

GULF OF MEXICO FISHERY MANAGEMENT COUNCIL
SUSTAINABLE FISHERIES/ECOSYSTEM MANAGEMENT COMMITTEE

Hilton Galveston Island Resort Galveston, Texas

October 5, 2015

VOTING MEMBERS

- Robin Riechers.....Texas
- Leann Bosarge.....Mississippi
- Steve Branstetter (designee for Roy Crabtree).....NMFS
- John Sanchez.....Florida
- Greg Stunz.....Texas
- David Walker.....Alabama
- Roy Williams.....Florida

NON-VOTING MEMBERS

- Kevin Anson.....Alabama
- Martha Bademan (designee for Nick Wiley).....Florida
- Doug Boyd.....Texas
- Jason Brand.....USCG
- Pamela Dana.....Florida
- Dale Diaz.....Mississippi
- Dave Donaldson.....GSMFC
- Myron Fischer (designee for Randy Pausina).....Louisiana
- John Greene.....Alabama
- Kelly Lucas (designee for Jamie Miller).....Mississippi
- Campo Matens.....Louisiana
- Ed Swindell.....Louisiana

STAFF

- Steven Atran.....Senior Fishery Biologist
- Assane Diagne.....Economist
- John Froeschke.....Fishery Biologist/Statistician
- Doug Gregory.....Executive Director
- Ava Lasseter.....Anthropologist
- Mara Levy.....NOAA General Counsel
- Charlene Ponce.....Public Information Officer
- Ryan Rindone.....Fishery Biologist/SEDAR Liaison
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- Pam Anderson.....Panama City, FL
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 10 Jason Link.....
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 12 Kristen McConnell.....EDF
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 14 Bonnie Ponwith.....SEFSC
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17
 18 The Sustainable Fisheries/Ecosystem Management Committee of the
 19 Gulf of Mexico Fishery Management Council convened at the Hilton
 20 Galveston Island Resort, Galveston, Texas, Monday morning,
 21 October 5, 2015, and was called to order at 8:30 a.m. by
 22 Chairman Robin Riechers.

23
 24 **ADOPTION OF AGENDA**
 25 **APPROVAL OF MINUTES**
 26 **ACTION GUIDE AND NEXT STEPS**
 27

28 **CHAIRMAN ROBIN RIECHERS:** It looks like we have a quorum. Ms.
 29 Bosarge is here and Dr. Branstetter is here. Mr. Sanchez was
 30 here and he's getting back in his seat. Dr. Stunz is here and
 31 Mr. Walker I saw earlier. There he is and Mr. Williams and so
 32 everybody is present.

33
 34 With that, are there any -- We will take any changes to the
 35 agenda or move for adoption. Hearing no changes or objections
 36 to the agenda, so moved.

37
 38 Next, we will go to the minutes, which is -- The last time this
 39 committee met was in the summer of 2015, June 8, and so it was
 40 two meetings ago, Tab E-2. Are there any corrections,
 41 additions, or deletions to the minutes? Seeing no hands in the
 42 air, if no corrections, additions, or deletions, then we will
 43 accept the minutes as written. With that, that takes us to Dr.
 44 Barbieri's presentation regarding the SSC Review of Integrated
 45 Ecosystem Assessment and Management Strategy Evaluation, Single
 46 Species. We need to come up with a better title than that.
 47 That's it --
 48

1 **MR. STEVEN ATRAN:** We didn't come up with that title.

2
3 **SSC REVIEW OF INTEGRATED ECOSYSTEM ASSESSMENT - MANAGEMENT**
4 **STRATEGY EVALUATION - SINGLE SPECIES**
5

6 **DR. LUIZ BARBIERI:** Thank you, Mr. Chairman, and good morning,
7 committee. I am going to actually just go through a very brief
8 overview presentation of a discussion that the SSC had at this
9 last meeting.

10
11 We received a presentation from the Science Center on a program
12 called Integrated Ecosystem Assessment that develops science
13 tools in support of ecosystem-based management and they came and
14 gave us a presentation and discussed a number of issues and
15 requested SSC input and so I am going to walk you through that
16 discussion and some of our recommendations.

17
18 **CHAIRMAN RIECHERS:** Luiz, is the -- For those trying to follow
19 along, has the presentation came to us as well or was it in the
20 big PDF? No? Okay. I was just trying to scroll to find it.

21
22 **DR. BARBIERI:** No and I apologize, Mr. Chairman. I actually
23 sent the presentation that I finished last night and so we
24 didn't have time to have it with your briefing package.

25
26 **CHAIRMAN RIECHERS:** No problem. I was just going to follow
27 along here if I could.

