SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

CORAL ADVISORY PANEL

Webinar

May 9, 2018

SUMMARY MINUTES

Coral Advisory Panel Members

Jocelyn Karazsia	Dr. Ken Banks
Dr. Sandra Brooke	Dr. Henry Feddern
Dr. Nicole Fogarty	Michael Merrifield
Jamie Monty	Kimberly Puglise
Dr. Steve Ross	Stephanie Schopmeyer
Margo Stiles	Dr. Joshua Voss

Council Staff

Dr. Chip Collier	Dr. Brian Cheuvront

Other observers and participants attached.

The Coral Advisory Panel of the South Atlantic Fishery Management Council convened via webinar on May 9, 2018 and was called to order by Ms. Jocelyn Karazsia.

MS. KARAZSIA: Hi, everyone. This is Jocelyn Karazsia, and I am calling the meeting to order.

DR. COLLIER: What we would like to start off my doing -- My name is Chip Collier, and I work with the South Atlantic Fishery Management Council as staff, and I'm in charge of helping to put together the Coral Advisory Panel meetings. What we're going to do now is go through the introductions, and, as I call your name, I will unmute you, and if you could just provide a brief introduction to yourself, because it's been a while since the Coral AP met, which was May of 2014. Then, Jocelyn, after we get done with this, then we'll go through the Approval of the Agenda and the Approval of the May 2014 Minutes.

MS. KARAZSIA: Sounds good. Good afternoon. I'm Jocelyn Karazsia, and I work for NOAA's National Marine Fisheries Service's Habitat Conservation Division in West Palm Beach, Florida. My primary responsibilities are implementation of the essential fish habitat provisions of the Magnuson-Stevens Act, and I'm currently Co-Chair of the AP and Acting Chair of the advisory panel today.

DR. BANKS: Ken Banks, and I'm with the Broward County, Florida, the Environmental Protection Department, and I manage marine resources programs, and I've been on the AP for a number of years, and, before that, I was on the Habitat and Environmental Protection Panel for a decade or so.

DR. BROOKE: I'm Sandra Brooke, and I'm a Florida State University research associate, and I've been on the advisory panel for more years than I care to count now, and I work mostly in deep-sea corals, and I've also done some shallow-water work.

DR. VOSS: My name is Joshua Voss, and I'm at Florida Atlantic University's Harbor Branch Oceanographic Institute. I'm a coral reef ecologist interested in connectivity and molecular characterizations of coral health and mesophotic and shallow-reef habitats.

MR. MERRIFIELD: I'm Mike Merrifield, and I'm with Cape Canaveral Shrimp Company, and I am the Chair of the Deepwater Shrimp AP.

DR. FOGARTY: I'm Nicki Fogarty, and I'm at Nova Southeastern University, and I specialize in general coral reef ecology and the coral reproductive biology.

MS. SCHOPMEYER: I'm Stephanie Schopmeyer, and I'm an associate research scientist with the Florida Fish and Wildlife Research Institute in St. Pete, with the coral program, and I'm new to the Coral AP.

DR. ROSS: I'm Steve Ross, and I've been on the Coral AP for a number of terms, and I'm also on the Habitat and Ecosystem AP, and I'm with the University of North Carolina.

MS. PUGLISE: I'm Kimberly Puglise, and I work for NOAA's National Center for Coastal Ocean Science in Silver Spring. I'm an oceanographer, and I manage their shallow and mesophotic coral reef programs as well as coastal hypoxia, and I also used to work in deep-sea corals.

DR. COLLIER: We also have a few observers. Jamie Monty was part of the Coral AP, and he's on the line, as well as Jason Rock and Lora Clarke. If you want to go to Approval of the Agenda, Jocelyn.

MS. KARAZSIA: Sure, Chip, but can I make some introductory remarks, first?

DR. COLLIER: Of course.

MS. KARAZSIA: Okay, and I just want to thank you all for dedicating your afternoon to this meeting today. This is the first advisory panel meeting where I am serving as Acting Chair, since Steve Blair retired. For those of you that were on the advisory panel while Steve was Chair, you know he did a fantastic job getting us through these meetings, and he left behind very large shoes to fill.

I want to welcome our new AP members and welcome back our well-seasoned advisory panel members, and I also want to thank Chip and other council staff for assembling the meeting materials. I know it's been a while since the Coral Advisory Panel has met, and that's largely because the South Atlantic Fishery Management Council has not requested the Coral Advisory Panel provide input on the actions and alternatives that have been under evaluation by the council. However, we're meeting today because the council does want the Coral Advisory Panel input to be reflected in the scoping draft paper for modifications to shrimp and golden crab access areas. That will be submitted to the council in June, which is next month.

A lot has happened in the coral world since the advisory panel last met in 2014, and we try to pepper our meeting agendas to cover some of those topics, and, now that there's a timeline for the council to make decisions related to the Coral, Shrimp, and Golden Crab Fishery Management Plans, I suspect that we may need to meet more regularly, and so, if you have additional topics that you want included in future agendas, we can talk about those during Agenda Item 8, or you can always reach out to Chip or myself directly after the meeting.

I know we have a lot to get through today, and so our first task is regarding the agenda. Chip, I see you highlighted the change we discussed yesterday, which was Approval of the May 2014 Minutes. The earlier version of the agenda had read "May 2017 Meeting Minutes". I also had another recommended change to the agenda. I would like to allow for public comment during the Sub-Part b parts of the agenda that pertain to discussion and recommendations, if that is okay, and I also noticed that we don't have a scheduled break in the agenda, Chip, and so I propose that we add maybe a five or ten-minute break, potentially after Agenda Item 2. Are there any other changes, recommended changes, or comments on the agenda? **Hearing none, is there a motion to accept the agenda with the additional changes that I proposed?**

DR. ROSS: **So moved.**

MS. KARAZSIA: Thank you, Josh.

AP MEMBER: Second.

MS. KARAZSIA: Thanks. Okay. The next item is Approval of the May 2014 Minutes. Unfortunately, I was not able to attend that meeting, due to jury duty, and so are there any recommended changes or comments regarding the minutes as they were distributed? **Hearing none, can I have a motion to accept the minutes as distributed?**

DR. FEDDERN: **Motion to accept.**

MS. KARAZSIA: Thank you. Can I get a second?

MS. PUGLISE: I second it.

MS. KARAZSIA: Thanks, Kimberly. Now I think I'm turning it back over to you, Chip, for Agenda Item 1.

DR. COLLIER: Attachment 1 is the summary of South Atlantic amendments, and this is just to let you know all the amendments that the South Atlantic is --

AP MEMBER: Sorry, but, before we move forward, don't we need to actually vote to accept the agenda and approve the minutes and not just move and second?

DR. COLLIER: Generally, the way we do our approval of the agenda and the minutes, they're usually not too controversial, and it's just by consensus. If there's any edits, people can provide those edits.

AP MEMBER: Sounds good. I was just looking at -- In reviewing the minutes for last time, we actually voted on it, and that's why I brought it up. Thank you.

DR. COLLIER: All right, and so the way these things are separated is we have different fishery management plans for different fisheries. It starts off reviewing some of the snapper grouper fishery management plans, and we have it separated into recently implemented or submitted amendments, and you can see there is items there for mutton snapper, which is Amendment 41, where they are adjusting the bag limit, trip limit, and size limit for mutton snapper. There is Amendment 43, which is addressing an annual catch limit for red snapper and also the annual catch limit for red grouper in an abbreviated framework.

There are several items under development, including recreational measures in Amendment 26, and these are for the vision blueprint regulatory amendment, and what the vision blueprint is, it was a process set up by the council, where they went out and actually got -- They had scoping meetings or visioning meetings with participants in the fishery and stakeholders to really see how they envision the snapper grouper fishery for the future. They are trying to implement some of those options in the recreational visioning amendment, which is Amendment 26, and then also a commercial visioning amendment, which is Amendment 27.

You can see some of the actions that are listed, both in the recreational here, and then, if you follow down, you can see the commercial afterwards. In Amendment 46, they're talking about a recreational permit and reporting, and this is trying to improve information for the private recreational fishery. There is also consideration of a for-hire permit moratorium in the snapper grouper fishery, and they're talking about best fishing practices and powerhead regulations in

Amendment 29, and then adjusting the rebuilding schedule for red grouper in Amendment 30. There is also one for accountability measures in yellowtail snapper and sea turtle gear restrictions.

Going into dolphin wahoo, they are looking at -- They had one recently implemented item, which was a commercial trip limit for dolphin. For golden crab, shrimp, and coral, we're going to be talking about this item today, and it's a combination of three different amendments, Coral Amendment 10, Golden Crab Amendment 10, and Shrimp Amendment 11.

For mackerel and cobia, there were recently catch limits for king mackerel and re-designation of boundary and mixing zones in Amendment 26 that was recently implemented, and there was also a Framework Amendment 4, which worked on Atlantic cobia and adjusting the recreational bag limits, vessel limits, minimum size limits, and accountability measures, and they have two items under development in the mackerel fishery, which is Amendment 31, which would be potential removal of Atlantic cobia from the federal FMP or complementary management of Atlantic cobia. Then they're also talking about king mackerel trip limits in Framework Amendment 6, and this is just addressing one of the lines and some of the trip limits that were there prior to the most recent amendment that was passed.

Spiny lobster has two different items under development, and one is looking at the annual catch limits and recreational traps in Regulatory Amendment 4, and then there is one looking at a procedure for coordinating management with Florida and bully net regulations in Spiny Lobster Amendment 13.

Both the king mackerel and spiny lobster amendments, those are combination amendments with the Gulf of Mexico, and so it takes some time to develop those amendments. We have a few generic amendments, and one is a South Atlantic for-hire electronic reporting amendment, and there is a notice of availability for this, and it's taking public comments through May 13. That is requiring electronic reporting for charterboat vessels with a federal for-hire permit.

Under development is a comprehensive recreational accountability measures amendment, and what that is looking at doing is revising accountability measures for the recreational fishery to allow for more flexibility. That is a very quick overview of a lot of work that's going on. If anybody has any questions, I would be happy to try to answer them, or I can send your question along to the appropriate person that's working on that amendment. Jocelyn, I am not seeing any questions.

MS. KARAZSIA: Okay. Thank you for that update, Chip. Shall we move on to Agenda Item 2?

DR. COLLIER: I think that would be good. I think that's why most of us are here. What the draft options paper is, this is prior to scoping or any management measures being developed, and I was really curious what direction the golden crab and rock shrimp fishermen really wanted to do with these access areas, and I also wanted to get information from the Coral AP as well on how we should draft these potential options and potentially incorporate some of these ideas into the scoping documents.

As I said, we are very early in the process. Things are going to change, and we hope that we get recommendations, and we're going to have more meetings with not only the Coral AP, but probably the -- Well, not only the Coral AP, but also the Shrimp and Golden Crab Advisory Panels,

and so the purpose of this -- The purpose for Coral Amendment 10 and 11, Shrimp Amendment 11, is to modify access areas for the golden crab and rock shrimp fisheries while maintaining the protection of deepwater coral.

While we are the last council meeting, and we haven't had the chance to get the new purpose and need revised for this amendment, and so it stands the way it is until the council can approve the next version of it, but the council also recommended that we include actions in the amendment for VMS for the golden crab fishery and also address transit provisions for the shrimp fishery.

Some of the need for this amendment is to increase access in the golden crab fishery and better achieve optimum yield and to modify access in the rock shrimp fishery. The golden crab fishery has an ACL, and they are generally not reaching the ACL in that fishery, and so there is not a concern of overfishing based on the current ACL definitions, and the rock shrimp fishery is to address some of the concerns from the rock shrimp fishermen that were brought up during the development of Coral Amendment 8.

We have some background and also continued on there is a description of the golden crab fishery and what has occurred in the development of the Stetson-Miami Terrace. These guys, they were requesting an access area in that northern zone, and, while the council was creating the Stetson-Miami Terrace, there was some concern that they couldn't verify where some of the fishing activity was occurring.

What I tried to do in the development of this options paper was go back and do some research on where golden crab have been reported in the past and also some of the research that's been done, and so I have included in some research from Wenner and Ulrich in 1987 and 1988, where they did a two-year investigative study, and they generally looked in some areas off of Georgia and South Carolina, and I have provided you some information in Figure 1.1 about the different zones in the golden crab fishery, where we have a Southern Zone, we have a Middle Zone, and a Northern Zone. What we're going to be talking about today is going to be up in this Northern Zone.

In the study, they described two different fishing vessels that reportedly fished off of Georgia and South Carolina. They fished in 1984 and 1985, and I went back and tried to review those landings, but I could not find them. However, there was another vessel that reported landings beginning in 1987, and there were some years afterwards. They had landings in 1987, 1995, and 1996. Because it was a single vessel, these data are confidential, but I can just tell you that there were landings.

In some of the research done by Wenner and Ulrich up in this area, I identified some of the areas where they had their greatest golden crab catches, and you can see it's right on the boundary of the CHAPC here, and this other boundary is the depth contour that the golden crab fishermen cannot fish below, and so it's right there on the edge of where fishing would be allowed.

However, in talking with the golden crab fishermen, this is not the actual area that they wanted opened up, and so, after we discuss this -- After we go through some more of the background information, I will show you a map that I recently made based on the recommendations from the golden crab fishermen, and these maps are being modified, because I was not able to get it done in time for that, but I will try to provide you the best representation that I can.

The information that we're including in this document is looking at some of the predictive maps from Kinlan et al., and that was developed in 2012, and also some data from the Deep-Sea Coral Research Technology Program, and, the deep-sea coral research data, that information includes locations where deepwater coral have been observed, and so those points are put on the different maps, and you can see the black squares here represent actual coral observations. Then here are the color patterns, and a darker blue indicates a higher probability of coral being in the area, and then, if it's blank, that means there is zero probability of coral.

This figure here was looking at the catches of golden crab in the Wenner and Ulrich studies, and the green triangles that are empty represent no catches of golden crab, and then the yellow triangles represent positive catches of golden crab. You can see most of their work was done here right on the edge, and I do want to point out that, the way that they were operating in this fishery at that time is they were using buoy gear, but that's not how the fishery typically operates.

When they were setting their gear, they often had problems with their buoys going underwater, and so it tended to be very difficult to fish in areas that were likely to be fished by the golden crab fishermen. The golden crab fishermen don't use buoy gear. They use a trawl line, and then they grapple that line back up.

As I said before, opening additional areas should not be an impact to the golden crab fishery. They are well below their current ACL, or their annual catch limit. There is some trend in decreasing landings from 2014 to 2017, and that could be potential decreases in golden crab or it could be due to decreases in effort in the fishery. There was some indication that some of the fishermen have not been as active as they were in the past.

