biosecurity, what are
7 your onshore operations going to look like, and what's the
8 harvest frequency, and all of that information will be contained
9 in these plans that will be submitted along with the permit
10 application.

11
12 In addition to that, some of the more critical plans include
13 environmental monitoring, that we will work on with the federal
14 agencies, as well as our emergency response plans that need to
15 be in detail for the Corps of Engineers, and quality assurance
16 plans that are part of your application package. With that, I
17 appreciate you all's attention, and I happy to update you, and
18 we'll take any questions.

19
20 **CHAIRMAN DIAZ:** Any questions or comments for Dr. Lucas? Ms.
21 Bosarge.

22
23 **MS. BOSARGE:** I just wanted to thank you. I really appreciate
24 you putting that slide in there with the shrimp trawl. I
25 appreciate that, and it does seem to be located in a spot that,
26 at least by the ELB data, shouldn't be too heavily trawled, and
27 so I do appreciate that. I did have one question, and, Kelly,
28 this is probably something I should already know, but, the fish
29 that you're going to put out there, they're sterile, and they
30 can't reproduce, and how do we ensure that? I know you all have
31 protocols, but I don't remember them.

32
33 **DR. LUCAS:** They're not sterile, but they are the first
34 generation. I believe, in the State of Florida, one of the new
35 requirements, and Martha may be able to speak to this, is to get
36 a, I guess, a release -- Almost like a stock enhancement
37 program, and so, if the red drum were to be released, you would
38 treat it almost like stock enhancement, because it's from the
39 first generation, and those red drum did come within the mile
40 limits around the cage, and we appreciate those states who
41 issued us permits for that.

42
43 **CHAIRMAN DIAZ:** Any other questions or comments for Dr. Lucas?
44 Mr. Strelcheck.

45
46 **MR. STRELCHECK:** No questions, but I just wanted to thank you,
47 Kelly, and your team. We have been collaborating with Kelly for
48 quite some time now, weekly meetings, or maybe even more

1 regularly, and I know we've made a lot of information requests
2 from you, and I just appreciate your responsiveness, and I know
3 we've run into some tough issues, but I continue to look forward
4 to working with you as this project progresses.
5

6 **DR. LUCAS:** Thank you, and I did want to say, just to Andy's
7 point, as part of our grant from Gulf States Marine Fisheries,
8 we recognize that this is probably one of the first commercial-
9 scale farms to operate in the Gulf of Mexico, and so, as part of
10 that grant, it's this commitment to working hand-in-hand with
11 the agency, so that we can share lessons learned, and we can be
12 as responsive as possible and try to figure out a path forward
13 that works for the agency as well as any applicant.
14

15 **CHAIRMAN DIAZ:** Mr. Anson.
16

17 **MR. ANSON:** Thank you, Mr. Chair, and thank you, Dr. Lucas, for
18 the presentation. I don't recall, but what are the
19 restrictions, as far as the public and the distance from the
20 cage or from the farm area? Is there a buffer, or can they go
21 up to the line that they identify here, or is there a buffer
22 beyond that line?
23

24 **DR. LUCAS:** Typically, and we've been talking to the Corps about
25 this, they don't have like a restriction, in terms of a buffer,
26 and, if you think of other structures that are out there, like
27 oil rigs and stuff, it's basically like don't tie up to the oil
28 rig, and so I think part of the discussion the agencies are
29 having is should there be some level of buffer.
30

31 Of course, it will be more -- As you can see in that image, you
32 have multiple buoys and information that is marked, and, in
33 addition to not tying up, it's making sure they don't get caught
34 on lines and stuff, but certainly these become fish aggregating
35 devices and stuff, and so they become good fishing spots, and so
36 it's how do we work with the community that will be fishing
37 around there. We certainly want them to be able to fish there,
38 but we want to make sure that they're safe and the cages are
39 safe as well.
40

41 **MR. ANSON:** Thank you.
42

43 **CHAIRMAN DIAZ:** Mr. Donaldson.
44

45 **MR. DAVE DONALDSON:** Thank you, Mr. Chairman. Again, like Andy,
46 not a question, but a comment. I just wanted to reiterate what
47 Andy said. We've been working with Kelly for a few years on
48 this project, as part of our regional pilot program that's run

1 through the commission, and we appreciate her flexibility in
2 dealing with some of the obstacles that have come her way, but
3 we're looking forward to the final outcome of it, and we
4 appreciate you working with us and continuing to work with us.