28
29 **DR. BARBIERI:** My apologies for that. Again, the Integrated
30 Ecosystem Assessment Working Group and the Science Center has
31 been looking into issues that integrate ecosystem factors into
32 fisheries assessment and management and in this particular case,
33 they came and they gave us a presentation on how management
34 strategy evaluation could be applied to an ecosystem model to
35 evaluate the impacts of management strategies on single species
36 management, assessment and management.

37
38 The idea was to kind of come up with something that was in
39 between a full-blown ecosystem perspective of assessment and
40 management and the single species management and so basically
41 trying to contextualize this discussion in a way that ties into
42 existing fishery management plans and addresses some of the
43 issues that you are trying to see addressed.

44
45 Of course, one of the issues that came to the surface regarding
46 ecosystem impacts was the red tide events that have happened
47 periodically over the West Florida Shelf and impacted grouper
48 species, in particular red grouper and gag, and decreases in

1 abundance that were episodic.

2
3 This is something that the council has -- The council and the
4 SSC, to tell you the truth, has struggled with in terms of
5 finding how to integrate this into our picture of population
6 dynamics in gag and red grouper and so this is a good
7 opportunity to address those issues.

8
9 You may remember that at the Key West, Florida, June meeting
10 last year there was a motion that was made by you requesting
11 that the Gulf of Mexico Integrated Ecosystem Assessment Program
12 work with the Standing and Ecosystem SSCs to evaluate the
13 current red grouper harvest control rule to determine if it is
14 robust to possible future changes in intensity and frequency of
15 episodic events of non-fishing mortality.

16
17 This is a long-winded way to say that basically you wanted to
18 see what the impacts of those red tide events could be having on
19 those populations and how do we integrate that into our
20 management framework.

21
22 The management strategy evaluation that the Integrated Ecosystem
23 Assessment group prepared was looking at these issues and they
24 came and requested SSC feedback on several of these issues.
25 Developing a management strategy evaluation approach that's
26 beneficial to the SSC and so basically, instead of working in
27 isolation, they are trying to develop a relationship with the
28 SSC and the council and iterate their processes in a way that's
29 most beneficial to you. So, again, helping contextualize what
30 they do in terms of Gulf fisheries management.

31
32 Also, some input on key uncertainties that the SSC faces and
33 would like to see addressed and types of harvest control rules
34 and how they perhaps could be modified to accommodate some of
35 these issues and then help in identifying priority performance
36 metrics for this exercise.

37
38 An example here of several things that could come up. For
39 example, if a severe red tide event was to occur in the next
40 three years, are we prepared for future changes in the frequency
41 of red tide? When is a red tide too strong and when it is not
42 strong enough? When can we measure those impacts accurately?
43 Are there biological and economic tradeoffs that are happening?
44 The lag time between assessments that we have, are those a
45 factor in properly taking into account those factors?

46
47 In terms of performance metrics, they brought this in front of
48 us and requested some input from the SSC and, as you can see

1 there, they have three types of criteria. This is a diagram and
2 this diagram is showing the simultaneous integration of these
3 factors in developing performance metrics and so you want to
4 avoid an overfished state, avoid risk of collapse in fisheries,
5 but, at the same time, maximize or optimize the net present
6 value of the catch and so what combination of factors can be put
7 together and evaluated within the context of what we just
8 discussed to maximize those outcomes?

9
10 Later on, I encourage you to go, and I am not going to read them
11 here, but read those little notes next to each one of those
12 axis, because it's something that they really tried to go to the
13 fisheries management plans and pull explicit language there of
14 things that could be used to address those performance.

15
16 They emphasize that they want to look at this MSE application as
17 a process and not a product and so it's going to be iterative
18 and interactive, both with the SSC and with the council. We
19 would definitely welcome council input and participation, if at
20 all possible, to help us guide this process and help the IEA
21 group work through.

22
23 Additional dimensions that could be incorporated into red tide
24 MSE are magnitude and frequency. We saw this this last year and
25 there was a massive red tide on the West Florida Shelf, but it
26 really wasn't strong enough and it didn't last long enough to
27 cause any major population level impacts and so it wasn't really
28 something that made a difference and how can we tell?

29
30 Taking into account the stock assessment uncertainty and the
31 frequency of the assessments and then some of the implementation
32 uncertainty issues that happen when you set an ACL and that ACL
33 is really exceeded, due to implementation error. Again, just to
34 emphasize that there are several factors here that can be added
35 to this exercise and your input would be very valuable.