In the rock shrimp fishery, as I have mentioned, in 2015, there was an expansion in Coral Amendment 8, and there was a lot of discussion on this eastern edge of the Oculina Bank, and the Deepwater Shrimp Advisory Panel provided comments to the council in 2015 and some additional coordinates. However, there was not enough time to get those changes into the fishery management plan, and so there was some discussion on whether or not it should be allowed to open up this area, where it's highlighted here, from essentially 29.50 down to 28.50.

If you click on this interactive map, we've had something developed that will allow you to look at these different items in a lot more detail than I have provided, than I could actually put on a map. We have provided several layers in ArcGIS format, and you can see our most recent mapping event that was done in 2017 on the Nancy Foster, and you can see it's overlaid with the Oculina Bank extension, and it also has information on the presence of coral, which are represented by these dots, and mapping, which is represented in I guess this almost salmon color. You guys are more than welcome to look at that link and move it around and play with it how you see fit, and, if there is any data layers that you think I need to put in there, please let me know.

Then the final piece of background information that I'm going to give you today is the shrimp transit provision. As you guys know, this winter was a pretty severe winter, and, when we have a severe winter up off of Charleston and Georgia, sometimes the EEZ out to twenty nautical miles will close for shrimp trawling, and the reason that happens is white shrimp are susceptible to cold-water mortality events, and what they are trying to do is protect spawning white shrimp before the spring harvest.

This year was the first year since 2001 that Georgia and South Carolina have closed due to that cold-water provision, and, when we noticed -- When the closure went into place, there is some requirements where gear stowage has to be done below deck. That might have worked when the original provision was made. However, there are several vessels now that can't even put their doors underneath the deck of the boat, because they actually have freezers in that space now, and there is also some safety concerns with requiring either the door to be on the deck of the boat or the net being unhooked.

The council wanted to include this transit provision in the amendment, and what we did was we've looked at several different transit provisions. There were I think four from the South Atlantic region, two from the Gulf of Mexico region, and two from the Mid-Atlantic and New England regions. We wanted to review if it potentially could be consistent among the areas.

Based on the guidance from the council, we have developed some possible actions and alternatives. For Action Number 1, the first one is to adjust the golden crab access area in the Stetson-Miami Coral Habitat Area of Particular Concern. I have a map here, Figure 1.6, that I was originally considering, but let me take you to a different item that's probably going to be a little bit more useful.

This is the motion that the golden crab fishermen made at their most recent meeting, which was April 25 through 26, and, in discussion of this action, they made a motion to add an alternative for a golden crab access area between the depth lines of 1,600 feet and 2,400 feet from the Northern Zone at Latitude 29 North, continued up through the Stetson-Miami Terrace to the Virginia state line, and reopen low and moderate probability areas and regulate known areas of high concentration of coral. Option b is to reopen low, moderate, and high probability areas and regulate known areas of high concentrations of coral. Option c is to reopen low, moderate, and very high probability areas of corals and regulate known areas of high concentrations of coral.

Based on those directions, I went ahead and made some maps for these. Up top, what's included in the map are depth contours. This depth contour is about 1,300 feet, and this depth contour is about 1,950, and I believe this one is just a little over 2,600 feet. The blue box is the Stetson-Miami Terrace, and then all the black dots are known observations of coral, and then this figure down below is the probability map from Kinlan et al. in 2012. The green is probability in Grid Code Number 1, and then purple is Grid Code Number 2. Orange is Grid Codes Number 3 through 5, and then in red is Grid Code 6 through 10. The higher the grid code, the higher the probability that coral was in this area.

Going through, if you just look at the probability map from the Kinlan et al., we first developed an option where the grid code was zero for the probability, and you can see all these different yellow boxes, which could be potential access areas for the golden crab fishermen. Then it's remapped up here with the actual observed locations of coral.

The next option removes the Grid Code 1 and zero, and, going through a similar process, we made an access area down here based on the probability areas, and then you can look up top where the distribution of coral is in relation to these areas. Going on to the low and moderate probability areas, and so these are Grid Codes zero, 1, 2, and 3, and they are removed from this probability model, and new grids are made. You can see, as we're going through these different options, all these potential access areas are getting larger.

This one includes the zero, 1, 2, up through 5 grid codes are removed. There is this area in the middle of very high probability of coral, and that remains protected. Then you can see, once again, the distribution of coral overlapping the access areas, and the final one is based on their recommendation to remove basically all of the areas, all of the access areas, and that makes this large yellow box, where it follows the depth contour up in the northern portion and then the southern portion.

I didn't cut out this portion right here, where it is deeper than what they had recommended, and the reason that I didn't do that is the Law Enforcement AP recommends that we try to keep these boxes as simple as possible, and cutting out this area would increase the complexity of the area. I am sorry to pop that on the Coral AP at the last minute, but I just got those done yesterday, and I was able to send them out to the golden crab fishermen for their review, but those are likely to be the new options that would be included in this options paper. I think we can go through some discussion here, if the Coral AP wants to do that. That way, we can talk about each action as we go through it.

MS. KARAZSIA: That sounds good. Thanks, Chip, for the overview of the draft options. I guess are there any overarching comments or discussion items prior to getting into each individual action and alternative and having discussion specific to that item?

DR. BROOKE: I don't know where to even start with this, but the ACL -- It seems extremely high, given that these guys have a huge access area in the southern part of that HAPC, and they can't even reach half of their annual catch limit. I think one of the things we really need to address before this request is to figure out what's going on in the fishery. I mean, you said something like it may have been some of the fishermen may have reduced their effort, but those catches have gone down, and, if there is overfishing going on, that really brings into question the sustainability of the golden crab fishery in general, and it really brings into question whether we should move on from an area that is potentially overfished to open up a virgin area which is one of the most understudied deep coral areas in that HAPC. I guess my comment would be that the ACL really needs to be reexamined, I think, and when was it first established?

DR. COLLIER: The ACL was established I believe in 2011 for the golden crab fishery.

DR. BROOKE: It was based on what?

DR. COLLIER: It was based on part of their landings, but it wasn't just based on their landings. It was also to try to allow for expansion of the fishery, and the SSC recognized that the fishery was a pretty new fishery at that time, and it was a small fishery, and there was no indication that overfishing was occurring at that time, and so they wanted to allow the potential for an increase in that one.

DR. BROOKE: Okay, but there was no sort of biological data used there, and so it was just basically a level that was picked that was a lot higher than their landings, to allow them to expand, but it wasn't based on potential overfishing from the perspective of the biology of the animal, correct?

DR. COLLIER: Right, and so what this was is they looked at what they called an ORCS approach, and so only reliable catch series, and it's a very data-limited species, and they were using that model in order to develop it, and I believe there was golden crab and -- There is one other species where they recognized that it was potentially a developing fishery, and they didn't have the ACLs set to their similar process. They envisioned this one as potentially going up, and so I believe that was some of the rationale.

DR. BROOKE: Okay. Well, it seems like -- I mean, this isn't necessarily a recommendation or a motion, but it could be, but somebody needs to look at the CPUE to see whether there is potentially overfishing going on. If that ACL wasn't based on biology and it was based on some computational model to allow fishing to expand, then it's quite possible that it's wrong, and, if there is any overfishing going on, we really need to look at this fishery.

MR. MERRIFIELD: Sandra, I think that there has been -- I think they've had a lot of gear issues with this fishery. It's a deepwater fishery, and there's been quite a few of them that have not been fishing, and so I think that's the biggest drop, is related to participation, reduction in participation, but, of the ones that are still there, one of the reasons they are looking to expand is because of the nature of the fishery.

If you fish an area -- It's a typical rotation fishery, where they are looking for areas that they can rotate through, and they want to be able to rotate through before they come back and the area that they had originally fished comes back, and so that's why they are looking to expand it to more areas, because, once these other boats do get back into operation, they're going to run into some conflict in trying to rotate through certain areas. That's part of the information that I got from the meeting, and I am not a golden crab fisherman, but I'm just kind of passing along some information that I picked up from that meeting.

DR. BROOKE: Thank you. Again, that seems rather nebulous, that some of the guys have had some gear issues, and there must be a way of looking at CPUE. I mean, this isn't rocket science.

MR. MERRIFIELD: I would think there is, because everything is reported, and so you know how many trips have been made over the years and what the landings have been.

MS. KARAZSIA: From what I understand, there isn't a lot of active fishing or fishers with licenses to catch golden crab, or permits for golden crab, and what is the scale of how many operational vessels are actively fishing each year for golden crab?

DR. COLLIER: I haven't looked to see how many guys are actually reporting landings or how many permits are reporting landings, and there are eleven permits in the fishery. I believe, when I looked at it last, there was -- Those permits were at six households or businesses.

MS. KARAZSIA: Okay, and another question related to gear is do we know the range of the length of the trawl lines and grapple lines that are used? I know you mentioned that it's a considerable amount of lines, but we do have an idea of how much is actually let out?

DR. COLLIER: I do not have that. I believe it's in the fishery management plan, and I will send it to you after this meeting. I will send it to the AP after this meeting.

MS. KARAZSIA: Thanks. Chip, do you want us to now run through each of the possible actions and alternatives and discuss?

DR. COLLIER: Well, if we could, let's just go through Action Number 1 that's up here on the screen, and then I can -- I will pull up the motion from the golden crab fishermen. As opposed to what was in there now, this is a more refined version of Alternative 2, where the motion is this, and so, like I said, we're working on adjusting this based on comments from the Golden Crab AP, but, if you guys have any recommendations, please let me know.

DR. BROOKE: Before we get into this motion, I actually left my hand up by accident, but there is something about this that just generally seems counterintuitive to me. You are saying there is six businesses and eleven permits, and it's a very small fishery. They have a huge area in the middle of that HAPC already that is open access, and it's a historical fishing area, and it's a very small fishery and they've got a big area.

If they can't reach their ACL, why do they need to go into new areas? I don't quite understand why they can't -- If there is enough -- I just don't understand why they need to go into new areas if there is such a small fishery and they've already got such a big area. How much do they expect it to expand so that they can reach their ACL? It seems they're not reaching their ACL not because the crabs aren't there, but because they don't have the capacity, and so how is opening new area going to increase their capacity?

AP MEMBER: Well, the area isn't uniform out there, and so there are possible good areas and bad areas, and so it may be difficult for them to find good areas, because it's so deep.

DR. BROOKE: Yes, that really doesn't compute either, because, if it's difficult there, it's going to be even more difficult in an area further north that they're not familiar with.

DR. COLLIER: I know there was some discussion at the meeting of competition in the area, and so they are fairly large trawls that they use, and they said there was some indication that, within these access areas, that some of the fishermen were having to wrestle around what the other fishermen had. Brian Cheuvront, who is the lead for our Golden Crab Fishery Management Plan is here, and he can talk about the actual nature of the gear and the length of the gear and how it works.

DR. CHEUVRONT: The way that this gear is fished is the traps are attached to long trawls, and these trawls can be well over a mile long, and there has been a history in the past, particularly in the Northern Zone, where fishing operations have gotten their gear entangled with another fishing operation, and that zone particularly is fairly narrow, and so what they need is more area, generally in length as opposed to width, to be able to deploy the gear and not be on top of each other. Do you have any other questions about the gear or how the fishery works?

MS. KARAZSIA: I have a follow-up question. What is the kind of frequency of these gear interactions?

DR. CHEUVRONT: You know, I can't really answer that. I know that I have heard from the participants in the fishery, and, as you all know, there is not that many of them, but I have talked

with them, and they have said that it has happened on multiple occasions, but I did not follow-up to ask them how frequently this occurred.

MS. KARAZSIA: Okay, and is there an option for maybe better coordination when folks are fishing to minimize gear interactions?

DR. CHEUVRONT: That, I don't know, and the participants in this fishery haven't always gotten along well with each other, and so the idea of them communicating isn't always -- I am not sure what the likelihood is of that being, to be honest with you.

DR. BROOKE: So they want us to open virgin coral area because they can't sort themselves out and get along?

MR. MERRIFIELD: A couple of things. One is they also have to find flat bottom, because they can't deploy traps on any kind of structure, because the traps will either get caught on the bottom or, if they're not sitting flat on the bottom, they don't catch, and so they're looking for -- In those areas, they're looking for flat bottom to deploy on.

I think any time -- I think whenever you have these large closures like this, I think you're going to have -- I have talked about this with Chip before, that you have to have some kind of a method for going back into these areas that the areas can be relooked at, because, if you do massive closures, like the Stetson-Miami, which is a large closure, you don't know who you are impacting until you get into it. Then you find out that was some activity there at one point in time and now it's been closed out, and there is no method for relooking at that. This is it. What we're doing right now is it, and this is the only way to go about looking at it, and I think we ran into this issue with the original Oculina Bank, where it closed off a large square area, of which a lot of it may not have needed to be closed that was fished, and then there has been no way to go back and relook at that.

MS. KARAZSIA: I have a follow-up question, and I'm not as familiar with the Kinlan model, but, I mean, presumably areas that have moderate or high concentrations of coral, or that are modeled to have that, don't have that flat bottom that would be needed, and so would potentially not be good places to fish, and does anybody know more about that model that could maybe speak to that?

DR. COLLIER: I have looked at the model, but I haven't looked at it in great detail to try to figure out exactly what information is driving the model. I know they used all the information, or subsets of the information, in order to calculate the probabilities based on observations of coral and based on mapping, and they also incorporated sea surface or bottom temperature, and I believe they included some distance from shore and other items like that, and latitude.

DR. BROOKE: The models are strongly driven by coral records, and so that's one of the strongest drivers of the probability. The problem with that northern area is that it's understudied relative to the southern end, in south Florida, up to about Cape Canaveral, and so the models, even though they are showing high probability, we don't have the coral data that would necessarily increase the moderate probability to high probability, which it may be. We also don't have good maps for most of that area. My point is that the probability profiles lose their accuracy if you don't have a lot of coral data.

The other point I would like to make, and then I will shut up, is that we worked with the golden crab fishermen when the HAPCs were being developed, and all of their historical areas remained open, apart from a small area in the Northern Zone, and that's because they could not be identified correctly. The fishermen couldn't say exactly where those historical areas were, and so, yes, we closed a large area, but we did work with the golden crabbers before we closed it to allow them access, and there is 170 nautical miles of access along the Florida coast, and so it's not a tiny little access area, and I think that needs to be taken into consideration also.

DR. CHEUVRONT: The golden crab fishery is set up in three distinct zones, and you must have a permit to fish each zone. The Northern Zone is actually the smallest of the three zones, and so it's not that full 170 nautical miles or whatever that any of the fishermen are allowed to fish in. There is a limited number of permits in the fishery, and each permit is tied to a very specific zone.