5

6 **DR. LUCAS:** Thank you.

7

8 **CHAIRMAN DIAZ:** Ms. Bosarge.

9

10 **MS. BOSARGE:** Just one more question. I see you have those
11 surface buoys listed on here, and I guess that's maybe kind of
12 what I'm seeing in the picture there, but are they going to be -
13 - Well, I'm thinking about navigation. Are these things going
14 to be lighted, so that you can see them at night?

15

16 I mean, when you think about oil platforms, you think about the
17 loud noise, and so there's a lot of different precautions that
18 they take to let people know that they're there, so they don't
19 run into them, and so what, besides just a buoy in the water,
20 what are we doing? Do you have any sounds or lights or
21 anything?

22

23 **DR. LUCAS:** We haven't listed any -- There will be lights, and
24 so this will be done in accordance with the Coast Guard, and so
25 you do have to fill out the Coast Guard information for all the
26 hazards to navigation, and so that will be part of it, and so,
27 yes, those will be lighted buoys. The number and how they want
28 to do it, we'll work with them to make sure that we get
29 everything adequate that they need.

30

31 **CHAIRMAN DIAZ:** Mr. Swindell.

32

33 **MR. ED SWINDELL:** What is the feed efficiency or assumption by
34 the stock? Do you have a percentage of how much feed you put in
35 versus how much feed is actually used by the stock of fish?

36

37 **DR. LUCAS:** You do, and that was the feed conversion rate, and
38 certainly some species are better than others, and you actually
39 feed to that, but you use cameras, and so you want to make sure
40 that you're not overfeeding, and so you have cameras that are
41 set on there, and you have feed that goes in, and so the feed
42 conversion rate we used here is like 1.7, and, I think, for red
43 drum, it's probably closer to 1.5, and so you're feeding them in
44 accordance with everything that you're watching.

45

46 As soon as they are no longer interested in eating, and you're
47 not putting food out just to put food out, because that would be
48 waste, and that would just be more nutrients in the water that

1 don't need to be there.

2

3 **CHAIRMAN DIAZ:** Go ahead, Mr. Swindell.

4

5 **MR. SWINDELL:** Do you know anything about -- What is the
6 typically movement of water through that system, or what
7 direction does it move?

8

9 **DR. LUCAS:** It moves to the south and west, as that current is
10 moving towards the west, and we do map that, and we put out an
11 acoustic doppler current profiler for several months, which
12 calculates the currents in that area, and so they use that in
13 the feed model, to look at where you will see any of the
14 effluent coming off.

15

16 **CHAIRMAN DIAZ:** Dr. Frazer.

17

18 **DR. TOM FRAZER:** Thanks, Kelly, for the presentation. I was
19 thinking about it, and, originally, when you guys were talking
20 about doing this, you had eighteen cages, and you kind of scaled
21 it back to twelve, and you had a production cycle that was over
22 five or six years, and I know the focus has been primarily on
23 almaco jack, but you had kind of redfish and Gulf striped bass,
24 and you had others too, and what I'm curious about is whether or
25 not you intend to like focus specifically on one species for the
26 next five or six years, or, after you get a permit, do you
27 intend to have like a polyculture of fish in there, and then,
28 finally, what are those others that you are considering?

29

30 **DR. LUCAS:** So a lot there. Red drum, of course, just because
31 of what is known on red drum and how often that is cultured and
32 the information, and it's very much a commercial-ready species,
33 and so we will start with red drum. The Gulf striped bass and
34 the almaco jack both have availability, and Donna has worked
35 with striped bass in the Northeast, and so that's very much a
36 familiar species for them, and so it would be a good potential
37 species, but we will start with red drum.

38

39 We will look to almaco jack, as the production of that increases
40 and becomes more readily available to move out, and I know that
41 Mote Marine Lab has been working on that, and then the Gulf
42 striped bass, of course, because it is already cultured, and we
43 do know about it.

44

45 Somebody recently sent me an article, and I haven't had time to
46 look into it, but there was some concern, kind of early on, that
47 maybe some of the warmer temperatures that you would see on the
48 site might not be great for Gulf striped bass or whatever, and

1 so you might want to try to culture those kind of in cooler
2 temperatures, but it's a new article, and so don't hold me to
3 that, and that new article just came out, and somebody sent it
4 to me, and I haven't read it, and so maybe it kind of changes
5 the game plan.

6
7 I think Donna and them, and she's here, and so she may have a
8 different plan, but the potential, of course, is there for
9 polyculture, but definitely start out and get good at something.