36
37 Next steps, the SSC is discussing formation of a working group
38 to increase interaction with the IEA group and make this a more
39 integrative type of a process. They will be back this coming
40 year and we don't know exactly when, but we discussed having
41 them come back periodically and give the SSC presentations, so
42 we can help guide this and basically the SSC would like to serve
43 as sort of a bridge between what the science products are and
44 how we can help you integrate into fisheries management in the
45 Gulf and that completes my presentation, Mr. Chairman, and I'm
46 available for questions, if there are any.

47
48 **CHAIRMAN RIECHERS:** Mr. Greene.

1
2 **MR. JOHNNY GREENE:** Thank you, Luiz. How would you take
3 something like this and incorporate sargassum grass into it?
4 Amberjack and triggerfish rely pretty heavily on that and it
5 seems like triggerfish especially is something that we're going
6 to be wrestling with tomorrow in great detail and how would you
7 look at something like a triggerfish, or perhaps an amberjack
8 that also relies on it, into something like this?

9
10 **DR. BARBIERI:** I think it's very possible. There are different
11 ways of accomplishing this, but this is the kind of input that
12 the SSC and the IEA group is actually looking for, is this type
13 of input of identifying what issues, like you told us last year
14 about the red tide events and that's moving forward and now
15 being much more explicitly integrated into the stock
16 assessments.

17
18 That issue of the sargassum and gray trigger and greater
19 amberjack and trying to account for some of those factors that
20 cannot be explicitly accounted for in the assessment.

21
22 You know our routine assessments, as sophisticated as they are,
23 they are really sort of a blunt instrument, so to speak, in
24 terms of the ability to integrate a multitude of these auxiliary
25 types of information and so this process allows you to align the
26 two better, those ecological factors and those routine
27 assessments. That is a very good suggestion.

28
29 **CHAIRMAN RIECHERS:** Go ahead. A follow-up.

30
31 **MR. GREENE:** How far down the road is something like this? Is
32 this something that we can be looking at in the next two to
33 three years or is this five to ten years down the road or can
34 you elaborate on that, to any degree?

35
36 **DR. BARBIERI:** This process is not short. To be done right and
37 to take into account all the necessary steps and factors, it can
38 take a long time and so yes, something like this can be
39 addressed within that two to three-year timeframe to get things
40 moving, but it is ideal to identify issues as early as possible,
41 so you can get a little ahead of the curve and give us three to
42 five, or perhaps longer, timeframes to identify things that are
43 way out into the future, but, during that time, we can look into
44 how those things can be best integrated into this process.

45
46 **CHAIRMAN RIECHERS:** I think Bonnie has a response as well.

47
48 **DR. BONNIE PONWITH:** Yes, the steps that I can picture in my

1 mind vary relative to the problem, but here is a rough cut.
2 Either via research and monitoring or via anecdotal information
3 from people who are on the water all the time. We have a
4 hypothesis and we think there is a relationship between this
5 thing and this species and then it's a matter of understanding
6 what that relationship is.

7
8 Let's just use, for example, sargassum. You're saying that
9 there's a relationship between sargassum and triggerfish and
10 it's a matter of then looking at the dynamics of that
11 relationship and understanding. Is it linear? Does it go in
12 one direction? Is it a bell curve or what are those
13 relationships?

14
15 Once you understand those, so you can plug them in numerically,
16 then it's a matter of understanding sargassum and how it
17 responds to currents and wind and other things that influence
18 its dynamics.

19
20 Then, once you understand those two components and its
21 relationship on the stock, you have got a more holistic approach
22 to be able to at least describe the relationship and potentially
23 predict it. For that particular example, my sense is it could
24 take a good while.

25
26 There may be simpler examples of features or oceanographic
27 events that have a measurable influence on the health of a stock
28 that we already have the data in hand and we just need to
29 understand that that relationship exists and model it. Again, I
30 think the answer is it would vary with the problem, the question
31 that's being asked, but if we have the data in hand, it will be
32 a lot faster.

33
34 **CHAIRMAN RIECHERS:** Luiz.

35
36 **DR. BARBIERI:** Yes and, to that point, Mr. Chairman, I just
37 couldn't emphasize enough, just to add to what Dr. Ponwith just
38 brought up, you know the fact that your participation in this
39 process is critical and so your SSC, of course, would be working
40 with you, hand-in-hand, in trying to guide the development of
41 this process, but you know as many of you that are interested in
42 this topic and would like to help us bring the more holistic
43 management perspective that you have in identifying those issues
44 early on and working on those, the better.

45
46 **CHAIRMAN RIECHERS:** Any other questions or comments? Leann.