MS. KARAZSIA: That last speaker was barely audible, and so, for clarification, you were saying each permit that's issued is attributed to a particular fishing zone?

DR. CHEUVRONT: That is correct.

MS. KARAZSIA: Then can you explain how there are these gear interaction issues if --

DR. CHEUVRONT: Because there are multiple permits in each zone.

MS. KARAZSIA: Okay. Thank you.

MS. STILES: I wanted to thank you for bringing this to the AP, and I think it makes sense that there might be some possible new information, new reconsideration, of the areas as time goes by, and I am mostly here because we actually had a request for a review of protected habitat internationally, and this is seen, globally, as a model process and a model habitat protection, because the golden crab fishermen were in the room with the coral scientists, and there was mapping of the fishing area, and there was mapping of the coral.

It seems like this options paper is a really good start, and there is a lot of solid information on the coral, but that we need to refine the options paper before it goes to the council with additional information on the fishery. I think one of the benefits of this situation is that -- I mean, if there's eleven permits in six households and you have five people on the Golden Crab AP, we have a good sense of the universe and what happens.

It sounds like Brian spoke with some of the golden crabbers, and there should be more information about the problem they are trying to solve, and I feel like we have a very broad solution for what is probably a very solvable, narrow problem, and so, if we're talking about traps entangling between five people, and if we're talking about stowage on five vessels or six vessels, or maybe ten vessels, it seems like maybe there is some kind of technical solution.

Maybe they don't need to have access to the entire -- I think it's unrealistic to have an option that opens high probability coral areas on the table when probably the areas that are closest to their homeport that are in their ideal fishing depth, that should be an option. It shouldn't be solely determined by the coral, if that makes sense, and so like we're trying to solve a problem for a small number of people, and we should spend more time with those people and find out exactly what a

good solution looks like instead of just kind of opening huge swaths and presuming that somewhere in there the problem will be solved.

DR. VOSS: Margot actually just stole a lot of the thunder of what I was going to say. The one point that I would add to that in particular is really a question about the temporal nature of the fishery and if utilizing different time windows would be amenable to helping limit some of these potential gear interaction issues.

MS. STILES: I just wanted to second that I think time is a good question, and another question would be for someone like Mr. Merrifield or the Law Enforcement AP or the golden crab fishermen, the representatives themselves, if they have ideas to solve the stowage problem, and we're not trying to make things unsafe or difficult.

We want to be able to distinguish the real golden crab fishermen from maybe other boats that are not supposed to be in the area, and so we're trying to make it very, very clear who is a legitimate golden crab fisherman. Maybe the stowage below deck is no longer a good indication of that, but there should be something that people that are on the water everyday know when they see a boat that they're like, that's not a golden crab fisherman and that's something else, and so there has to be something practical that allows us to recognize that. If you just kind of throw away whatever the old recommendation was without replacing it, then you're going to lose the original intent of the creation of the coral habitat protection.

DR. COLLIER: One thing I want to point out, Margot, is the stowage issue is just for the shrimp trawl fishery, and that is much larger than eleven fishermen. It involves both shallow-water and deepwater shrimp fishermen that could be potentially transiting from Florida to North Carolina or just Florida to Georgia.

MS. STILES: If we're talking just about the golden crab, I didn't realize that stowage is not a problem for them, and so I still think that talking with the golden crabbers -- We need a little more information on the fishery and the options, if that makes sense, so we have -- Instead of just a little coral or a lot of coral as options, it would be nice to have some other possibilities of things that are close to their homeport and things that are of like greater value to the fishermen.

DR. COLLIER: Thank you. One question I have for the group is are you guys comfortable with us using that Kinlan et al. 2012 version, or are there other recommended models, or do you guys not recommend using that model?

DR. VOSS: I think that there needs to be a recognition that that model has variable probabilities of success and accuracy in different regions, and Sandra alluded to this earlier. The relative uncertainty around its predictions varies by space, and so using the universal confidence of the model for this particular region may not be appropriate.

DR. BROOKE: I agree with Josh, and it's difficult, because we don't have coral records. Well, we don't have many coral records for that area either, and so models are not the panacea. They're just a tool, and so I think they're useful, and they can be used as a guide, but I wouldn't use them to draw boundaries. I would use them as a guidance rather than start drawing lines in the ocean.

DR. KARAZSIA: On page 8 of the options paper, there is a statement regarding an opportunity to have some of this area mapped over this upcoming summer, with additional information being available by September of 2018, and it sounds like this would be a good area to map if there is the ability to do so.

DR. COLLIER: Sandra might be able to speak to this more, but, yes, the Okeanos is going to have several -- It's going to have two different legs of a cruise down here, and one is focused just on mapping, and other is going to be focused on mapping and ROV work, and they are working on the exact locations of where those are going to be.

DR. BROOKE: What I was going to say is the Okeanos is going to be out in this area. Now, I did actually propose -- There is a mechanism through NOAA's online SeaSketch portal to propose areas to be mapped. I think there is still opportunity to do that, even though the deadline has officially closed, and so you can propose areas that you would like them to map.

There are large areas in the Stetson Bank region that are already proposed for mapping and for ROV dives. I can't tell at the moment, looking at this maps, where exactly their proposed fishing zones versus the areas they are going to map, but Kasey Cantwell told me that she is working with council to identify areas that the Okeanos can map. One point though is that, even if we have bottom maps, and they are extremely useful, obviously, but the golden crab fishery is -- As they said, it's a mile line of traps, and they grapple them back up from the bottom, and you are working in a very high-current area, fairly close to high relief.

The historical fishing area and the idea of freezing the footprint, it's that whatever impact is going to happen with that fishery has already happened, and, again, not to sound like a broken record, but it seems that, first of all, there are other issues within the fishery that need to be addressed before we start opening up virgin areas, and the whole agreement in the first place was that this would be a frozen footprint, and there doesn't seem to be enough justification to open up areas that are rich in coral in a dodgy, high-current area, and I just haven't seen the justification for doing that.

MS. KARAZSIA: Thanks for those comments, everyone. Chip, are you looking to the AP to recommend Alternative 1 versus Alternative 2 or to potentially develop an additional alternative?

DR. COLLIER: The AP can develop an additional alternative. We are not really looking for motions in regard to which one is a preferred right now. We are looking at creating alternatives, and I guess one of the alternatives could be to better investigate some of these areas to see if overfishing is occurring prior to opening up new areas. You guys can make a recommendation that no new areas should be opened, if that's what you think it should be.

MS. STILES: I was going to suggest that -- Can we make a recommendation and propose alternatives, because it seems like, if we make a recommendation that the areas not be opened, because there's not enough information, and we don't propose alternatives, then we're kind of missing an opportunity to shape the action if it goes forward.

DR. COLLIER: That's a definite possibility, where you almost do a treed approach, where you say your first recommendation is areas not be opened, and then your second one would be, if you are considering opening areas, consider these pieces of information.

MR. MERRIFIELD: The reason this is coming before you guys is because Charlie Phillips basically brought it back to the table from five years ago, and the problem is, again, is that there is no method for going back to the table and saying, yes, we would like to look at this area and see if there are any more areas that we could fish in in this massively large closed area.

I understand that there's a lot of research that needs to be done there yet, but, again, when you close a large area like that, there is no method for coming back to the table, and so this is a five-year opportunity that may not come along again, and this is why they are trying to make some headway and get some additional fishing area, because the opportunity may not come up again.

DR. BROOKE: I feel like I'm hogging this conversation, but this is the opportunity to change that. This is the mechanism for doing that, and we have proposed amendments based on research outside of the five-year mechanism, and I'm not sure how it works for the fisheries, but we have made changes outside of that five-year loop.

Anyway, this is your mechanism, but the problem that I have is that it seems like the internal issues with the fishery have to do with conflicts between people and to do with permitting, and I don't see the justification for opening up new areas, and so this is your mechanism, but it is under review. Just because it's proposed, it doesn't mean that they're going to be opened, and so this is the process.

I don't know whether this is a recommendation or an amendment or what it is, but I would like to see the golden crab fishery examined for CPUE, and let's establish whether there is any overfishing going on, whether the permitting structure is appropriate, and maybe the permitting structure can be changed to reduce some of those conflicts, and maybe there is some technology that will show where the lines are, so that you can avoid each other or you could talk to each other.

I mean, it seems like there is issues, as Margot said, within the fishery that could be addressed before we just open new areas and let people have at it. I am really strongly opposed to opening these new areas at the moment with the information we have, both on the coral distribution and the justification from the fishery, and I'm not sure where you go from there within the confines of the council.

MR. MERRIFIELD: Sandra, I mean, you're right that this is the mechanism, but, unless the council decides that they are going to take on this amendment, it doesn't happen, and it hasn't happened for five years, even though it was requested five years ago, and so they feel like this is an opportunity here, because it did get brought up by the current Council Chair, but who knows after this when it may become a viable amendment again, because it kind of gets pushed -- There are a lot of important amendments that need to be addressed, and so these kind of get pushed to the background.

There is that, and then, regarding -- I mean, I think you're right. I think there may be some need to -- I know, however many years ago it was when the Deepwater Shrimp and the Coral APs got together, and we talked a lot of this out, and there was a lot of benefit from that, and I don't know if that's something that needs to happen with the Golden Crab or if we just need to get a better handle on what's going on. I know they were specific that they needed more real estate, and their

specific ask was -- Now, whether there is other issues that could mitigate that, I don't know, but that was their specific ask.

MS. STILES: Chip, I think I'm going to have to ask for your help, because I'm out of practice in the wording of alternatives, but I would like to see something that has to do with testing technology, and I don't know if that's VMS or other technology, to prevent gear entanglement to make the existing golden crab areas work better.

I also feel like if we had, as part of that, if it turned out that the VMS was helpful in solving that, and I don't know if it would be, but they use, as you know, AIS to prevent collisions of vessels, and so I feel like perhaps AIS could be used to prevent collisions of gear, but I am not sure how to word that or if that is a -- It's not really in the same frame as the other alternative.

It would be a requirement of the -- What I could imagine the council doing is requiring that golden crab fishermen, and maybe providing funding for golden crab fishermen, to use a certain technology to prevent this gear interaction that is the problem at the heart of this, and so you would need to know what that technology was to be able to require it. If it's ten people, you could also just -- If it works, you could probably just get them to use it if you give them the funding to buy it, but I would like to see that, because I feel like it might be more targeted to the problem at hand.

Maybe the people -- Do we know how many people are in the Northern Zone, because if it's not-- If that's where the overlap is greatest, because it's a small area, that seems like the place where you would test these possible solutions. With AIS, you don't have to talk to each other. You would just see -- You would have more information about what's happening.

DR. COLLIER: I think there are four possible permits that can fish in that Northern Zone.

DR. ROSS: I would like to propose an amendment to the motion, and that is that the first step is to really get more information on the frequency and severity and cost of these interactions. I feel like we've glommed onto that very quickly as the main problem, and I think we need more information from the fishermen and from the data to determine if that is the primary issue.

DR. COLLIER: The golden crab fishermen have indicated that are other issues, and so I will have to get back with them to really discuss those in greater detail.

DR. BROOKE: Just a comment about the technology. VMS and AIS, let me show you where the battle is. I agree with Margot that it would be useful to have some form of technology that shows you where the gear is, but, when we were going through the original regulations for the HAPCs, we decided that VMS wasn't particularly useful because of that. It just shows you where the vessel is, but I think it would be interesting to try and find some kind of technology that will show you where the gear is, and so that's the crux of this, because what Margot mentioned shows you where the vessel is.

There is technology out there, and so it's possible to do that, but I think this needs to be stipulated in here to prevent gear -- Well, actually it does, to prevent gear interaction, but I wouldn't say AIS, because it's not really appropriate for what we're looking at, and I would delete that, actually, because it's a bit of a red herring, because it just shows you where the vessel is. I think that's all I was going to say.

MS. KARAZSIA: In the spirit of time and the need to move forward, do we want to potentially develop another alternative that includes a recommendation to not open any new areas but to also collect this additional information and better understand maybe the communication dynamics that are problematic within the fishery and potential solutions to address those?

DR. COLLIER: Yes, that would be a second motion. If you want to really address the not opening new areas, I recommend developing that as a second one.

MS. KARAZSIA: Okay. That's my recommendation.

MS. STILES: I don't know how the editing works, but I would like the motion on collecting more information to include not opening new areas until that information is available, so that we can make a good decision. I think Jocelyn's point on communication was good, and I don't know where to put that.

MS. KARAZSIA: I also appreciate Mike Merrifield's recommendation to potentially have more direct communication between the participants of the golden crab fishery and the Coral Advisory Panel.

DR. COLLIER: If you guys think we should try to have a joint meeting between the Golden Crab, Rock Shrimp, and Coral AP, we can do that as well.

DR. BROOKE: Just, in reverse order, I think a joint meeting would be useful. They have been in the past, so that we can actually discuss these issues rather than going over the phone, and so I think that would be a good idea, and, sort of as a continuation of that, I suppose, though it's not captured in this motion, and maybe it's just a single motion, but we need to understand what's going on with the fishery. This communication and this gear entanglement has been captured, but what the CPUE is and what the potential for expansion is. It just seems we need to -- Within this motion, I think we need to encompass everything that might be a solution or investigating what might be a solution to this problem that they have without going into new areas.

Maybe, as Jocelyn -- She couched it a lot better than I did, but maybe the motion, or additional motions, could be, as she mentioned, that we recommend not opening new areas pending additional information on coral habitat and a more thorough investigation into the golden crab fishery problems, or something along those lines. Whether you want to put it in this one or not, I'm not sure. Does it go in one motion, or should we put it in two, if we're recommending not opening new areas?

DR. COLLIER: If you could repeat that motion and then I'll put it up on the page.

DR. BROOKE: Oh, dear. Right. Okay. Let's start with we recommend that no new areas are opened pending further information on coral habitat distribution, and that could be a stand-alone, I suppose. If you get too many issues in one motion, people don't really know how to vote sometimes.

DR. COLLIER: I know this is going against Roberts Rules, but we'll put that as a second motion, and then we can come back to it after we get done with Motion Number 1.

DR. BROOKE: Yes, this is an iterative process.

DR. COLLIER: Yes, it's a little different when you're doing it through webinar.

DR. BROOKE: Yes, and so maybe, under Motion Number 1, we should make that the bucket for collecting more information on the fishery, and so that would be frequency and severity and cause of gear entanglement issues. If that's going to be not opening new areas until new information is collected on the fishery, does that go under Motion Number 2 or -- You've got both in here now.

DR. VOSS: I like the tact of having one motion relative to information from the fishermen and fishery and the second motion relative to benthic habitat coral information, because those are going to be two separate lines of information that need to flow in, and the decisions are going to be contingent on both of those separate lines.