10
11 The other species that were on the list were ones that were
12 being cultured in the Gulf of Mexico and were being worked on by
13 a group that is kind of like all of the southeast aquaculture
14 centers, and they kind of provided a list of these species and
15 where they were in those species development, and they included
16 things like gray snapper was one of them, and tripletail was one
17 that our lab has worked on a fair amount that was listed.
18 Pompano was listed. Cobia, of course, was listed, but we think
19 it's, I guess, a little too cool in this area for cobia, and so
20 some of those traditional ones that are already done were listed
21 for those that were being worked on in the Southeast and that we
22 could talk to our colleagues about, and certainly look to them
23 for production.

24
25 **DR. FRAZER:** I appreciate that, and so I knew I threw a lot of
26 questions.

27
28 **CHAIRMAN DIAZ:** Ms. Boggs.

29
30 **MS. SUSAN BOGGS:** Thank you, Mr. Chair, and thank you, Dr.
31 Lucas. It's 265 acres, and is that what I am seeing here, the
32 area?

33
34 **DR. LUCAS:** I think it's a little bit smaller than that, but if
35 it says 265 on your slide, then you are correct.

36
37 **MS. BOGGS:** Okay. I just wanted to confirm that, and then I
38 know one of the questions, and we talked about this before, and
39 I heard from some of the charter fleet, was the disease in these
40 fish farms and how you would control for something like that.

41
42 **DR. LUCAS:** The best way to control disease is your biosecurity
43 plan. You want to make sure that -- There are a very limited
44 number of drugs that are available for aquaculture already, as
45 regulated, and you don't even want to get there, and so you want
46 to control any of the disease that could potentially occur
47 through very tight biosecurity measures, and that is everything
48 from before they leave the hatchery, all the different controls

1 you put in place, how your boat is cleaned, what gear people are
2 wearing, how they're handling everything.

3
4 Then it's making sure that you give the fish plenty of room in
5 the cage to move around, to reduce disease, and so, yes, that
6 will be part of that safety plan that gets submitted, and we
7 will have certified vets that will be part of the plan and
8 monitoring as we move forward, but mostly I think what we see
9 is, the tighter your biosecurity controls are, the less chance
10 you have for any disease.

11
12 **CHAIRMAN DIAZ:** Ms. Bosarge, and then we're going to wrap this
13 up.

14
15 **MS. BOSARGE:** If staff could go back to Slide 14, and, Kelly,
16 this isn't for you, but this is just kind of something to keep
17 in mind for the council, as we move forward with other things
18 that are coming up on the horizon, and so, if you look at the
19 rectangular boxes with the little lines going across it at an
20 angle, and I think you have those listed as fish havens, and so
21 like artificial reefs, and so we can't shrimp there, because
22 we'll tear our gear up.

23
24 Then, of course, you're going to have a site right in between
25 those, and so, that area that is in between them, we won't be
26 shrimping there anymore either, and I only bring this up because
27 the other thing that's coming up on the horizon, and this looks
28 like you're pretty much at the head of the canyon, and we're
29 right up in there close to it, and so the other thing that's
30 coming up on the horizon at the head of the canyon is possible
31 wind farms, and that will be another big chunk of area that we
32 can't shrimp, once they put them in there, and so I just bring
33 that up so that the council can think about this in a holistic
34 view.

35
36 You know, you hear me fussing, a lot of times, about you're
37 taking more bottom, you're taking more bottom, and yours is a
38 small piece, but it's when you start looking at all of this in
39 aggregate that it really starts to build up on us and takes away
40 our ability to access our historical shrimp grounds, and so
41 that's all, and I think you've done a great job, and I'm not
42 blaming you, but I just want to think about this holistically.

43
44 **CHAIRMAN DIAZ:** (Chairman Diaz's comment is not audible on the
45 recording.)

46
47 **DR. LUCAS:** Thank you, all.