47
48 **MS. LEANN BOSARGE:** Luiz, I saw in the minutes where you all had

1 actually spoken about that specifically, where you said the
2 SEFSC was forming and MSE advisory committee and you suggested
3 that perhaps there could be a council representative on that
4 committee and so that would be a way that maybe we could be
5 there at the ground level and seeing exactly what these inputs
6 are and what we may want to see as outputs and, therefore, what
7 we need as inputs.

8
9 **CHAIRMAN RIECHERS:** Luiz.

10
11 **DR. BARBIERI:** Yes and that's exactly it. We are actually
12 planning to develop this more in our January meeting, in more
13 detail, that working group and how we're going to integrate the
14 council and the SSC and the Science Center in this working group
15 and how we're going to make it work and so yes, this is the
16 time.

17
18 **CHAIRMAN RIECHERS:** Luiz, I mean I see this as -- Bonnie, you
19 may want to chime in as well. I mean obviously there was some
20 money for some of the environmental work that we did some time
21 back or these influences -- We had a grant for ecosystem work, I
22 should say, and this is just a furtherance of that discussion,
23 in some respects. When you do have these bigger episodic
24 events, how can we relate them to some of the things going on in
25 stocks?

26
27 I mean we've been working on it for a while and it's not new and
28 it's just sometimes it's, as you said, Bonnie, the availability
29 of the data that would actually allow us to look at those
30 causations, in some respects. Any other comments or questions?
31 Thank you, Luiz.

32
33 **DR. BARBIERI:** Thank you, Mr. Chairman.

34
35 **CHAIRMAN RIECHERS:** With that, that turns us to our next agenda
36 item and that's the NOAA Ecosystem-Based Fisheries Management
37 Policy and Mr. Jason Link will be presenting that. Maybe Dr.
38 Link and, if so, I apologize.

39
40 **PRESENTATION - NOAA ECOSYSTEM-BASED FISHERIES MANAGEMENT POLICY**

41
42 **DR. JASON LINK:** Call me whatever you want, but just not late
43 for dinner. While the slides are being loaded, thank you, Mr.
44 Chairman, and thank you, everybody, for allowing me to speak to
45 you this morning. What a great segue into this talk with the
46 example of the work you're already doing.

47
48 Before I start, can I tell you a story real quick? Bonnie has

1 heard this story and so I will let her ignore it, but when I was
2 a kid, I used to visit my grandfather out of Fort Walton Beach
3 and we would go fishing for king mackerel and he had a billy-
4 club on this boat for when we caught the big ones, to kind of
5 knock them on the head.

6
7 I remember my brother would pick that thing up and it had a
8 little lanyard and he would spin it around like this and he
9 would spin it back and spin it back and I remember one time my
10 grandfather was driving the boat and he bent over to grab a cup
11 of coffee and whack, he got hit on the head.

12
13 I will never forget, to the day I die, what he said. He said,
14 what did you do that for, to my brother. I have taken that
15 lesson and oftentimes throughout the agency, over my career, I
16 have said, why are we doing that? What did we do that for?
17 It's within that vein that I want to give a talk to you about,
18 real quick, what we're doing with respect to ecosystem-based
19 fishery management.

20
21 Here is the take-away and, on behalf of the agency, let me just
22 say that NOAA needs to, can, and is committed to doing
23 ecosystem-based fishery management. Part of the reason we
24 developed this policy is to make that commitment clear and so we
25 want to make sure that you know that. We also want to
26 recognize, and I won't get into it too much this morning, unless
27 you want to talk about it, but there are many benefits for
28 ecosystem-based fishery management.

29
30 Our aim of doing this is ultimately to provide a menu of options
31 for all of the councils, all of our partners, all the work that
32 we need to do to address these ecosystem considerations. The
33 reason we're doing that is these issues are not going away and
34 they are going to increase over time.

35
36 The key thing that we are realizing is that making EBFM
37 operational is challenging, and we just heard a discussion about
38 that, but we can't do it without partnerships and so that's one
39 of the things we want to emphasize and why we're developing this
40 policy.

41
42 If you look at the next slide, one of the great examples of that
43 is gag grouper. It was difficult estimating mortality and
44 spawning stock biomass and we thought red tide might be
45 associated and you have all heard of this example, but it was
46 incorporated into the assessment and it basically improved the
47 results and improved the performance of the assessment model and
48 resulted in not only increased understanding, but improved

1 status of the stock.

2
3 This is the type of thing that we're looking at and we were just
4 talking about an example that Luiz did a moment ago. The other
5 thing I would mention, as another example, are coral reefs and
6 their associated fisheries. I understand you will be discussing
7 that tomorrow, but the reality is that there's a changing
8 climate and not only is that having thermal effects, but it's
9 having chemical effects and bleaching and we're seeing that.