DR. BROOKE: Yes, I agree, and maybe take the not opening new areas out of Motion Number 1.

MS. STILES: I think that's a good idea. I also am thinking that -- I mean, I was interested in both the problems that are being faced by the fishery and then separately interested by a wider range of solutions, and so that might be separate, and so collecting more information on the fishery and the challenges they're having, so that we can really speak to that in a targeted way. Then maybe have a separate motion that is we should explore a wider range of solutions rather than focusing in immediately on opening the coral areas, which might also be an option, but it shouldn't be the only option.

MS. PUGLISE: Correct me if I'm wrong, but wouldn't it make more sense to have a single motion with two parts, since both parts need to happen in order for us to consider an opening of a new area, rather than having them separated into separate motions?

DR. COLLIER: All right. Let me work on that real quick.

MS. PUGLISE: Since the floor is quiet, I actually had another point to make. My recollection, from past meetings, for this particular group is that we have to keep in mind that the most important thing to us is coral and coral habitat and making a recommendation based on that, and so, while we are veering into some questions that usually are outside of our territory, like gear interactions and stuff to that nature, I think, ultimately, the issue is we are most interested in trying to determine whether or not there is coral in that area and protecting that habitat.

DR. VOSS: First, I was going to make the same point that Kimberly just did about our purview and focus as the Coral AP. Second, I was -- It could be part of the recommendation, but more just an observation and a question for Jocelyn on clarification. I have heard a recommendation that we do a joint AP meeting, but what I am unfamiliar with is whether or not the fishermen themselves would be members of that AP or if we're actually looking to sit down with the fishermen involved and not just representatives on the AP. My recommendation relative to the meeting, with whoever it is, is that it be in-person and not a webinar.

DR. COLLIER: Yes, it would be in-person, and it would be with -- The fishermen are AP members.

MR. MERRIFIELD: I totally agree with Jocelyn that you don't want to flip into fisheries management of the crab fishery here, and, I mean, I would just -- I think you guys are -- You are the kind of gatekeepers of this area, and so, when somebody approaches you about possibly opening something up, you want to see justification, and then you want to see what the potential impacts are to the coral.

If you don't feel like they are coming to you with enough justification for that, then I think -- I do think the joint meetings work really well, and I think, moving forward, Chip, you told me that you're involved in developing a process down the road here on how these things progress in the future, and I think the first thing is you've got to get everybody in a room and say here's a problem and here's the people that need to be involved in coming up with some possible solutions for that, and that's step number one. Then you move forward from there, and I think we're kind of a little bit out of order here, but I do think that Jocelyn is right that you want to be careful getting into managing the crab fishery and trying to decide how they can best avoid interactions, and that's kind of my point.

DR. COLLIER: Okay.

MS. KARAZSIA: Chip, does the joint meeting need to be included within the motion?

DR. COLLIER: I can just make that recommendation to the council and just let them know about that. I don't think that needs to be a motion.

MS. KARAZSIA: Okay. Thank you.

MS. STILES: I think I may be confusing the different proposals. Right now, we're only looking at the option of having like some access area for golden crab somewhere, and it's not the part where they were listing like high probability of coral and low probability of coral and all those many different things.

MS. PUGLISE: Now, it's the same part.

MS. STILES: Which page are the alternatives on?

MR. PUGLISE: The one that he keeps showing, we don't have.

MS. STILES: I am looking at page 8 that says Action 1 and adjust access areas, and there is no action or create new areas. I don't see -- I am sure you covered it and I just didn't remember exactly --

DR. COLLIER: We had a meeting on April 25 and 26, and the AP recommended that we develop access areas based on that Kinlan et al. model, and I developed access based on zero probability, 1, 2, 3 to 5, and then 6 to 10, and those were the options that I had presented, and, unfortunately, I didn't get it into the briefing book, but I can send it to the group after this meeting.

MS. STILES: That's okay. You guys are still the most like organized fishery management group that I have ever met, and I think I -- I think the Kinlan model is probably a good model, but I actually don't feel like we should develop alternatives based on that model. I think it would be better to develop alternatives based on this additional information that includes both the fishery and the corals.

DR. COLLIER: Okay.

DR. BROOKE: I think Kimberly's and others point about objective drift is well taken. Maybe our motion would be to not open new areas pending further new information on coral habitat distribution, and our recommendation would be that we meet with the Golden Crab and Shrimp APs to discuss ways to come to a compromise or -- Well, that's not the correct word, but to discuss alternatives that may include opening new areas or something along those lines, because we are drifting off into territory that we don't belong, I think.

MS. KARAZSIA: Just to maybe add to that, I think there was some talk about we could benefit from having a better crafted problem statement from the golden crab fishers, and so that would help us further evaluate the need to open new areas.

MS. STILES: I mean, it seems like people are circling around the -- Basically, there is no reason for coral and coral alone to open areas, but, if there is some compelling need and there is more data, then that's something that it sounds like most people are comfortable considering.

DR. BROOKE: To discuss development of potential areas, and I think it's unlikely that this meeting is going to happen before the Okeanos data is in, but we should use their data to consider this. From what Jocelyn said, is that part of the motion, that we would like a document from the golden crab fishery to further their justification or give us more information on why they want these areas open? Is that part of that motion?

DR. COLLIER: I mean, the problem statement really comes in as the purpose and need for this, and it's not all that well-crafted, but it is to modify access areas for golden crab, and the need is to increase access to better achieve optimum yield. Then we could definitely put additional information as we develop it, and that's really my fault that I didn't include all of that information and get that from the golden crab fishermen.

DR. BROOKE: Okay, and so we don't need that in the motion then and that's just something that you do in the background?

DR. COLLIER: Yes. We do have three more actions in this document to go over, and is there a motion that you guys prefer over another one, and that one would be the main motion from the group?

MR. MERRIFIELD: We have kind of belabored this, but I think if you think about -- If they came at you with very valid reasons as to why they wanted to expand into this area, and they were legitimate, and everything was in order, what would be your process for saying, okay, how do we evaluate this to see if there are areas that we can open up?

DR. BROOKE: Well, within our purview, Mike, it would be all about the coral protection. If it came back that there is really no areas up there that the AP felt were safe for this kind of fishery -- Because this is one of the more potentially damaging fisheries, because of the way they're fished and the length of the line.

Really, our purview is not to tell you guys how to fish or to judge the fishery, but it's the corals, and so what our decision should be made on is whether those areas are fishable, in our opinion. However, part of that decision may be, well, there may be areas up there that are fishable, but they still put the corals at risk, because of the way they're fished, and so, if we can't see a justification from the fishery, that may influence the opinion, but that's just me speaking, and I do not speak for the rest of the group.

MR. MERRIFIELD: So, really, that's kind of where -- That's the yea or nay, and that's the go or no go, is, based upon the fishery, how do you evaluate the probability of damage to coral or the presence of coral, and that's really what is going to determine whether you're going to allow something to be opened up within that area or not.

DR. BROOKE: Again, I can't speak for what the council ultimately decides, and this is just me speaking and not for the rest of the AP, but we can use benthic data, multibeam data, and coral records, and we've been working in these systems for -- I have been working in these systems for twenty-odd years, and so we have a good idea, based on literature and other data, where corals are. We know where the good stuff is.

What we don't really know is where the edges of the reefs are, and so that part is kind of problematic, but we can get a pretty good -- If we have the right data, we can get a pretty good handle on where the corals are, and we also know what the currents are doing in those areas, because of hydrodynamics and so forth, and so, using that information, we will look at, okay, if you're trying to lay a one-mile trap line in a two-knot current in a width of sand that is 200 feet wide, there is a pretty high probability that you're going to get hung up somewhere, and we've seen traps that have been hung up and abandoned.

It's a judgment call. It's a judgment call. We don't know where every scrap of coral is out there, but we've got data that will give us a pretty good idea. The trouble is, with the area that you're looking to move into, most of it doesn't have any data, and so, using the precautionary principle, which is part of Magnuson, we should say, if we don't know, and we have a high suspicion that this gear is going to cause damage, then we should recommend that these areas are not opened.

Now, the other side of that, of course, is that your guys don't want to be deploying in high coral areas, because you lose the gear, and so nobody wants to be in the corals, but these are really difficult areas to work, as you know, and so we need to identify areas that are safe, both for the fishery and for the coral habitat, and that's tricky when you don't have any data and you're working in a high coral area. I guess the bottom line is that we use the best available data and we made a judgment call.

Now, if there was a -- If there is no need that we can perceive, and, again, this is me personally, if there is no need that I can perceive from the fishery to even risk those areas, then I would recommend no, because I wouldn't see the need for it. If there is a strong, compelling need to

expand the area, then we would consider it, and we would try and come up with the best alternative possible, and does that make sense?

MR. MERRIFIELD: That's an excellent explanation of where we are. I guess the next step -- With that in mind, you need some more data on how compelling the need is, and then, secondly, and I hate to really kind of put that parameter on it, but let's just leave that as it is, but what's the need, and then what is the data that is needed to be able to, with some comfort level, allow for some additional trawling areas, and, if you don't have it, how do we get it.

DR. BROOKE: The Okeanos is -- Well, the most important basic information we need is multibeam, acoustic sonar data, and that will give us the topography of the bottom, the same kind of data that you guys use on the boats, but its's a wider swath and three-dimensional data, and it basically shows us where the rugged habitat is, which are areas that you guys would want to avoid anyway.

As to how to get it, we've been piecing together multibeam from various research cruises and NOAA cruises for the last fifty years, and we still haven't covered a lot of that Stetson Bank area. There will be new data from the Okeanos cruises, the NOAA cruises, this summer, and so, by I think the end of June, we should have a lot more information about that Stetson area, because it's one of the priority sites that the Okeanos is going to be mapping, and so hopefully we'll have more information by the end of the summer.

MR. MERRIFIELD: My last comment on this is, and we had talked about this before, in our last joint meeting, and that was strapping some electronics to the bottom of these boats to let them collect data as they are passing through these areas or exploring these areas for potential areas to fish. That may actually -- In the meeting last week, they said that they were willing to map whatever you needed to see mapped or let them look for areas that would seem to be high potential areas for the golden crab fishery, and I know that's a whole other -- How to get that to happen is a whole other thing, and so, anyway, that's my last point. Thanks.

MS. KARAZSIA: If there aren't any more comments, I think we need to identify a motion that we want to move forward with. Does anyone have a recommendation, based on the four available on the screen?

DR. BROOKE: **My preference is Number 4.**

DR. COLLIER: Is there a second?

MS. STILES: Could we add something about fishery information, because, this particular version, I like it because it's simple, but it just says new information on coral. **I would suggest that it says do not open new areas until new information on coral habitat distribution and the fishery needs**. If people support that, I would second that.

DR. COLLIER: Sandra, is that good with you?

DR. BROOKE: That looks good to me.

DR. COLLIER: Margot, is that good with you?

MS. STILES: Yes.

DR. COLLIER: Jocelyn, if you want to, I guess, call for a vote, and what we can do is everybody say -- We can do the for and then the oppose and then the abstentions.

MS. KARAZSIA: Okay. I am calling for a vote to move forward with what's on the screen as Motion 4. **All in favor say aye; any nays.** Okay. I think we're moving on to the next action.

DR. BROOKE: Do we delete the unvoted motions then?

DR. COLLIER: Yes.

DR. BROOKE: Okay. Thank you.

DR. COLLIER: All right. On to Action 2. Action 2 is considering VMS for the golden crab fishery, and there is two different options for this. One would be for the entire fishery, which is Alternative 2, and Alternative 3 would just be in the Northern Zone, where there is potential expansion of the golden crab fishery. Then there is sub-alternatives underneath those about who would pay for the device, and then that needs to be modified based on some information that we had from NMFS.

Those are the current options that we're considering for VMS. We've had a lot of discussion on this already, and the golden crab fishermen did not like the idea of VMS. They felt like it was just a cost to them and that it wouldn't necessarily be useful for enforcement. Enforcement also talked about this, and they recognized that a VMS would have limited use for determining whether or not somebody was fishing in a closed area, but it could be used to begin to send a ship in that direction if somebody is fishing illegally, and it helps us to gather better information on where the fishery actually occurs, and so it could be useful in items like that.

You would be getting into a mile or two range from where they're currently setting their pots, as opposed to general areas, such as Northern Zone, and I guess that's how they put it. I haven't really seen how the logbooks are for this fishery, but I would imagine that they're very broad areas, and so Brian said it is by zone. Is there any discussion on that?

AP MEMBER: Chip, can you clarify the additional information you said you had from NMFS relative to Alternatives 2 and 3?

DR. COLLIER: The new information -- I would have to just add in there "if funding is available", and it's just very limited. NMFS said it's usually available, but it's not always available, and so you have to put that clarifying text in there.

MS. KARAZSIA: Chip, what do we know about the cost for the purchase and installation and maintenance?

DR. CHEUVRONT: The federal program that could pay for the gear would pay for all the gear and the installation, I believe, but the fishermen would be required to pay for the data transmission,

which is based on the number of pings that would be required. I think Mike Merrifield can probably address that issue.

MR. MERRIFIELD: Basically, if they're installed, they're paid for, and the first install is covered. Anything that is done after that is up to the vessel itself, and so if there's an upgrade or if there is a -- If something is not supported anymore or if one breaks or something to that effect, then it's up to them to pay for that additional as well as if one would stop pinging. It's your responsibility to get to the dock to have a replacement, because then they are no longer, obviously, able to monitor. Beyond that, it's the monthly rate times a certain amount per ping, which I am guesstimating to be right around maybe fifty-dollars a month, and it might be more, and I'm not sure. It's been a while since I've had a vessel.

I think that there is not really an enforcement value, because of the areas that you're talking about, because there is so much wandering, and I really don't know -- In the shrimp fishery, it's easy, because you can isolate pings by speed of the vessel, whereas I don't know what kind of fluctuations the golden crab vessels have in speed when they're laying gear versus when they're picking up gear versus when they are going back to the beginning of the line to pick up or coming in, and I don't really know what the variations in speed are, and so it's hard to come up with those parameters of a value, and the only thing that might be of value to them, as it was in the rock shrimp fishery, was that it does show effort, where effort is concentrated, but that would be the only value I could see in the VMS.

You're not going to know where the gear is, because they are not associated to the gear at all, and it's only the vessel, but you're not going to avoid your entanglements and things like that, and so the only value I would see would be, long-term, you might see some concentrated effort, but, other than that, that's about it.

MS. KARAZSIA: Thank you for that explanation, and so, from the Coral Advisory Panel's perspective, I thought I heard I think Chip say that law enforcement thought it could be a helpful tool to identify if people are fishing outside of the allowable areas, and did I hear you right there, Chip?