48

1 **CHAIRMAN DIAZ:** All right. Sorry about that. Next up on the
2 agenda is Bycatch Reduction Methodology. Dr. Diagne, would you
3 take us through the action guide and next steps for that item?
4

5 **BYCATCH REPORTING METHODOLOGY**
6

7 **DR. DIAGNE:** Yes, Mr. Chair. Thank you very much. First, the
8 agenda item should read "Bycatch Reporting", instead of
9 "Reduction", as noted. For this last agenda item, Mr. Dan Luers
10 from SERO is going to present a review of the standardized
11 bycatch reporting methodology for the Gulf of Mexico and joint
12 FMPs, and these are required to be reviewed once every five
13 years, and, currently, the agency and the council are in the
14 process of conducting this review. It is expected that a draft
15 would be presented to the SSC, and later on to the council, and
16 so we can turn it over to Dan. Thank you.
17

18 **CHAIRMAN DIAZ:** Thank, Dr. Diagne. We have Mr. Luers to do the
19 presentation. Whenever you're ready, feel free.
20

21 **MR. DAN LUERS:** Good morning, everyone. My name is Dan Luers,
22 and I work with SERO, with the Gulf Branch Sustainable Fisheries
23 Department, and, today, we're going to talk about just where we
24 are on the update with the SBRM review.
25

26 The purpose of the presentation is to remind the council that we
27 need to review the SBRM, and we're going to talk about the SBRM
28 review, and then we're going to discuss specific fisheries and
29 SBRMs for the fisheries and the timing of the progress and
30 review, and then, hopefully, we can answer questions about
31 specific fisheries and bycatch reduction methods that might be
32 applicable in the FMPs.
33

34 I think the best way to do it is to maybe go through each
35 fishery and maybe have questions after, but, if we want to wait
36 until the end, or if no questions come up, we can kind of decide
37 that as we go along.
38

39 Again, SBRMs are an established, consistent procedure, or
40 procedures, used to collect and record bycatch data. The
41 purpose is to use the information to assess the amount and type
42 of bycatch, and, just as a reminder, the council has SBRMs for
43 each of the FMPs.
44

45 Basically, what this review is, there's four mandatory
46 components of the SBRM review, and so these are kind of -- I
47 guess you should probably look at these sort of as questions,
48 and so what are the characteristics of bycatch occurring in the

1 fishery, is the methodology feasible, from a cost, technical,
2 and operational perspective, and is the uncertainty acceptable
3 in the data that results from the methodology, and how are the
4 resulting data used to assess the amount of bycatch occurring in
5 the fishery?

6
7 The FMPs, we're going to talk about Reef Fish and Shrimp, and
8 those are the major ones, where there is a lot of SBRM. Coral,
9 since there is no active fishery, we won't discuss that here,
10 and then the CMP and the Spiny Lobster are joint with the South
11 Atlantic, and so we'll discuss those, but, again, there is a
12 little complexity, because of that.

13
14 Starting with the Reef Fish FMP, there is thirty-one species in
15 the Gulf, about 890 permitted vessels, commercially, and then
16 the primary gears are longline, vertical line, and modified buoy
17 gear.

18
19 The types of bycatch reporting methodology that are currently
20 going on, we have logbooks, which are required for all vessels,
21 and they must include the quantity, in pounds, of all the
22 species, the area caught, the gear, et cetera. Supplementary
23 discard data program, and so, if the vessel is selected, they
24 report the number and the average size of the fish being
25 discarded by species and reasons for discards, and so that
26 happens -- 20 percent of the vessels are selected each year, and
27 that changes each year, and so it should occur that, every five
28 years, every vessel has reported on year.

29
30 Then we also have the Reef Fish Observer Program, which the
31 observers report all catch, including protected resources, and
32 that usually covers about 2 percent of the trips annually. The
33 shark longline, I included that here, because we get some
34 ancillary data from it, and it's not really a reef fish SBRM,
35 because we don't require it, but it does record all catch,
36 including protected resources, and it gives a good estimate of
37 reef fish bycatch and that sort of thing.

38
39 Characteristics of bycatch for the for-hire vessels, we have
40 MRIP, which includes the APAIS, the Access Point Angler
41 Intercept Survey, and then the CHTS and FES, which all are used,
42 or the FES is what is used now, and I think we've discussed that
43 a lot, but estimates estimate catch rates and effort for
44 captured species, and there is also the Southeast Regional
45 Headboat Survey, and so there is limited headboat observer
46 coverage, dockside sampling, and discard reporting.

47
48 Then, of course, we've talked about SEFHIER, which was

1 implemented in 2021, and so we're hoping that will provide --
2 It's mandatory, of course, and we're hoping that will provide a
3 lot of discard information as well. For private vessels, again,
4 MRFSS, MRIP, CHTS, or FES, and estimates of catch and effort for
5 captured species, and information on dead discards is also
6 obtained.