10
11 There are some events going on south of Florida right now and
12 that impacts coral health and if we impact coral health, that
13 can trickle through to impact reef fish and production and that
14 can then trickle through and impact local sport fisheries and
15 recreational fisheries and even diving and tourism and there is
16 a lot of economic impacts on that and we're seeing this around
17 the country as an increasing impact.

18
19 One other thing that you might not be thinking about that I
20 would point you to is kind of a systems-level approach, an
21 overall look, and here is an example of that.

22
23 If you look at the blue there, that's the total landings and
24 this is from national landings statistics. That total landings
25 there in the blue, in metric tons, has gone down over time, but
26 if you look at the total value, in the dashed red line there on
27 the right axis, it has actually bounced around, but it's been a
28 lot higher and actually has been increasing the past few years.

29
30 I would think that this might be another thing that we're
31 looking at, at a system level, to get to that holism look and to
32 evaluate, perhaps, within this context, what are some trade-offs
33 that we might want to consider.

34
35 Let me give you this blue infographic and the reason we show you
36 this is there is different levels of ecosystem-based management
37 and a lot of my erudite friends say it better than I, but there
38 is a lot of linguistic uncertainty about ecosystem-based
39 management and oftentimes people will be at this top level
40 talking about it, when the reality is they are at the bottom
41 level, or the next bottom level, where we're talking about the
42 gag grouper example or the red grouper example, where we're
43 trying to incorporate red tide or other environmental parameters
44 into a stock assessment.

45
46 We just want to flag that we're realizing there is different
47 layers and nuances to this and largely where we're focusing our
48 efforts with this ecosystem-based fishery management is this

1 second level, where we're trying to incorporate other factors
2 and decrease uncertainty to give us a better understanding at
3 the stock level, but also at the EBFM level, this third level
4 here, where we're managing all these species at once, as in the
5 example that I just showed you, and taking into account there is
6 dynamics as a system.

7
8 What we have is we've developed this policy. I was talking to
9 someone earlier and my boss, who is the Chief Scientist for the
10 agency, said develop an implementation plan for ecosystem-based
11 fishery management and I said, yes, sir. He said, make sure
12 it's consistent with the EBFM policy and I said, yes, sir. Then
13 we looked around the room and we said, what policy?

14
15 We realized we needed to take a step back and develop this
16 policy and that's what we're presenting to you here in really,
17 really quick terms, but the policy has a statement of what it
18 is, and I will show you that in a moment. We give some
19 background and definition is a key part of it and there is
20 context and the legal basis and then the guiding principles.

21
22 Really, the policy statement is what you can see here and it's
23 really trying to show our support of EBFM as a way to better
24 inform decisions and help achieve and optimize the benefits from
25 the fisheries and it also recognizes all the other factors that
26 are associated with the marine fishery context and tries to take
27 those into account and so that's our policy statement.

28
29 We define EBFM as a systematic approach to fisheries management
30 in a geographically specified area that ensures the resilience
31 and sustainability of the ecosystem. It recognizes the
32 physical, biological, economic, and social interactions among
33 the affected components of the ecosystem, including humans, and
34 it seeks to optimize benefits among a diverse set of societal
35 goals.

36
37 We wrestled with that as a committee. There is over forty
38 different definitions of EBFM in the literature and we tried to
39 capture some of the best facets of each of those, but this is in
40 the policy and the key thing with the policy are these guiding
41 principles.

42
43 We always start with the end in mind and unpack it and so at the
44 top you have the outcome and we want to maintain resilient
45 ecosystems. Then, to do that, we have to have that predicated
46 on a very solid and strong science basis, as we've just been
47 discussing.

48

1 We want to advance our understanding of the science, but then
2 build up from that to what are the objectives. We just heard a
3 process that can speak to that in the prior discussion, but
4 implement some ecosystem-level planning and a lot of places
5 around the country are developing FEPs and this is an area where
6 that might be useful. That also comes into play in what are the
7 priorities and really take a proactive look to prioritize
8 vulnerabilities and risk to different components of the
9 ecosystem.

10
11 A lot of the work that we're doing in our stock assessment
12 prioritization efforts and a lot of the work that we're doing in
13 our climate vulnerability analyses and the National Climate
14 Science Strategy has a regional action plan. A lot of those
15 efforts were considered as we developed this policy, to tailor
16 around ongoing work and not to start from scratch, but to really
17 build on that and to emphasize what our main priorities are.