DR. COLLIER: You did, and so, I mean, it would be very difficult to use this to determine if they're a mile outside, but, if they're fifty miles outside, you would definitely be able to see that they're not fishing in an allowable area.

DR. BROOKE: You kind of answered my question, but, back when we mentioned this earlier, when we were looking at the regulations, we considered VMS, but, because of the nature of the fishery, we decided it wasn't useful, and so obviously you are revisting this. My question, probably for law enforcement, is what do you do then if somebody has to go outside of the allowed fishing area to recover their gear, which they may have to? Is that okay, and how far is it okay? Is there a buffer zone, which -- I think you need to talk to law enforcement. Before you go further with this, I think you need to have a conversation with law enforcement to find out what exactly the parameters are, because sometimes these guys have to go outside, the vessels outside, to recover the gear, because of the current. That's just a comment, really.

DR. COLLIER: Does the AP think that this should be included, and is it a good range of alternatives?

DR. VOSS: We talked about this briefly earlier, and, again, in the confines of that previous conversation, it may have been getting a little bit outside of our purview, but here it may not be, and it sounds like the VMS location information of the ship is only of limited utility, but, if that was combined with information about the location of the gear versus some kind of acoustic tracking system, this information would be much more useful, in terms of developing information about the fishery itself and its location and effort.

MS. KARAZSIA: **Josh, would that be a recommendation to evaluate other technologies beyond VMS that are more focused on the location of the gear?**

DR. VOSS: **Yes**.

DR. COLLIER: Is that one good enough, Josh?

DR. VOSS: Yes, that captures what my thought was.

DR. BROOKE: I like that. I think that's a good plan, but maybe amend it to "in addition to" or "instead of", because that's financially burdensome if there is no real information that can come out of it, and I understand your concept, because at least that gives us some information on where these guys are fishing, but, if we come up with technology that will tell us where the gear is, then we may not need VMS and the financial burden associated with it.

DR. VOSS: Agreed.

DR. COLLIER: This doesn't necessarily have to go in the motion, but just a question for me. Would you want to have something like VMS, where it's readily-accessible information, or do you want information that could be downloaded when they come back closer to land?

DR. BROOKE: This is the problem with technology, and so VMS gets directly sent to NOAA, the enforcement center, and so they can see it real-time, and, of course, they can call the vessel and say, hey, you're in the wrong place, or they can go out and do their enforcement thing. That is useful for -- Obviously it's useful for vessels that are fishing right next to their gear. This additional technology, I think, is probably, at least initially, unlikely to be integrated so that law enforcement can see it.

Ideally, yes, that would be the case, that it would be real-time, and maybe if it's GPS and satellite-based it could, and so, ideally, it would be real-time, but I think maybe the limits of technology would dictate whether it's real-time or not, and so it depends on what technology would come up with whether it's real-time or not, but, yes, ideally, it would be. Does that answer your question?

DR. COLLIER: Yes.

MR. MERRIFIELD: I was just trying to clarify the goal, and, really, the goal that you want is to know where the gear is being set, which would give you some more insurances that it's not being set in the areas of higher probability of coral, and so, if they were to expand the area, then this might be a tool that would help, whatever this tool is, and it might be something that would help -- It would alleviate some of the concern with where this gear is being deployed, and so I just

wanted to -- My hand was up and down, because, as you guys were talking, I am seeing where you're going, and so I've got it.

MS. KARAZSIA: Are we ready to vote on this motion? Is there any additional discussion?

DR. COLLIER: I am not seeing any hands, if you want to do a vote.

MS. KARAZSIA: Sure. We're taking a vote on whether or not to move Motion 2, as currently worded, forward. **All in favor, say aye; any nays. The motion is approved.** Now we'll move on to Action 3.

DR. COLLIER: Action 3 is adjusting the Oculina Bank OHAPC eastern edge that was established in Coral Amendment 8. It's this narrow strip here, and that's the information where we have the new mapping data, and it's on this page here. If you guys want to play with it, you're more than welcome to go to the available data that we put in there, and then I will open it up for your discussion, and so, before we do that, there were some locations that were provided to the council, like I said, in 2015, but there wasn't time to really continue developing those motions, and so the council went forward with the information that they had available.

MS. PUGLISE: Can you show on that map that we're looking at right now exactly where the area that they want to open is?

DR. COLLIER: I do not have that location plotted out. I had to do some digging in order to find the coordinates, but, hopefully by the end of the week, we can have those coordinates put up here on this map.

MS. PUGLISE: Without that information, it makes it very difficult for us to discuss, because, for instance, if it was right there where the little orange dots are, I'm going to say no, because our whole point is to protect the coral, but, if it's not there, I might feel differently.

DR. COLLIER: Okay.

MS. PUGLISE: Because, again, these lines were drawn based on not just where we saw coral, but also to make it a nice box for enforcement.

MR. MERRIFIELD: A couple of things. One is we have -- Enforcement was a lot -- They didn't have to be exact square lines. I mean, the straighter the lines, obviously the easier for enforcement, but, if you -- I don't know if you have it readily available, Chip, the VMS charts that we used when we developed that amendment, but what happened was a lot of the VMS dots, which is what shows where the concentration of effort that occurred, got eliminated by the coordinates that went through at the last minute, and it was kind of last minute.

It's hard to get all these fishermen together in one place, but we did get some coordinates that were submitted late in the game, and so they were not incorporated into the amendment at the time, but the reason that we have VMS is to show where the concentration of effort is, and so we should utilize that data, and so that's basically what we're saying, is that there is an area of high productivity that was eliminated that can be shown by the graphs or by the track data that we brought to the table that we would like to see that last-minute request considered.

If we can pull that up, you will kind of get an idea of what the area is that we're looking for, and there is all kind of maps going around with different types of bathymetric data on it, and this is very hard to read, I find, with the coloration there. It just doesn't do it for me. I can't really see anything from that, but, if you show some charts that have some bathymetric data on it, it's a lot easier to see where the structure is and where the soft bottom rolldown from the reef actually occurs.

DR. BROOKE: Just to reiterate what Kimberly said, we created those lines to protect the corals, but there's another factor also with trawling. The trawling chronically kicks up sediment, and corals don't like sediment, and this is a very high-current area, and so accidents happen, and the combination of the chronic sediment resuspension and the wiggle room for deployment, and we really need a buffer around the corals.

Having said that, I agree with Mike and Kimberly that it's really unclear from what you're showing us what exactly we're looking at and whether there is sand there and how far away that is from the coral mounds, and we can tell that from the bathymetry, but we can't see it right here, and so do you need an answer right now, or can we leave this for further digestion and consideration? Because I wouldn't want to make any recommendation based on what I'm looking at right now.

DR. COLLIER: That's fine. Do you have any data layers that would be beneficial that we could add onto this that would help in your understanding?

DR. BROOKE: John has probably got the most up-to-date Oculina multibeam, but, like I said, I just can't see what I'm looking at. Mike, how deep is this area that you are trying to open?

MR. MERRIFIELD: We're at probably -- I think the closest that the request goes is like ninety-four meters.

DR. BROOKE: That's on the hairy edge of the banks, and we would have to really look at this. That's within coral depth. If it was over the edge, in 150 meters or so, you might be far enough away, but that's really close.

MR. MERRIFIELD: The current boundary is in like -- It's less than a hundred. It's like ninety-six, maybe, meters, the current boundary.

DR. BROOKE: Right, which is four meters shallower than where you're looking. Again, we can't -- I can't say anything at the moment, looking at this, and so I think this requires a little bit more sort of time and consideration based on the information that I personally have in front of me, and I wouldn't feel comfortable making a recommendation.

MR. MERRIFIELD: I totally agree. I mean, this is -- We need better visuals than that, and I think there are some available, and, with VMS, if you can apply VMS points on these charts, Chip.

DR. COLLIER: I am trying to pull those up, and I don't know if we're allowed to display those publicly. I will have to see what we can do with those. There is certain limitations of what you can do with VMS, and so I will have to check on what we're allowed to display with the VMS points.

MR. MERRIFIELD: There were several charts in the last amendment that I wrote all the VMS points.

DR. COLLIER: Yes, and so, with that, you can't get -- I mean, you get a pretty good location on where they were, but, if it's on something like this GIS map, people might be able to zoom in, and so I think we can turn it off, where they can't zoom into specific points, but that data is confidential information, and we don't want to violate those issues.

MR. MERRIFIELD: I don't understand the confidentiality.

DR. COLLIER: It's just part of VMS.

MS. STILES: There is latitude for a council to display, and you just can't hand over the data points, in the past. I think it would be great if you could look into that further and come back to us with a display at the appropriate resolution.

DR. COLLIER: Right.

DR. BROOKE: I think, in the past, they have somehow clustered VMS so that it's kind of an average of three vessels or something, so they can display it that way, but it is confidential. Can you zoom in, Chip, on the map that you've got right there, so we can see the edge of the bank where that new multibeam is? Okay, and so that's -- Sorry, but we've already asked you this, but you can't show on here where their proposed opening area is, can you?

DR. COLLIER: I have not created that yet, no.

DR. BROOKE: Okay. It looks like there is some rugged areas just peeping in on the western edge of that multibeam.

DR. COLLIER: Where the red is peeking in?

DR. BROOKE: Yes.

DR. COLLIER: Okay.

DR. BROOKE: I think it would be a case of overlying the areas proposed with what we have here, since we have multibeam at the eastern edge. Rather than getting back a map, we've got the data, at least some data, and so it would be a case of developing a map illustrating it better and not collecting more data. I think you've got it right, actually. Develop better maps with bathymetry and VMS points, so that we can determine whether this is acceptable or not.

MS. PUGLISE: Perhaps develop better maps with existing data, so that it's clear that we really don't want you to collect new data.

MR. MERRIFIELD: Chip, I'm a little frustrated. This is not an easy process to go through, and how much time have we wasted now by not having -- I mean, if we needed to have a joint meeting from the beginning in order to go over these things, that's what we should have done. This is not

new data. This is data that was brought up years ago, and it's now, just by chance, it's coming up to relook at it, because the council, at that time, said we will look at this at another date, and so now we're several years down the road here, and we have this opportunity to relook at it, and we're kicking the can down the road again. We have better data available than this. We have better charts available than this, but we're not seeing them to be able to make the decisions that we're being asked to make.

DR. COLLIER: I don't think we're necessarily making final decisions here. What we're making is recommendations on how to improve this document and to make it the best document possible, and so when options are developed that the council and other APs are able to look at this, and the other APs are going to include likely a joint meeting between the Coral, Golden Crab, and Deepwater Shrimp APs, and so, to me, this is helping me develop a better document for you to review at a later time, and so I don't think it's kicking the can down the road. We are very early in the process, and, typically, APs don't meet to discuss something that hasn't gone out for scoping yet, and so I'm trying to get ahead of the game and trying to get everything that we need for evaluation by you guys.

MR. MERRIFIELD: My apologies. I probably am not familiar with the process and what the next steps are, and so I will step back from that comment. I'm sorry.

DR. COLLIER: It's all right. I understand your frustration.

DR. BROOKE: I understand your frustration too, Mike, but it's part of the decision-making process. Just a picky thing with this motion, and I like it, but maybe clarify what we mean by "the area", and so this is the proposed open area or something, proposed fishing area.

MS. STILES: You could say "boundary adjustment".

DR. BROOKE: Yes, that's probably better.

MS. KARAZSIA: Any additional suggestions to the language of this motion, or are we ready to vote on it?

DR. COLLIER: I am not seeing any other hands.

MS. KARAZSIA: Okay. **All in favor of Motion 3 as it's currently written, say aye; any nays. The motion is approved.** Now we're moving on to Action 4, the transit provisions for the shrimp trawl fishery.

DR. COLLIER: Yes, and so what I have listed here is there are four different transit provisions in the South Atlantic region, depending on what type of area they are crossing, and so, if you're crossing a cold-water closure, you can see that the Alternative 1 is that option, where if you possess -- If you have brown shrimp, pink shrimp, or white shrimp, it may be possessed onboard a fishing vessel in a closed area, provided the vessel in transit and all trawl nets with a mesh size less than four inches, as measured, blah, blah, blah, are stowed below deck while transiting the closed area. For the purpose of this paragraph, a vessel is in transit when it is on a direct and continuous course through a closed area.

This is the main reason that this whole transit provision is being looked at, is because, during the cold-water closure -- This is a large closure area, and it goes from Georgia up through South Carolina, and it's part of the EEZ, and it goes out from three miles to twenty miles. When the area is closed due to the cold-water closure, a lot of the vessels can't stow their gear below deck, and so we're considering modifying this transit provision, and we're trying to see if there is other language that we have potentially in what we have listed for MPAs, spawning SMZs, or the Oculina Bank, and those are Alternatives 2 through 4. Alternative 5 is a Gulf-protected area closure language, and Alternative 6 has Gulf shrimp language, and then Alternatives 7 and 8 have Northeast Zone closures.

Some of the differences range from such as in Alternative 2, where a trawl net may remain on the deck of the boat, but the trawl doors must be disconnected from such net and must be secured. In the spawning SMZs, or spawning special management zones, it lists that stowed means that trawl doors and nets must be out of the water, but doors are not required to be on the deck of the boat or secured on or below deck, and then, in the HAPC, vessels fishing or possessing rock shrimp in or from the area, except a shrimp vessel with a valid vessel permit for rock shrimp that possesses rock shrimp may transit the area if fishing gear is appropriate stowed. For the purpose of this paragraph, transit means a direct and non-stop continuous course through the area, maintaining a minimum speed of five knots, as determined by an operating VMS and a VMS minimum ping rate of one ping per five minutes. Fishing gear appropriately stowed means that doors and nets are out of the water.

You guys can go through and read the other alternatives that are listed there, if you would like to see them, and those are the range of ideas that we're considering, Alternatives 1 through 8, for something like the cold-area closure.

We are also considering whether or not we should have consistent regulations, because, like I said, we have different regulations in marine protected areas, and that is Sub-Action 4.2. In Sub-Action 4.3, we have spawning special management zones, transit provisions for those, and then Sub-Action 4.4 is when the vessels are transiting the Oculina Habitat Area of Particular Concern, and so if you all have any recommendations on what we need or if these areas should be consistent, or if we're missing some potential alternatives for this.

MS. STILES: I think I wanted to ask the advice of others on the call. I am concerned that some of these shrimp fisheries are different from the rock shrimp and royal red shrimp that are relevant in this case, and so I'm not sure if the mesh size or the sort of context of the -- Like there is a reference to a bag strap, and I'm not sure if some of the really specific ones are appropriate for this fishery.