7
8 The amount and type of bycatch, we're not going to get too deep
9 in that. Really, what this report is looking at is we will
10 report the numbers of bycatch species, but it's not really
11 asking if we're catching too many bycatch species or that sort
12 of thing in a fishery, and it's basically saying are we
13 adequately capturing what is being captured, if that makes any
14 sense.

15
16 Also, the importance of bycatch in estimating -- We will use the
17 estimates of numbers for species, versus release mortality, to
18 estimate dead discards, and, again, the numbers aren't
19 necessarily important here, or as important, as whether we're
20 actually getting the information we need.

21
22 The next criterion is the feasibility of the methodology, and so
23 are these SBRMs feasible, from a cost, operational, and
24 technical standpoint, and, for the commercial, we have the
25 logbooks, and, again, this is just a list of things that are the
26 SBRMs, and so the question is whether they are feasible, and
27 most of these programs have been run for quite a long time,
28 which would indicate that they are feasible.

29
30 Also, with the recreational, for the for-hire, we have MRIP and
31 the SRHS, which have run for a long time, and SEFHIER, at this
32 point, is -- It seems like it's going to be the -- It's going to
33 provide a lot of data, and it's just being started, but it
34 appears to be feasible, but these are questions that you should
35 be asking yourself, are these things feasible? Then private
36 angler, the same thing, the MRIP and, formerly, MRFSS.

37
38 The next question we have to ask, and, again, this is for Reef
39 Fish, is, is the uncertainty acceptable, given the obstacles,
40 such as financial, legal, et cetera, and so, with the commercial
41 SBRMs, we have logbooks, which often have high uncertainty
42 associated with the discards, and CVs sometimes exceed 100
43 percent. As Clay mentioned the other day, rare species are
44 often -- They may not be identified before they're discarded.
45 If the captain doesn't know what it is, and he just throws it
46 back, it's not going to be identified, and potentially species
47 are potentially not reported.

48

1 Supplementary Data Discard Program, we have a problem with non-
2 reporting, and not that people won't turn in reports, but they
3 just say no discards, and, technically, they're still in
4 compliance. Those aren't generally used, or they aren't used, I
5 don't think, in the estimates, but I guess there are
6 possibilities where no discards would be correct, and so it does
7 lead to some uncertainty.

8
9 The Reef Fish Observer Program, again, the 2 percent coverage,
10 that is less accurate in estimating the capture of rare species,
11 and so you're hoping to get a better idea of that from the
12 logbooks, hopefully, with the rare species that are being
13 reported.

14
15 The observer program indicates that self-reported discard rates
16 are consistently lower than observed reported rates, and so
17 logbooks, basically, aren't always as accurate, and they're not
18 telling you everything they catch, in general, is what that
19 indicates. Then the shark, again, this one is in blue, and it's
20 not really an SBRM, but it does provide ancillary data on the
21 reef fish discards in the fishery.

22
23 For recreational SBRMs, we have MRIP, which is self-reported,
24 including the dockside surveys. The SRHS, the regional headboat
25 survey, has a limited headboat observer coverage. Also, there
26 is dockside sampling and discard reporting, and so it does
27 provide a measure to estimate accuracy of self-reported headboat
28 landings. Then SEFHIER, again, is self-reported, but it's much
29 more comprehensive, and the private anglers are self-reported,
30 including dockside surveys.

31
32 The final criterion is how is the data used to assess the amount
33 and type of bycatch occurring in the fisheries, and this is kind
34 of the same for all the fisheries, and so, if I go through this
35 here, I probably won't go through it again on the other slides,
36 but the Science Center uses the data in stock assessments to
37 incorporate bycatch into estimates of total fishing mortality.

38
39 The council uses SBRM to derive bycatch information to assess if
40 new management measures are necessary and develop measures or
41 evaluate the potential impact of measures, and then the SSC uses
42 information, as they review the status of fisheries and develop
43 ABC recommendations. All aspects of fishery management in the
44 region that have bycatch implications use data from the SBRM.

45
46 That is, basically, all the criteria that we look for for each
47 fishery, and so that's the end of the reef fish, and that's kind
48 of what's going to go into the report, a very brief version of

1 what we're looking at, and, like I said, in the report, I will
2 outline all of the bycatch species and that sort of thing, and
3 that will be comprehensively addressed in there, but, really,
4 this is more about whether the methods are acceptable and
5 adequate for what we need them for, and so, at this point, I'll
6 take some questions on the reef fish, if anyone has any.