18
19 The fourth point then is what are our options and we want to
20 explore and address tradeoffs within an ecosystem. One of the
21 key ways to do that is management strategy evaluation, so you
22 have a solid basis for that already, as you've seen in the prior
23 discussion, and then what is the advice and we want to
24 ultimately incorporate these ecosystem considerations into the
25 management advice we give, as in the gag grouper example, so
26 that that advice better handles and better takes into account
27 the dynamics going on in the system.

28
29 The next steps for the policy, it's open for comment and we
30 ultimately would love to have everyone's comments by the middle
31 of December. That's one of the things we want to make you aware
32 of. Any comments are welcome and send them to myself or Heather
33 Sagar.

34
35 The other thing I would point out is, in addition to this policy
36 statement, we are developing that implementation plan, that
37 roadmap that I mentioned, in parallel. It's a bit lagged behind
38 the policy statement and it will come out a couple of months
39 after, but we wanted to make sure that we developed the policy
40 and that we were able to get appropriate comments and our aim is
41 to publish this in the early part of next year.

42
43 The last thing I would like to show you is just a whole host of
44 efforts that we have ongoing that I think really do support what
45 we're trying to do with ecosystem-based fishery management. A
46 lot of what we're doing may not be widely known and we just want
47 to make sure that -- Again, we're not doing anything new and
48 we're not doing anything different and this isn't a changing

1 course. This is building upon a lot of extant efforts.

2
3 The Climate Science Strategy I mentioned, that's a big part of
4 ecosystem-based management, dealing with climate issues. Also,
5 just looking at how the stock assessment can be improved. We
6 are updating our stock assessment improvement plan aware of some
7 of these factors.

8
9 As I mentioned, we're developing a roadmap and then next year,
10 as another highlight, all of our labs around the country are
11 having an ecosystem program review. I forget the dates of
12 yours, Bonnie, but sometime next spring. We are going to be
13 looking at this in greater detail. With that, Mr. Chairman, I
14 will stop and take questions and thank you all for your time.

15
16 **CHAIRMAN RIECHERS:** Any questions or comments from the committee
17 or others? Obviously, Dr. Link, we thank you for coming and
18 presenting. You know it does dovetail in with the previous
19 conversation quite well and after you all get past the point of
20 your comments being received and you all go through the reviews,
21 obviously that's going to shape what you do, in some respects,
22 but could you give us any insight into how you plan on --
23 Obviously absent of comments that would change your mind, how
24 you plan on then pushing the policy forward and integrating it
25 into the regions?

26
27 **DR. LINK:** Are you asking me in not so many words what our
28 implementation plan might look like?

29
30 **CHAIRMAN RIECHERS:** Yes.

31
32 **DR. LINK:** Okay. Thanks. We want to make sure that we do have
33 opportunity to revise the policy based on comments that you all
34 and others might provide and so let me reiterate that, first of
35 all.

36
37 Second of all, similar to what we did with our climate effort,
38 we're trying to come up with a roadmap, and this is partly
39 internal to NOAA Fisheries, so that we can align our resources
40 and efforts and so forth as well, and maybe take a look at some
41 of our programs or things of that nature. There is a fair bit
42 of that type of thing, but we're also trying to ensure that each
43 of the Regional Offices and Science Centers has the emphasis and
44 focus and the tools to do this and so there's that aspect.

45
46 What we're hoping, at the end of the day, is that this gets
47 regionalized and we have the regional teams working on this.
48 One of our recommendations is to develop points of contact in

1 each Regional Office or Center and largely we know who those
2 are, and you probably do too, but to coalesce that and form some
3 of those groups more rigorously or in a focused effort than we
4 have already and so things of that nature. I can elaborate
5 further, but I think you get the idea.

6
7 **CHAIRMAN RIECHERS:** Mr. Gregory.

8
9 **EXECUTIVE DIRECTOR DOUG GREGORY:** Thank you, Dr. Link. That was
10 very good. A couple of things. One is I guess in the strategy
11 is there's a definition of resilience versus sustainability and
12 I think that would be very important.

13
14 I inferred from what you said about the difference between
15 ecosystem management and ecosystem-based fisheries management.
16 That was important to me, because it helps me to focus. All
17 along, in talking with people about what is ecosystem-based
18 management, my inclination was, well, let's get the
19 environmental parameters built into the stock assessments and I
20 think that's the direction we're going, because the whole
21 concept of ecosystem management is mind-numbing. It's like
22 trying to grasp -- It's almost like trying to grasp what is the
23 universe.