I am not saying they are or they aren't. I don't know, and so there is kind of a fundamental question here of whether we want to leave the "appropriately stowed" language in Alternative 4 and Alternative 5 that leaves some discretion to, I presume, the boarding officer to say that this is appropriately stowed or not or whether we want to have something that is very specific to the rock shrimp or royal red shrimp, because I think the reason for variation may be because of variation in fisheries, and I don't have enough experience with the other fisheries to know how different they are.

MR. PUGLISE: I am feeling like this might be a little bit outside our purview, in the sense that what we care about is -- Basically the reason why these provisions are here is to determine whether or not someone is fishing illegally or not, and that is the bottom line of what we care about. What equals not fishing is a matter of two things. One is safety and two is enforcement, and so, to me, for the Coral Advisory Panel to judge something that really is in enforcement's bailiwick seems a bit odd.

We, bottom line, don't care what they've done as long as enforcement can tell whether they're fishing or not fishing, and, whatever that language need be, let it be. I think we're not necessarily the appropriate ones to say, well, it's safest if the doors are in the water, but not attached. It just doesn't make sense for us to make that kind of call. I do think there is value though, from a general perspective of having consistency, if it's possible.

MR. MERRIFIELD: That was very well said, Kimberly. I think that the main focus of the Coral AP would be to ensure that illegal fishing is not occurring, and these are some very diverse fisheries that you have listed here, and that you can make one is kind of crazy, and I don't really see how you can do that and keep safety in mind and ensure that illegal fishing is not occurring.

I think, in our meeting, in the Deepwater Shrimp AP meeting, we came up with what we thought was sufficient to say that we're not fishing, and I think law enforcement needs to look at that and say that's sufficient to us and it's not putting anybody in harm's way, and so this is an acceptable definition, and I just don't think you're going to get something that's going to go across all these fisheries, and even some of these different zones, SMZs versus MPAs versus HAPCs, and there are large areas and there are small areas, and there is just all kinds of different things that have to go there, but I really think that you've got to look at the vessel and say what are they capable of doing in a safe manner to ensure that illegal fishing is not occurring and that's what it should be, and it should be -- Minimally, it should just be in a safe manner.

DR. BROOKE: I kind of agree with other two speakers. The Alternative 4, the Oculina Bank HAPC regulation, came from a Shrimp AP and Coral AP meeting about the banks, and this is a rather convoluted proposal or solution that we came up with, but it seems that -- As the other two speakers have alluded to, there may be some common theme that can be done, like removing the trawl doors and stowing them away so they can't easily be replaced, something like that that can be done across the fisheries, but this is really a discussion between enforcement and the fishers, rather than us, and so maybe this is something that we can move off of our plate, because I don't think we have the collective expertise here on the Coral AP. We can come up with ideas, but we're not the ones that really have the expertise in this field.

MS. KARAZSIA: Do we know what the Law Enforcement AP -- Did they have a preferred alternative?

DR. COLLIER: They did, and I don't have it with me right now. I know, at the joint meeting between the Golden Crab and Deepwater Shrimp, they recommended doors be out of the water, and, Mike, you might be able to help me with it, but it was doors out of the water and --

MR. MERRIFIELD: The nets hung, which means they're hung up above the deck and they're not in the water, and I think they went to the point of saying the bag strap is off, which means the bags are open.

DR. COLLIER: Yes, the bag straps had to be off. That's right.

MR. MERRIFIELD: Right, and so, I mean, even if the doors are -- It gets complicated, because, first of all, there is no down-below space for any of these things, and so it would have to be on the deck, but even putting those doors on the deck is dangerous, especially if you're in rough sea, and, typically, they're out at the ends of the outriggers, but out of the water. The main thing is the nets are onboard, and they're hung, up high in the rigging, and that's going to tell you that they've been out of the water for at least thirty to forty-five minutes, or actually longer. To get all the nets up and out of the water and out of that position, it probably takes about an hour to get that done.

MS. STILES: Thinking about what people are saying about what is the purview of the Coral AP, and I thought that one thing I liked about the Oculina Bank HAPC language is that it specifies which fishery it's relevant for, and so I think there is a role for the Coral AP to say which fisheries we're concerned about impacting these areas, and so perhaps there is something we could say about that without weighing-in on which language and saying that we support -- Just being silent on that, potentially.

DR. COLLIER: Is that okay?

MS. STILES: I am happy with it. I am not super clear on --

DR. COLLIER: You broke up there, Margot.

MS. STILES: I am happy with it, unless -- I think another option would be for us to not say anything.

DR. COLLIER: I would leave that up to the group. We will say this is -- Jocelyn, can we say that this is a motion and see if there's a second?

MS. KARAZSIA: Yes. Is there a second?

AP MEMBER: Sure. I will second that.

MS. KARAZSIA: Okay.

DR. VOSS: Are we open for discussion on it now?

MS. KARAZSIA: I'm sorry. Is there additional discussion on it?

DR. VOSS: In reading through the Action Number 4, it's certainly not specific to rock shrimp, yet we've developed a motion that is specific to rock shrimp, and is that appropriate?

DR. COLLIER: Well, I mean I think it's -- If you guys feel comfortable making recommendations for just one of these and saying that that's what you're really trying to address and that's where your expertise lies, then I think that's what you guys should say.

MR. MERRIFIELD: Okay. You might just make that -- I don't know if you want to make it deepwater shrimp, and, that way, you have your red shrimp in there as well, because they both have to transit that HAPC.

MS. STILES: I agree.

MS. KARAZSIA: Are there any additional recommended changes?

DR. VOSS: It should be "fisheries".

MS. KARAZSIA: Is the next step voting on the motion, Chip?

DR. COLLIER: Yes.

MS. KARAZSIA: Okay. **All in favor of Motion 4 as it's currently written, say aye; any nays. The motion is approved.**

DR. COLLIER: All right. You wanted to take a break after this?

MS. KARAZSIA: Do folks need a quick, five-minute break? If there is no need for one, I'm okay with moving forward. Then moving forward with Agenda Item 3.

DR. COLLIER: Yes, and so just tell me when you would like me to change the slide for you.

DR. VOSS: No problem. Thank you for the invitation to speak for a few minutes about the disease issues that are currently happening on coral reefs in Florida. It's been very much a concerted effort from many different agency partners, and you will see one of those typical every agency and university slides here near the end, but I just wanted to acknowledge the people that had contributed directly to some of the information you will see in this presentation as well as those that have been involved in a smaller disease advisory committee that Stephanie has been leading recently, and so she hopefully can chime in, and please feel free to do so, Stephanie, if you have anything to add or if you need to correct anything as I'm going through this.

This was a new disease, and I've been intentionally vague about the name of the disease, because there has still been debate even among some of the coral disease working group about what specifically we should be calling this, but it was first observed near the Port of Miami in 2014, and it is characterized by a very distinct line of necrosis and subsequently rapid tissue loss, and so, by that description, it would fall into the white syndromes category for coral diseases, but it's been called white blotch and white plague type by number of different researchers, all likely addressing things that we think are similar in terms of their etiology.

One of the challenges with this outbreak, as compared to others, is that we really don't know if we're looking at a single pathogen system that's presenting in the same way with slight variations across species or if it could be multiple different pathogens that are presenting in a somewhat similar way, and so there is work going towards those efforts as well.

To date, at least fifteen different coral species have been affected in south Florida, and so it's roughly half of the scleractinian coral species that we had, and the initial spread was quite rapid.

Within that first year, it had spread from kind of the epicenter there in Miami up to Palm Beach and the Upper Keys. You can see, in the two panels on the right, that the disease rate of progression can be quite rapid, like on the Pseudodiploria strigosa bottom, but, in other individuals, like the Dendrogyra on the top, they have been more slow to progress, and so making estimates about the fate of colonies has been one of the major aims.

As I mentioned earlier, the disease has presented in various different ways in various different locations and on various different colonies, but what seems to be fairly consistent is, number one, a fairly rapid tissue loss. At times, but not always, it's accompanied with a band of bleached coral tissue, or coral tissue that appears to have lost its integrity and its adhesion to the coral skeleton at the disease interface, and, unsurprisingly, some of the corals that it appears to present most interestingly or uniquely on are Siderastrea siderea, and we've seen that for other diseases as well, but, like many other diseases, it marches across in a horizontal fashion.

What is quite interesting about this disease, as compared to say black band, and, again, I am using the term "disease" in a very broad sense. We do not know yet if this is a pathogenic infection, but it is an impairment and loss of function, and so it certainly qualifies as a disease. One of the differences about this disease, as opposed to others, is that multifocal or multiple lesions on a single colony appears to be quite common.

As of late 2017, it had basically spread from the original epicenter all the way up into Martin County, and I will talk more about that in just a moment, and down through the Middle Keys, and there was a lot of hope that perhaps Seven-Mile Bridge might represent a natural hydrological boundary and perhaps prevent the spread of infection into the Lower Keys. Unfortunately, the disease was recently observed at Looe Key, in fairly substantial prevalence values, and so it has reached lower the Lower Keys and Looe Key, which is regarded by many as one of the last great places of coral, and that "great" is, of course, relative, in the Florida Keys.

The extent to which it's going to continue to spread down into the Lower Keys is currently unknown, but it has not been observed beyond kind of a background level of other plague-like diseases in the Sambos or in Key West, to date.

That progression in the Keys has been probably some of the most well tracked, in terms of the spatial extent, and most of this has been through CREMP data that has been collected by FWC and partners, and so you can see, using the circles here that roughly depict years and timelines, that spatial progression down through the Keys, and then again recently that jump across to Looe Key Reef that we've seen, and then it's going to be an open question about which areas it extends to going forward. There is multiple efforts to try to map the progression and the extent of disease and its etiology, in terms of moving through the coral population, both at the reef scale and at the multiple reef scale, that are ongoing.

To give you an idea of the impact of this disease relative to kind of other levels of background disease that we've seen in previous years, this is a subset of data for our CREMP data, this Coral Reef Ecosystem Monitoring Program, and this is just from 2011 through 2017 in just the Upper Florida Keys, but you can see that, for a number of coral species, total disease prevalences were relatively low, and certainly it was never extending much beyond -- They may be 15 percent or so in some of the Pseudodiploria strigosa and Siderastrea in 2014, but most in the single digits.

However, in 2017, you can see this rapid increase in the Upper Florida Keys, in terms of the prevalence, and so it's not only the spatial extent that has been increasing during this disease outbreak, but also the relative percentage of corals within each species that has increased dramatically in the past year or two.

For a long time, we have been tracking corals at the northern extent of the Florida Reef Tract up in St. Lucie and Martin County, with the hope that these corals were relatively resilient, even while we were getting and observing lots of disease in Palm Beach County and in Jupiter. All the way until April of 2017, no disease had been observed in this location, and so we were hoping that it was perhaps resilient, or at least just not getting exposed to a pathogen, if this is indeed a pathogenic disease.

Unfortunately, those hopes were incorrect, and the disease was reported in May of 2017, and we got up there for some more detailed surveys shortly thereafter, and we observed similar overall prevalence numbers of about 14.3 percent. In the Upper Keys, it was about 14 percent as well, and there were less coral species affected, but that was driven only by the fact that there are less coral species at St. Lucie Reef as compared to other places in Florida.

I think one of the most striking things is that we went for some coral species, like the knobby brain coral, Pseudodiploria strigosa -- Inside of a month, we went from no disease prevalence whatsoever to over 40 percent prevalence, and so it was very rapidly moving through this particular population.

As if this disease outbreak wasn't bad enough, then Hurricane Irma decided to play a visit, and you will see from the main track here that it could have certainly been much worse for the east coast of Florida than it was. However, we did have records of waves in excess of twenty feet along the northern southeast Florida coast, the Treasure Coast area, and Martin and Palm Beach County, and so we wanted to understand both the potential impacts of Hurricane Irma as well as any interactive effects between potential hurricane stress and this disease.

This was a task from FDEP and other partners that was a rapid assessment that was conducted along the entire Florida Reef Tract in about a three-month span, and Brian Walker and I were responsible for the portions from essentially halfway down the Dade County line and up.

In these post-Irma disease-focused surveys, a couple of things really popped out, and the orientation of these figures on the right is that essentially they should stack on top of one another, and so the panel on the left would stack on top of the panel on the right to make a contiguous swath through southeast Florida.

Essentially, what we saw is that we saw quite high disease prevalence rates up in Martin County, as you see at the top of the left-hand panel, and fairly high disease prevalence rates in Broward County and down into Miami-Dade as well, but, interestingly, in Palm Beach County, there was fairly low disease prevalence, and so we think that essentially we had an increase of disease just due to -- This is a working hypothesis, but an increase in the spread of disease in the southern areas of southeast Florida and that particularly up in Martin County that complicating factors from freshwater discharge, suspended sediments, and high turbidity may have contributed to additional coral losses and exacerbated the disease conditions there.

To give you an idea of the relative percentages within individual corals in this more northern section of the Florida Reef Tract, what I am calling southeast Florida, we saw, again, an overall prevalence in the region of about 11 percent, which was comparable to some of the overall prevalences that has been reported in the Keys, and some of the similar species were being affected, and most of which were relatively massive reef-building species, leading to concerns that not only are we losing corals, but we may be losing some of those corals that are most important in terms of ecosystem function.

What was interesting, particularly in the region that we were focused on, was that we were seeing strong differences in the species that were being impacted in Martin and Palm Beach County versus Broward and Miami-Dade County, and part of that is driven by the relative abundance of these species across that region, but there also seems to be an interaction between location and species susceptibility that I think is interesting in terms of -- There have been some ideas advanced that certain species were always getting affected first as it moved down into the Florida Keys, and we did not see that same pattern as this disease advanced up into Palm Beach and Martin Counties. These high-prevalence values also were contributing to high mortality values, and we have lost over 60 percent of the corals at some of the sites in Martin County.

To give you an idea about the relative abundance of colonies being lost, Meandrina meandrites is one of those sentinel species that does get impacted first, and, here, you can clearly see that this is CREMP data from the southeast Florida sites, and, by 2016, Dave Gilliam's group was reporting that they were effectively -- Meandrina were effectively extricated from all of the sites that were included in this study.

For Montastraea cavernosa, the story is not quite as bad. The first thing to note here is that the Y-axis is roughly an order of magnitude greater, in terms of densities of corals, for Montastrea cavernosa versus Meandrina, and, again, we see a significant drop from 2015 to 2016, but one of the encouraging things for Palm Beach County at least is that, when we returned to some of these sites just last month, none of the Montastrea cavernosa were showing any signs of infection at this time, and so that was one bright spot.