7

8 **CHAIRMAN DIAZ:** Ms. Bosarge.

9

10 **MS. BOSARGE:** On Slide 11, you're going to do the analysis, but
11 the analysis will eventually be used to see if changes or
12 improvements are needed somewhere, right, and it helps to inform
13 those types of decisions, and so, when I look at the analysis, I
14 see that -- If you look at the commercial side, we're passing
15 judgement, and we say high uncertainty, with discards CVs often
16 exceeding 100 percent. We're essentially pointing out the weak
17 points, right?

18

19 **MR. LUERS:** Yes.

20

21 **MS. BOSARGE:** Protected species potentially not reported, and
22 then you look at the -- So that's the basic thing that everybody
23 has to comply with, and then you get into the supplemental
24 discard program that fishermen are required to comply with, if
25 they're chosen, and you say, you know, non-reporting is an
26 issue, and then you go down to the observer program, that is 2
27 percent coverage and less accurate, and so you're giving some
28 feedback there, and you do the same thing with the for-hire.

29

30 Then you get to the private, and all you say is self-reported
31 from rec fishermen, including dockside surveys, and we don't
32 speak to any of the uncertainty, and we don't pass any judgment,
33 and we say nothing, and I thought it was funny, at the
34 beginning, when you talked about the Reef Fish FMP, and you said
35 there is thirty-one species, and there is eight-hundred-and-
36 something commercial federally-permitted boats, as if there is
37 only 800 boats with bycatch in that fishery.

38

39 I mean, it's just -- I realize that I'm a little sensitive about
40 it, but, at some point, we have to get down to both sides of the
41 issue, especially when you start to look at the magnitude of
42 bycatch on both sides of the issue, and we just looked at it for
43 red grouper.

44

45 The commercial side had about 287,000 fish discarded in 2017,
46 and the recreational side had 2.5 million, and so the fact that
47 we don't say anything about the uncertainty, or that there might
48 be room for improvement there is a little frustrating, and so I

1 hope that we can improve that, so that the council can really
2 look at this with an open set of eyes and find out where the
3 room for improvement is.

4
5 **MR. LUERS:** That's a good point, and perhaps -- I think the
6 report will be more comprehensive on the private, but I probably
7 neglected it a little bit more in here, and it's more from the
8 aspect that there is only one way of reporting than from the
9 aspect of I intentionally was downplaying it, and so I
10 understand your concern, and I will definitely address that
11 going forward.

12
13 **CHAIRMAN DIAZ:** Any other questions or comments for Mr. Luers at
14 this point? You can proceed, Mr. Luers.

15
16 **MR. LUERS:** Okay. Thank you. The next fishery is the shrimp
17 fishery, and so four managed shrimp species, the brown, white,
18 pink, and rock. There are 1,467 federally-permitted vessels,
19 and it's primarily trawl.

20
21 The bycatch reporting methodologies include logbooks, including
22 electronic and the cellular ELB, which you've been talking
23 about, and so they require all vessels -- They are required for
24 all vessels, and they give accurate calculations of vessel
25 effort, catch per unit effort at fishing locations, and they
26 must provide the size and number of trawls and types of bycatch
27 reduction devices, and TEDs as well.

28
29 In general, the observer program gets about 2 percent of annual
30 trips covered. Some of the other programs, which aren't SBRMs,
31 but kind of work in concert to make sure that we're on point
32 with bycatch is the Science Center cooperates with states to
33 monitor fishing effort, and then the NMFS OLE maintains
34 spreadsheets with boarding details, and the Sea Turtle Savage
35 and Stranding Network maintains a database of strandings. They
36 use that, with observer data, to monitor sea turtle mortalities
37 from fisheries interactions.

38
39 Again, we're not going to get too deep into the characteristics
40 of the bycatch, and shrimp does generally constitute less than a
41 third of the fishery catch, and that will be summarized in the
42 report, but the focus, again, is more on the adequacy of the
43 SBRMs than catch.

44
45 Shrimp gear, it's worth noting, can affect the abundance of
46 species that are targeted by other fisheries, and red snapper is
47 the most obvious example, and the ecological effects of bycatch
48 mortality are the same as fishing mortality from directed

1 fishing effort.

2
3 Most of the fish that are caught in the trawls are finfish and
4 invertebrates of little-known species, and little is known about
5 them, because they aren't important, and they aren't generally
6 targeted in any fisheries anywhere.