24
25 That was good for me and any comments that council members have
26 we will provide and, if the council is willing, any comments
27 that the staff puts together from this conversation, if we could
28 submit a letter, working with the Chair, that might be a way
29 forward, if we want to submit comments.

30
31 The other comment I have is about the reference you said about
32 the health of the coral reefs and fisheries. I came from the
33 Florida Keys and I've heard this for decades, but I want to
34 point something out that, to me, is an enigma about this. Most
35 of our fisheries in the Florida Keys that we manage are healthy.
36 Hogfish is not healthy at this point, but gray snapper and
37 yellowtail and mutton snapper and black grouper, but the coral
38 reef is deteriorating greatly and has been since the early
39 1980s.

40
41 There is a disconnect there and what I am beginning to think is
42 the other components of the ecosystem, the seagrasses and the
43 mangroves, are probably as important or more important to the
44 overall productivity of the Florida Keys -- Whatever the concept
45 is, bioherm or I don't know what the current ecological terms
46 are for that whole region.

47
48 They are not dependent on coral reefs. Even spiny lobster,

1 which lives in the rocks, or yellowtail, which are found
2 exclusively on top of the coral reefs or on top of coral, seem
3 to be flourishing while the corals are dying and so it's
4 important to understand, I think, that corals aren't everything
5 to fisheries.

6
7 Now, the tropical fish are deteriorating, the moray eels and
8 that sort of thing, but the major components of the South
9 Florida ecosystem that we manage are doing fairly well.

10
11 The other thing about the thing that has perplexed me about
12 trying to grasp with ecosystem management in general is, and
13 this goes back to the assessment prioritization and looking at
14 the value of species in an ecosystem, is no one would have ever
15 guess that the longspine diadema was the critical keystone-type
16 of species in the coral reef environment in the Caribbean, but
17 when that died, the coral reefs deteriorated greatly, because of
18 the interchange between the sea urchins eating the algae and
19 that sort of thing.

20
21 Predicting things like that are impossible, except after the
22 fact, and so we don't know what the value of particular species
23 are, but going forward with the fisheries-based part of it, I
24 think we can make great strides and I think we're going to be
25 doing that very quickly and so thanks for this introduction to
26 it and anything our staff can do to help, please let us know.

27
28 **DR. LINK:** Do you want a response or are you good?

29
30 **EXECUTIVE DIRECTOR GREGORY:** I welcome it if I said something
31 that was wrong. I welcome that.

32
33 **DR. LINK:** Thanks. I think the -- I mean we might have a little
34 difference of opinion on predictability and modeling, because I
35 am a modeler by training and so I think you can model anything.
36 That caveat aside, I think the point you're making is there are
37 parts of the ecosystem that we need to pay attention that we
38 don't always in a management context, but it would be useful to
39 at least keep tabs on those and bring that into the discussion.
40 If that's what you're saying, I am totally onboard with that and
41 that's basically what I am saying, too.

42
43 **CHAIRMAN RIECHERS:** Any other comments or questions? I would
44 ask the committee, is there any reason why we wouldn't have Mr.
45 Gregory work with Kevin and write a letter regarding the plan
46 itself? Everybody is shaking their head no and so I assume
47 that's a yes response. I think we've got enough opportunity to
48 even send that out for some review if you would like to, if you

1 get it done in time.

2
3 With that, thank you, Dr. Link. We appreciate you coming and
4 presenting that to us. With that, that takes us to Other
5 Business. Steve, do we have any other business to come before
6 the committee?

7
8 **MR. ATRAN:** Not that I am aware of.

9
10 **CHAIRMAN RIECHERS:** Anybody else have any other business to come
11 before the committee? Ms. Bosarge.

12
13 **OTHER BUSINESS**

14
15 **MS. BOSARGE:** Just a question. The SSC was speaking about
16 possibly forming a working group to work with the Southeast
17 Fisheries Science Center on this, as they have their
18 discussions. Did they need anything from us in order to do
19 that, Doug, or can they push forward with that?

20
21 **EXECUTIVE DIRECTOR GREGORY:** Not really. I think the real
22 question is how to proceed from here. You know what Johnny
23 mentioned about the sargassum is, I think, the kind of thing the
24 SSC was suggesting and maybe having the same presentation given
25 to -- Starting with the Reef Fish AP and seeing what feedback we
26 get from them before we go forward with a working group, because
27 this is going to be a multiyear process and I think we need to
28 sit back and try to figure out a game plan for how to move
29 forward with it, because it could be complex, but running this
30 by the advisory panel and seeing what comments this presentation
31 would stimulate from them would probably be the best next step.