One of the other corals that has really been a focus due to its current conservation status and previous losses to the Florida population is Dendrogyra cylindrus. These four panels are sequential, and so, from 2013/2014 through 2018, and, again, it's the same story as before, where you can see this expansion of the number of sites being reported with disease and then, shortly thereafter, dead Dendrogyra cylindrus in the south Florida area.

If we look at that in terms of a total Dendrogyra population effect, two big take-home messages. Number one, at least 95, and probably closer to 98 percent, of the existing Dendrogyra had been lost in roughly the past five years, and some of those are from disease, and some of those are from other impacts as well.

Currently, there has also been a dramatic decline in the number of existing genotypes that are in the wild. There is now roughly a third of what had existed previously, and there have been additional genotypes that have been harvested and brought into culture, either at Mote, KML, or some additional partner locations, with the hope that there could potentially be some sexual reproduction of these cultured individuals and perhaps future restoration in a time that may be more favorable for corals, if that's possible.

Some of the efforts that are ongoing currently, and most of the individuals undertaking all of these different studies are involved in that disease advisory committee, but there is a number of different efforts to look at individual colony fate tracking, and there has been a move to develop monitoring teams that can quickly deploy to areas that do start to show new signs of infection. One of the major questions is just how quickly are we losing these corals, and, based on coral status, do we even have an idea of whether or not an intervention would be possible?

Paul and Aeby, as well as some others, have been doing some transmission experiments to try to understand if this is indeed a bacterial pathogen, and it seems to be presenting as such to date, and so, accordingly, Julie Meyer, in collaboration with a number of us, is looking at individual samples, and, to date, six different potential pathogens have been cultured and are undergoing additional testing.

Erin Muller at Mote has been working on some epidemiological modeling. Most of this is in relatively small spatial scales, to try to understand the spread of this disease within a reef, patch reef or area, of a barrier reef and not across the entire Florida Reef Tract. One of the challenges with this study is that the disease seems to be moving so quickly that the frequency of sampling needed to effectively model it is much higher than we may have anticipated earlier on.

Jan Landsberg, along with Dr. Peters, Esther Peters, and Cheryl Woodley, have all been working some histological approaches to understand this disease, and there has been some clear indications of crystalline bodies being included, which, again, would seem to suggest perhaps that we could be looking at a pathogen existing here and a pathogenic response.

Then we have also been looking at gene expression of corals displaying signs of disease versus nearby colonies and comparing that to previous data, to try to understand how the coral is responding physiologically and then also comparing that to some of the genotype data that we have for long-term tracked corals, to understand if there is any kind of genotypically-derived resistance, because we do see instances where two corals that were right next to each other of the same species -- One gets the disease and dies, while the other persists just fine.

We have also tried to become more active about potential intervention ideas, ranging from the relatively simple and -- I guess I can use the term “barbaric”, since I suggested some of these, but amputation of infected areas or perhaps even euthanizing entire colonies to help prevent the spread within a population. There has been some ideas about using either UV light, or even welding torches, to potentially try to arrest a pathogen and kill a pathogen that may be causing the disease signs, and then there’s been a number of different topical treatments that have been suggested and tested, with varying levels of success.

The vast majority of those, there is not sufficient replication yet to say whether or not it could be successful. Some of the early suggestions about using chlorine-impregnated epoxy, for example, do not seem to be successful. They are killing the corals as well as potentially the disease along with it.

The things that do seem promising, although whether or not they would be effective in a large field-based application still remains to be seen, are combinations of some kind of physical barrier, be that trenching the coral to create a firebreak, or putting down an epoxy line in combination with

both antibacterial and antiseptic applications, but the vast majority of these have only been tested ex situ on small fragments. Brian Walker's group is starting to test some of these trenching and barrier approaches with epoxy on some of the large corals that are affected in southeast Florida, and the results of all of these are really pending at this point.

A quick summary, and this disease outbreak is now four years ongoing, and it's still expanding in geographic scope. Roughly two-thirds of the Florida Reef Tract is affected at this point, and roughly half of all the Florida coral species that we have are affected, and those that are affected, again, are those large, typically dominant, reef-building corals. There seems to be a relatively high frequency of mortality, but a lot of that data is anecdotal. Now that we have some more targeted fate tracking programs in place, I think that we're going to be able to say that with more confidence.

I think that places like St. Lucie and others really have driven home this fact that there is obviously additional contributing factors to disease susceptibility and disease incidence and colony loss, and that's been a combination of hurricanes, water quality, thermal stress, et cetera. Again, on a somewhat bright note, recent surveys in Palm Beach, Broward, Key West, and the Dry Tortugas have all indicated no disease incidence at this current time, and so that's somewhat hopeful.

With that, we'll go to the last slide, and this gives you an idea of the scope of just how many people we're coordinating, and this is not me coordinating it. Most of that is being coordinated by FDEP and FWC, and so thank you to them for all of their efforts, and, if there's a few minutes, I will happy to answer a couple of questions. Thanks.

MS. KARAZSIA: Thanks, Josh. I get a sense that there is less awareness of the severity of the disease outbreak as you move outside of southeast Florida, and so I think it's good to present this to the advisory panel today. I just wanted to mention that -- Well, you mentioned the epicenter being the Port of Miami, and I just wanted to further elaborate that the known epicenter was a monitoring station that was required by the Florida Department of Environmental Protection for the Port of Miami expansion project, and, although this disease outbreak occurred when the Army Corps was dredging over four-million cubic meters of material, the dredging event is often omitted from the disease chronology conversation. With that, we'll take any questions for Josh.

DR. BROOKE: I was going to ask if you think that this -- If you guys think that there is any -- Well, there is obviously a correlation, but any causation there with that port dredging, because, of course, Lauderdale is going to start soon too, isn't it?

MS. KARAZSIA: I would be interested in hearing Josh's thoughts on that. Lauderdale is scheduled for a 2020 start date, currently. Yes, the coral has also experienced multiple bleaching events prior to the disease outbreak, and so I don't think that the excess sediment in the system probably helped them become less susceptible to the disease.

DR. VOSS: I would agree with Jocelyn. Unless we were able to determine a pathogen or pathogens and then link that particular pathogen back to sediments from that event or something else, it's difficult to directly point a smoking gun. However, we know, from multiple studies, that sedimentation and turbidity and loss of light could be contributing factors that make corals more susceptible to infection, and so we definitely could have had an epicenter and a high prevalence of disease as a result of complicating factors, and that high prevalence of disease could have been what contributed to pathogens increasing in abundance and then spreading by some mechanism

thereafter. The rate, extent, and directionality of the spread leads me to hypothesize that it's likely waterborne or carried by some waterborne particles of some kind, and whether those are biotic or abiotic is unknown.

DR. BROOKE: You have no idea of the pathogen yet? You've had people working on for a while now, and you have no idea?

DR. VOSS: There are some -- The ones that are currently in culture have not fully been tested, and so I would not want to put words in Julie's mouth, or Val's mouth, about whether or not those could be verified as pathogens yet. What I will say is that the things that have been cultured from the diseased band are some of the typical things that we think of as pathogens.

DR. BROOKE: Which can also be incidental, and so I know it's tough. Unless we can figure out why it happened and where it happened and what is causing it, it's difficult to prevent it happening again, right?

DR. VOSS: Correct.

MS. KARAZSIA: Any additional questions for Josh?

AP MEMBER: Is it one pathogen or many?

DR. VOSS: I think we do not know at this time. I would say that the Ockham's Razor hypothesis would say to look for one pathogen first, but, just because you find one, it doesn't mean that there is not necessarily others.

AP MEMBER: Are all of the symptoms similar on the corals, or is the symptom different for each species?

DR. VOSS: The disease signs can present differently across different species. As I mentioned previously, that's probably most apparent in Siderastrea. Simple questions of, if you take a presumably infected Montastrea cavernosa that is displaying in one way and put that in a tank or next to a Siderastrea, after transmission, is it causing those different disease signs, and those kinds of experiments have not been done yet, and so I would say that the affected corals that we're seeing -- The vast majority of the massive corals present in a similar fashion, in terms of a rapid tissue loss, leaving behind bare coral skeleton with a tissue margin that often is slightly flayed and bleaching, but there is lots of variation to that, and that kind of description would also equally fit with previous descriptions of white plague, for example.

AP MEMBER: Could there be the initial infection by one pathogen and then other organisms prey upon that or attack the weakened tissue, so that you can have many attackers?

DR. VOSS: Of course. There has been numerous studies published that demonstrate shifts from being commensal bacteria to pathogenic bacteria or confirming the presence of pathogens in a non-pathogenic state in coral mucus, presumably lying in wait until the system is disrupted and they can go pathogenic, and so I think that that is possible. Again, the approach, in my opinion, would be to first operate under the assumption of a single pathogen, given the rate, spread, and directionality and similarity among the signs and symptoms, but, if we are successful in finding

one, I don't think that means we stop looking for the possibility of secondary or additional pathogens.

AP MEMBER: Are other things than stony corals being affected?

DR. VOSS: There are some other soft corals that have shown tissue loss, but, because the disease signs are so dissimilar from corals, it's not being characterized as the same thing. I am not aware of a concerted effort at this point to sample those other things and test those for pathogens. If anyone on the call happens to know of those, please chime in, but I am not aware of any efforts in that regard.

DR. BROOKE: Just a quick question. Josh, are you looking for viruses or just the sign of bacteria and the bacterial families?

DR. VOSS: There has been a thought to look for viruses, and we preserve samples in a way that could also be amenable to looking for viral DNA particles, and some of the histologically-preserved samples could be investigated for viral-like particles as well. I have had a very brief conversation about that with Julie, who is leading up most of the pathogen efforts, and we have thought about additional partners to engage to make that effort as well, but that's not my main thrust.

MS. KARAZSIA: Any additional hands, Chip?

DR. COLLIER: I am not seeing any.

MS. KARAZSIA: Okay. Thank you, Josh. I appreciate the update, and I propose that we move on to Agenda Item 4, the Southeast Florida Coral Reef Ecosystem Conservation Area, and Ken Banks was nice enough to offer to give us a quick update on this.

DR. BANKS: "Quick" will be a key word. I am going to start with a little background on this. Back in 2011 or 2012, we decided that we needed -- We had a lot of efforts going on to develop conservation recommendations and measures, and the Southeast Florida Coral Reef Initiative was the big one, but the thing I thought was missing was the elected officials' participation. We as stakeholders and agency people, we can only do so much and get so much attention, but I thought that the elected officials representing these people could maybe have a little more weight.

We pulled together some of ours, and then County Commission, Kristen Jacobs, she gathered them for us, with her influence, and we put together a group of county commissioners and city commissioners of the coastal counties of Martin, Palm Beach, Broward, and Dade County. We spent a year educating them, because none of them knew anything about the ocean, and then we spent two more years developing recommendations for conservation, and that group was sunsetted, which means it went away, and they were originally established by resolutions of the counties and participating cities, so that we had some official recognition.

The recommendations, they came up with a suite of things, from water quality and coastal construction impacts, the usual stuff, but one of the top, or at least in order, recommendations was to develop a management plan for the deep waters, coastal waters, of southeast Florida. The group went away, and this group was called the Southeast Florida Coastal Ocean Taskforce, and they

went away, but another recommendation was for a subset of those members, elected officials, to stay together to try to implement these recommendations.

We had a small group that decided to do that, and they were an unofficial group, and they weren't recognized through any resolutions or any official method, but they called themselves the Coastal Ocean Forum. The one issue that -- They had to prioritize, because there were maybe a hundred recommendations, and so they prioritized two of those, and one was to develop that management plan, and the other was to implement a coastal water quality monitoring program, which hadn't existed to that point. Broward County had three or four sites that we would look at monthly, but that's certainly not spatially robust, and it really doesn't tell you a whole lot.

The question was how do we do this, and so they felt the best way is, one, ask the legislature to fund this, the coastal water quality, and, because of the disease epidemic that Josh so nicely presented, we thought we would include funding for that as well, and then, as far as the management plan, we thought, well, how do we have something with teeth, and so we thought the first step would be to establish a box around our waters, an official box, to set boundaries of an area within state waters that we could then address from a management perspective.

Last year, our County Commissioner, Kristen Jacobs, had termed out as a County Commissioner, and she then was elected to the Florida legislature. She took that on as sort of a champion to propose legislation to designate this box, and, in that legislation, and this was from 2017, it included developing this management plan, which included not only DEP as constructors of that plan, but the Florida FWC, Fish and Wildlife Conservation Commission, because fisheries are important and the reefs, and there is not really a connection very well in the policy there.

Last year, she proposed in the House, and then Gary Farmer, Senator Gary Farmer, in the Senate proposed legislation to establish the box and develop a management plan and then also legislation to provide $1 million in funding for the epidemic and for coastal water quality monitoring. We passed unanimously in the House last year, but we didn't make it so good in the Senate, and so, this year, this past year, in 2018, we reintroduced the bill, and the language for the box was whittled down to eliminate the management plan. There were some groups that were opposed to this. They were concerned we were trying to eliminate fishing in southeast Florida, which was not the case, but, in their concerns, they wanted it whittled down, some of the language, and so the $1 million in still there.

Let me back up. We did get the $1 million in 2017. In 2018, we proposed this box legislation, and DEP put the $1 million in their budget for the disease and water quality monitoring, and so the language got whittled down to just create a box, and I think there's a presentation, and Chip may have it, and he can show the picture of the box, but it's so long that it's hard to get a perspective on it, but it basically runs from Martin County, St. Lucie Inlet, down to the Biscayne National Park boundary. The Biscayne National Park is covered under federal, the National Parks, and then the Keys are in a Sanctuary, and so they weren't included in the box.

This year, we passed again unanimously in the House, and we did make it a vote in the Senate, and it passed unanimously. Subsequent to that, the Governor signed it, and so it has officially been designated as the Southeast Florida Coral Reef Ecosystem Conservation Area. What does that mean?

It doesn't restrict or place any restrictions or requirements or regulations on anything. What we want to come out of this is the development of a management plan jointly by FWC and DEP. We also would like -- We think this would make it easier to budget funding within our southeast Florida waters through DEP's budgeting process, rather than going for special appropriations, which is very difficult. It requires a lot of lobbying and sponsorship, and it's quite drawn out and unreliable, but, this way, we think that we can kind of get into their budgeting system, and it's a lot easier to get funding for conservation measures, but, at this point, we're just hoping for a good management plan.

We have spoken to FWC commissioners and management, and they have some higher priorities right now, but we're hoping that they can help come to the table and collaborate in development of a management plan, and so that's all there is to it at the moment, and I can answer any questions you have.

MS. KARAZSIA: Thanks, Ken. I know you played a large role in coordinating this, and I'm hopeful that this will facilitate more conservation in the box, and it also makes me hopeful that it has such bipartisan support moving through the State of Florida system. Any questions for Ken?