7
8 From a feasibility standpoint, we have the ELB/cELB, and the
9 modifications are currently being discussed, but it seems like
10 this is going to go forward. The Gulf of Mexico Shrimp Observer
11 Program is expected to continue as long as we have funding, and,
12 largely, the other programs, which aren't really our SBRMs, will
13 likely continue as well.

14
15 This is the level of uncertainty understood and acceptable,
16 given the obstacles, and so SBGM, and that's the observer
17 program, is the best method for estimating discard rates for
18 species, and the logbook data provides reliable effort of
19 fishing data and location. There is some biases in the logbook
20 data, as we mentioned before, but they are more useful for
21 effort by area or info on captured and rare species, and so
22 using the SBGM, combined with the logbook, is the best method,
23 overall, for estimating bycatch.

24
25 Again, this criteria is the same, and so they are used in stock
26 assessments and for management measures and that sort of thing,
27 and so that is basically it for the shrimp fishery. Does
28 anybody have any questions regarding that, or comments?

29
30 **CHAIRMAN DIAZ:** Any questions for Mr. Luers at this point? I am
31 not seeing any, Mr. Luers. You can proceed.

32
33 **MR. LUERS:** Okay. On to the coastal migratory pelagics, and
34 this is jointly managed with the South Atlantic, the king
35 mackerel, Spanish mackerel, and cobia, and then trolling
36 handline and gillnet gear are the most common gears used for
37 those.

38
39 They are required to have logbooks, which includes the quantity
40 of all species, area caught, gear, et cetera, and the
41 supplementary data discard program, the same as the reef fish,
42 is 20 percent every five years, and then the Southeast Gillnet
43 Observer Program covers all anchored, strike, or drift gillnet
44 fishing, regardless of species, year-round in the Gulf.

45
46 For recreational vessels, we have MRIP, and it's basically the
47 same as the reef fish, and so we have MRIP and the headboat, and
48 then SEFHIER. For private anglers, estimates of catch and info

1 on dead discards through MRIP.

2
3 The amount and type of bycatch is characterized by low discards,
4 and so the highest discards are when trolling, but, generally,
5 it's a pretty clean fishery, and so that will be summarized in
6 the report. Again, the importance of bycatch in estimating
7 bycatch mortality rates vary from about 5 percent -- Bycatch
8 mortality, rather, varies from about 5 percent for cobia to 100
9 percent estimated in the king mackerel gillnet. Again, the
10 ecological effects are the same from direct and indirect fishing
11 mortality.

12
13 Feasibility, logbooks, supplementary discard program, and we've
14 discussed this for mostly everything, and, previously, the
15 Southeast Gillnet Observer Program seemed to -- It seemed to be
16 feasible, and then, for the charter boats, the same types for
17 CMP as we have for reef fish, and private angling as well, the
18 MRIP.

19
20 Is the level of uncertainty understood and acceptable, given the
21 obstacles? It's the same issues, and logbooks have pretty high
22 uncertainty, and protected species are potentially not reported,
23 and non-reporting is an issue with the supplementary data
24 programs, and then the gillnet observer program does give
25 accurate estimates of bycatch for the gillnet fisheries.
26 However, there is no observer program for any other CMP
27 fisheries.

28
29 Recreational is mostly self-reported, which comes with a lot of
30 questions, and the SRHS does have a limited observer program and
31 dockside sampling and discard reporting, and, again, SEFHIER is
32 on its way. The same thing with the private recreational, and
33 it is self-reported, and so it comes with a lot of questions.

34
35 Again, basically it's the same wording here, and the data is
36 being used in this fishery the same way as it's being used in
37 the other two fisheries. Any questions on CMP, before I move
38 on?

39
40 **CHAIRMAN DIAZ:** Any questions for Mr. Luers at this point? You
41 can proceed, Mr. Luers.

42
43 **MR. LUERS:** Okay. The final one I'm going to talk about is
44 spiny lobster, and it's currently managed with the South
45 Atlantic, and this is mostly traps and diving, with a small
46 percentage using hoop nets and bull nets.

47
48 They are required -- The commercial fishery is required to have

1 logbooks, catch and discards, and the Sea Turtle Stranding
2 Network also does report on -- The same as the reef fish, they
3 report on any strandings of sea turtles and then what may have
4 caused that stranding, and so if it's fisheries related.