32
33 **CHAIRMAN RIECHERS:** Doug, I definitely see that as the next
34 step, but at least what I am hearing Luiz indicate was that it
35 was kind of a linkage between the Center and then the
36 assessments that we then have to review as a council, just so
37 that the SSC may start to -- Hopefully it's a feedback loop.

38
39 If we can identify certain parameters that we would like to have
40 factored into assessments and can do that early enough, we can
41 tell the Center and then the SSC is on the frontend of that
42 discussion, or at least a little bit more in the communication
43 link as we do that. At least that's what I am hearing, in some
44 respects. Bonnie.

45
46 **DR. PONWITH:** What you just said, Robin, feeds into something
47 that we're going to be talking about a little bit later in the
48 day, during the SEDAR Committee meeting. It is an issue that we

1 discussed at length at the SEDAR Steering Committee involving a
2 pretty dramatic change to the way we do assessments and that it
3 creates the mechanism for incorporating these more research-
4 oriented components into a stock assessment.

5
6 I won't go into it now, because it's not the right time, but
7 what I would like you to do is make a mental bookmark of this
8 conversation, so when we do talk about it that you can see how
9 that links up.

10
11 **CHAIRMAN RIECHERS:** Thank you, Bonnie, for that. That helps
12 some, in some respects. Leann, based on Doug's comments and
13 those comments, I don't know that we have to have our path
14 forward. Let's just create that mental note and then try to
15 figure out how, as we move forward, how we would want to address
16 that and how we create that transition or that feedback loop.
17 Steven.

18
19 **MR. ATRAN:** Thank you and I think this might be a question for
20 Bonnie. I guess as far as that working group is composed of, my
21 understanding is that we wouldn't be going outside and that
22 would be primarily SSC members and maybe a council member plus
23 this Management Strategy Evaluation Advisory Committee that the
24 Southeast Science Center is going to form.

25
26 Also, we were told that the Center is in the process of hiring a
27 MSE expert. Each Science Center around the country is doing
28 that and so my question is what time table are we looking at for
29 hiring that expert and for forming that working group or that
30 advisory committee, because that would affect our timing on
31 forming a working group.

32
33 **DR. PONWITH:** We are in the process of developing the paperwork
34 to go to workforce management with that recruitment right now.
35 The recruitment process, the way our system is running right
36 now, is fairly long, but we've got a -- Just to give this some
37 context, the stock assessment peer review that we went through a
38 year ago, one of the results from that was a strong need for
39 management strategy evaluations.

40
41 Just to kind of footprint what we're talking about, it's using
42 simulation approaches to answer complex questions and so you
43 don't use trial-and-error out collecting data in the field and
44 take twelve years to answer something. You use patterns you're
45 seeing in the data, use simulations, and use those simulations
46 to help drive you to better answers, more precise answers, the
47 first time around.

1 We are recruiting for that position and when we bring that
2 person onboard, the structure that we envision is using that
3 position as a corporate resource and so rather than assigning it
4 to this stock assessment group or that stock assessment group,
5 they won't even be in a -- They will work for the directorate
6 and they will tackle -- Because of those broader-scale issues,
7 they will lead the work on those issues, but it will take
8 multiple people across the Science Center and probably beyond to
9 do the work that actually has to be done. They will be the one
10 in charge of it.

11
12 I will tell you that I think first dibs on the first management
13 strategy evaluation that we do is already taken and it's because
14 it's such an influential question and that is to take a look at
15 fishery-independent data collections across the Gulf and the
16 South Atlantic and the Caribbean and to use a simulation
17 approach to determine where are the biggest gaps across the
18 species we're responsible for, in terms of having adequate
19 fishery independent information and how could we potentially
20 restructure our data collections to get at the most dire of
21 those gaps.

22
23 I can imagine you can picture how valuable that type of an
24 analysis would be, because right now, that is our absolutely
25 most expensive data collection that we do, but the flip side of
26 that is there is no input to a stock assessment that has that
27 high of an influence in the assessment itself than the amount
28 and the quality of those data, but these are the types of
29 questions that we'll be answering.

30
31 Once we get past these first candidates, obtaining council and
32 SSC input on other candidate MSEs will be valuable. The short
33 answer to this is there is time. We still have to recruit the
34 position and, frankly, I think the first slot is taken and so
35 there is time to watch to see how this unfolds and think about
36 what is the best way of obtaining council input, from a
37 management standpoint, and SSC input, from a science standpoint,
38 into these MSEs.

39
40 **CHAIRMAN RIECHERS:** Any further comments? Hearing none, we
41 stand adjourned.

42
43 (Whereupon, the meeting adjourned at 9:15 a.m., October 5,
44 2015.)

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