5
6 Recreational vessels, Florida FWC monitors the bycatch of spiny
7 lobster, and there are low discards. The amount of type, it's
8 low discards, again, and 8 to 15 percent is generally what -- I
9 think that came out of the Matthews and Donahue paper that I
10 point out there down there as well, and most of the finfish
11 caught in the commercial traps are juveniles that escape within
12 forty-eight hours, and, again, it's summarized in the report,
13 because it's not really important.

14
15 Although this isn't necessarily important, but the mortality of
16 commercially and recreationally-important finfish is largely
17 negligible, as determined by Matthews and Donahue in 1997.

18
19 Feasibility, for commercial, we have the logbooks, and, for
20 recreational, really, because it's not in NMFS, and this is not
21 mandated by NMFS, we don't really have any recreational SBRMs
22 for spiny lobster.

23
24 The uncertainty resulting from the SBRMs has been evaluated
25 through analyses associated with regulatory and FMP amendments
26 implemented for the Spiny Lobster FMP. Bycatch levels are low
27 for both sectors, and then the review criterion for Number 4,
28 the data is used to assess if new management measures are
29 necessary and develop measures, and so that's the end of the
30 spiny lobster. Does anybody have any questions regarding that?

31
32 **CHAIRMAN DIAZ:** Ms. Guyas.

33
34 **MS. GUYAS:** Thanks, Dan, for this presentation, and so I'm with
35 FWC, and is there a draft of this report available somewhere? I
36 am particularly interested in this for spiny lobster, because
37 there is a lot of SBRMs kicked to FWC, and I would love to be
38 able to see kind of what the meat of this is.

39
40 **MR. LUERS:** There is, and I am still working on the draft for
41 the Gulf. It will be very similar to the South Atlantic report,
42 because it is jointly managed, and that one is more likely to be
43 available soon, and I will check on whether it's available yet,
44 but it's likely to be available very soon, and so I think that
45 would help you out.

46
47 This report, I expect to have it available to the council for
48 the next meeting, and I'm not sure when we're on the schedule

1 for the SSC, but we will endeavor to have it ready for the next
2 SSC meeting as well, and so you will have it. It's just we're
3 still working on it.

4
5 **MS. GUYAS:** I would encourage you to reach out to me, if you
6 can, with this lobster part, before you get to the SSC, so that
7 we can look at some of this, so I can help you out and make sure
8 you've got the right stuff in there. Thanks.

9
10 **MR. LUERS:** That sounds fantastic, and I will definitely reach
11 out to you on this, and I can use all the help I can get.

12
13 **CHAIRMAN DIAZ:** Any other questions for Mr. Luers about the
14 spiny lobster section? All right. Any questions or comments at
15 all for Mr. Luers on the presentation? His next slide, I
16 believe, kind of lays out where we're going with this, and so
17 our staff and NMFS staffs are working together on these
18 documents, and the SSC will eventually review them, and the
19 council will get another chance to review them and finalize them
20 at some point in the future, and that's kind of where we're
21 headed.

22
23 **MR. LUERS:** Yes, and the deadline for any actions would be
24 February 21 of 2022, and so we would like to have the
25 determinations made -- We're hoping we can have them made this
26 year, and we are a little behind schedule, if we decide that we
27 need to really implement anything else, but we'll find a way, if
28 we need to.

29
30 **CHAIRMAN DIAZ:** Ms. Bosarge.

31
32 **MS. BOSARGE:** I just want to say thanks for your presentation,
33 and sorry I was tough on you. It's been a long week, but you're
34 doing great work.

35
36 **MR. LUERS:** No, and it's very important, and I probably should
37 have focused a little bit more on that, and so my apologies.

38
39 **CHAIRMAN DIAZ:** All right. I am not seeing any other questions
40 or comments. Go ahead.

41
42 **MR. PETER HOOD:** Just real quick, I just wanted to say that Dan
43 is working on this, and he's been doing the lion's share of the
44 work, and John is also working on it, and I've been sort of
45 doing some of the reviews, I guess, but Dan is doing the
46 overview, and, if there's anything that anybody sees in there
47 that you think we've missed, or has any further comments on,
48 contact us, and let us know, and we'll try to incorporate that

1 and make sure we get it covered in the report.

2

3 **CHAIRMAN DIAZ:** Thank you, Mr. Hood. I am not seeing any
4 further comments on this agenda item, and so I think that wraps
5 us up there. The last item on our agenda is Other Business. At
6 the beginning of the meeting, nobody mentioned any other
7 business, and so this concludes the Sustainable Fisheries
8 Committee.

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10 (Whereupon, the meeting adjourned on June 24, 2021.)

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