DR. BANKS: I will add, before questions, that, if it hadn't been for the die-off of the Indian River Lagoon from the water discharges a couple of years ago and for the coral disease epidemic, we may not have made it through, but these brought great attention, and it was non-partisan, and the impacts to the Indian River area were tremendous economically, and our coral disease epidemic -- I gave a talk to one of the sub-committees when we were trying to get this through, and it really showed this disease problem, and then I tied to the economics, so that we have two things in one, and no one could deny the impacts, potential impacts, of any kind of reef degradation to the economics, and so it quickly became non-partisan, which is why I think it went through so well.

MR. MERRIFIELD: I was curious how many active graywater outflows exist in that defined conservation area.

DR. BANKS: I am sorry, but what's the first part of that?

MR. MERRIFIELD: I was just curious how many active graywater outflows still exist in that area.

DR. BANKS: We have secondarily-treated wastewater outflows, and I think they are maybe -- I don't know the exact number, maybe five or six, perhaps? They are supposed to be closed in 2025, I believe, by legislation, but there have been communities trying to push that back, because of the cost of alternatives.

MR. MERRIFIELD: Would any of these funds push for that kind of infrastructure changes?

DR. BANKS: The only funds -- Last year, like I said, we got a $1 million for disease and water quality, and, this year, DEP requested the same, and I heard this morning that they didn't get the same amount, and so that's earmarked for water quality monitoring and for the disease epidemic at this point.

MR. MERRIFIELD: (The comment is not audible on the recording.)

DR. BANKS: Any funding that would go toward alternatives to wastewater outflows would have to come from some other legislation, and I'm not aware of that.

MR. MERRIFIELD: I'm up in the Indian River Lagoon area, and funding is a huge issue for the infrastructure changes that need to take place.

DR. BANKS: (The comment is not audible on the recording.)

MS. STILES: Thank you, Ken. Do you need anything from this group? I mean, are you looking for -- You are trying to get the attention of FWC, and you're hoping to use some of this funding to do work in Broward, and I was unsure of sort of what comes next and if you need something from us.

DR. BANKS: The funding is not for Broward. It's for southeast Florida, and so we have water quality sites throughout the region. Our mayor, county mayor, and a commissioner from Martin County, a county commissioner, spoke to FWC, who met in Fort Lauderdale a couple of weeks ago, and they sort of hammered home that we need you here at the table, and there is certainly -- It's not that they're not willing, but it's just that they have some other things on their plate at the moment, but any encouragement to them of the importance of this management plan I think would be of value, and so in whatever means you could do that would be useful.

DR. BROOKE: I would just like to say, Ken, congratulations. I know what a heavy lift this was, and it's nice to hear at least a glimmer of good news in the coral world, and I suppose it's -- This is an iterative process. You take what you can get, and then every year you can push a bit more, but getting a budget line item for the funding would be a huge coup, and so power to you and the people that you work with. It's good news.

DR. BANKS: It taught me a lesson. If you want to get something done, you need people with influence. In our case, it was elected officials.

DR. BROOKE: Right, and an ecological disaster doesn't hurt either.

DR. BANKS: That doesn't hurt, especially two of them.

DR. BROOKE: Right. We've got the same issue up here in Apalachicola Bay. The oyster fishery has completely crashed, and now they're throwing millions at the problem, and they're just telling the scientists to go away and fix it, but it's useful. It's just a shame that it takes that from time to time to make this happen.

DR. BANKS: Yes, it does, and, if you can tie the economics to the issue, then you're all the more successful, hopefully.

DR. BROOKE: Yes, and the next thing to do is to fix the problem, isn't it, or problems. Anyway, good luck.

DR. BANKS: Thank you.

MS. KARAZSIA: Any more hands, Chip?

DR. VOSS: I just want to say thank you to whoever organized it such that we got to follow up my news with Ken's news.

MS. KARAZSIA: Okay. I guess now we're moving on to Agenda Item 5, which is an Update on Deep-Sea Coral Research from Daniel Wagner.

DR. COLLIER: Unfortunately, Daniel is on vacation today, and so he asked me to give the presentation for him, and so it's not going to be nearly as good, and there is others on the call that will likely know more about this than I do, and so they can chime in at any time, but what Daniel was going to be talking about today was the Southeast Deep Coral Initiative Efforts in the U.S. South Atlantic Region.

The funding comes from the Deep-Sea Coral Research and Technology Program, and it was part of the reauthorization of the Magnuson-Stevens Act of 2009, and it's looking at developing science to address fishing and other threats to deep coral, and they define deep coral as coral greater than fifty meters, and it integrates expertise in the resources across NOAA, and it incorporates fishery management agencies as well as NOAA scientists and academics.

They are funding fieldwork initiatives, and they have also done some background research through the program. The way the program has worked in the past is that it allows for three to four years in a certain area, and it provides funding for research expeditions, analysts analyzing the data and samples, and some of the research includes mapping and also ROV dives, and then you can see some of the specimens that have been collected in some of the past work.

It has been making its rounds, and it started in the southeast in 2009 to 2011, and then it went to the west coast from 2010 to 2012. From there, it went up to Alaska, and that work was done from 2012 to 2014. Then it switched back to the east coast and did work in the northeast from 2013 to 2015, and then it went out to the U.S. Pacific Islands. Since then, it has come back to the southeast, and it is concentrating on this area not only in the South Atlantic Bight that it did before, but it's including the Gulf of Mexico and the U.S. Caribbean, and so the size of the area has increased significantly.

Some of the issues that they were identifying in the Gulf of Mexico are fishing impacts as well as energy impacts, and you can see plotted here is the Flower Gardens National Marine Sanctuary and their proposed expansion as well as protected areas in the Gulf of Mexico Fishery Management areas and some of the proposed habitat areas of particular concern, and those are in purple.

In the U.S. Caribbean, they have identified some potential issues with deep-sea corals. Some of the deepwater snapper fisheries occur over coral, and they're not certain of the effects in those areas, and there is also concern with some deep-sea submerged cable. The cable is used to connect North America with South America, and so a lot of it is traveling through the U.S. Caribbean potential coral reef areas.

In the South Atlantic, they have identified potential fishery issues as well as energy issues, whether it be wind farms or offshore drilling, and those are the potential impacts there. Here, you can see all of the protected areas in the South Atlantic, and, these green areas that they have, those are

actually in place now, and they went in place in 2017. As I said before, this area is -- It's larger than it was before, and it's a tremendous area to get all the work done, and some of the proposals that have been requested might not get done this year, but hopefully they can get done when it comes back around or maybe through other funding sources. We have identified some diverse management priorities, whether it be fishing, energy production, or deep-sea corals.

They have developed a science plan for this, and they have identified some of the management issues. As we've been talking before, some of the management issues we're looking at are fishery issues, energy development, and also cable connections. They also identified research questions and potential expeditions and projects.

All the data will be publicly available. They're either going to be publicly available through reports, online apps, data portals, or in libraries, and you can see each of these are all presented, and this is an app, and these are some of the databases that were used in the development of the options paper that I put together for you as well as the information on the bathymetric lines.

Some of the research projects are here, and there's been some data mining. Sandra Brooke has been leading some of that, and we've also had the development of a deep-sea species guide developed by Daniel Wagner and Peter Etnoyer. They have looked into some geodatabases through Daniel Wagner as well as Tim Battista and Dan Dorfman, and they have done some habitat modeling by Matt Poti, and that's -- I believe that's an expansion on some of the work that was done by Brian Kinlan in 2012. They have also developed some environmental monitoring, and they are creating some fisheries citizen science projects in the Caribbean, and that's being led up by Andy David.

In data mining, in the Gulf of Mexico, they looked into the Flower Gardens, and they looked at data from 2001 to present, and they included some of the Harbor Branch Oceanographic Institute data from 1986 to present. In the Caribbean, it used NCCOS data from 2004 to present, and then there was Okeanos Explorer work that was done in 2015. In the South Atlantic, they are using data from Harbor Branch from 1986 to present as well as some NOAA initiatives that were done from 2011 to 2014. The work includes some ROV dives as well as identification of coral and some of the mapping efforts.

Here is some of the online geodatabases that exist from existing and proposed management areas, some previous submersible dives, looking at museum and visual record counts, multibeam data, satellite data, information on place names, current pipelines, oil and gas structures, and then the habitat modeling in the bottom right.

The deep-sea species guide that is currently available, you can look at it online, and here's a link to it, and it provides identification for some of the deepwater species. Anything that they collect in this program will be included into that deep-sea species guide to help future efforts. Habitat modeling, they are doing field tests on the existing models to refine them, and they are also developing new models for important taxa, and they are currently developing models for the Caribbean region. It hadn't been developed in previous modeling attempts.

As I mentioned before, they are doing some environmental monitoring. In some of these areas, they are deploying temperature loggers in select sites to better understand upwelling events and overall temperature regimes in the deepwater areas, and they are also collecting water samples for

carbonate chemistry, and that is going to be used to determine the impacts of climate change as well as other impacts that could be occurring.

The fishery citizen science project that's going on is a pilot project in the Caribbean, where they are requesting fishermen to drop these deep-drop cameras into areas where they are fishing in order to better identify the habitat that they're fishing on and the potential impacts that the fishery could be having.

Here is some of the field work that occurred in 2016 and 2017, and they had seventy-seven dives around the Flower Garden Banks using the R/V Manta. They had thirteen dives by the Nancy Foster in the Gulf of Mexico, and there was some mapping done that we displayed previously done on the Nancy Foster, and there were some AUV dives done off the Canyons up off of North Carolina, and there were ten dives done there. Then the Okeanos Explorer had seventeen ROV dives.

The field work for 2018, they are going to be busy. The R/V Manta is going to do another fifteen dives in the Flower Gardens, and there are going to be twenty-three ROV dives in the Gulf of Mexico, and that hasn't been defined exactly where they are, I believe, and then the Nancy Foster, and that was some of the work that Sandra was talking about that hasn't been defined yet, but it could be used to map some of the important areas in the South Atlantic region. In addition, they're going to be doing some ROV dives in the South Atlantic region as well. There is going to be twenty-two dives. There will be nineteen dives done with the Atlantis, using ROVs, and then, down in the Caribbean, they are proposing eleven ROV dives. That is going to be nine expeditions with 116 days at sea.

Here are all the current expeditions that are planned to occur in the Southeast Region, including the South Atlantic, Gulf of Mexico, and Caribbean, and you can see the leaders of each of these projects and the ports that they're going to be going out of and the regions that they're going to be working. They have been trying to really coordinate among these different primary funding sources to make sure that they're getting the best information and leverage each program to incorporate as much information and use the money as wisely as they could.

Here are the team members, and it's led up by Tom Hourigan and Heather Coleman, as well as Peter Etnoyer and Daniel Wagner. The science team includes Tim Battista, Andy David, Stacey Harter, Caitlin Adams, Martha Nizinski, G.P. Schmahl, and Emma Hickerson. With that, I will do my best to answer questions or potentially deflect to people like Sandra.

MS. KARAZSIA: Thanks, Chip. This is an important update for the AP, and I appreciate you stepping up to the plate to deliver the presentation in Daniel's absence. Are there any questions for Chip or Sandra?

DR. BROOKE: I don't know when I joined NOS, but that's okay.

DR. COLLIER: Well, congratulations.

DR. BROOKE: I will have to demand my paycheck. This probably isn't important, and everybody is tired, but this research project, which a lot of this work is being done under, is actually a new -- There is a whole slew of PIs involved in this enterprise, and it's actually funded primarily -- I

better not say that, but it's funded by BOEM to us as contractors, to our scientific groups as contractors, to do the science and in partnership with NOAA to do the fieldwork and the USGS, who also have scientists involved, and so that is not just a NOAA effort. It's actually a multi-federal-agency effort, and it's a four-year project to look at deep-sea corals and cold seeps in canyons between North Carolina and Jacksonville, and so it's an ongoing, quite extensive and expensive project.

MS. KARAZSIA: Any hands up, Chip?

DR. COLLIER: I am not seeing any.

MS. KARAZSIA: Okay. If there are no questions, I propose that we move forward with Agenda Item 6, which is Regulations Recommended for Removal.

DR. COLLIER: All right, and so what this is, it's, on February 24, 2017, President Trump signed an Executive Order to lower the regulatory burden on the American people by implementing and enforcing regulatory reform. Essentially, what this created is, in order to get one regulation put in, you had to remove two, and so we're working through that and trying to determine exactly what it means. What we're trying to get from you guys is to determine if there is any regulations that are outdated or should be modified in order to meet some of this.

There is a financial threshold for a lot of the regulations, for this regulation, and it's generally -- I believe it has to be over a million-dollar impact, and it might be more than that, and I'm not positive, and so it's unlikely that many of our fishery management plans actually have that kind of impact or any management action that would have them. What we have so far is that are a few items that are listed.

In the golden crab fishery, when they were establishing the fishery as a controlled access fishery, there were several piece of information that were in there, and that is out-of-date. Since it's already been established, we can remove these regulations without having any impact. There has been some discussion on general permits and fees, and what they're talking about is the mail renewal, and NMFS SERO is considering these changes. This will save time and expense for both the permit, license, endorsement, and government.

Another regulation that they're considering removing is powerhead regulations, and so this is actually included in an amendment that we talked about in the very beginning, but we're also listing it here as a potential for removal, and it's to be consistent with regulations with the rest of the South Atlantic. These species, blackfin, queen, and silk snapper, they are deepwater species, and they are talking about removing the size limit for them. It's likely that, when these fish are brought up from the deep depths, that they are dead anyways, and so it's not of much economic or ecological benefit to have a size limit on them, and the removal of those size limits is being considered in the visioning amendments.

In the shrimp fishery, there was discussion of removal for operator permits, and what an operator permit is, it's a permit that a captain must have on a fishing vessel, and this has been used to be able to track whether or not a fisherman typically violates laws, and so, the way that the tickets can go right now is it typically -- If there is only a vessel operator, the tickets will go to the vessel operator, and it's very difficult to track whether or not a fisherman has had any violations, and so

this is a way that potential violators can be tracked, and a vessel owner might not hire that operator if they have a history of violations. When the rock shrimp fishermen discussed this, they said it might be worth keeping this regulation.

There is some discussion on whether or not the establishment of coral HAPCs should be done through a framework procedure, and a framework procedure is just a quicker version of a fishery management plan, and, since we typically go through a series of review, like what we're doing with the current amendment, then it's unlikely that this should be done through a framework.

We talked about the shrimp transit provision, and that's listed here, and then the dolphin wahoo fishery, and they're talking about removing some permits in that, and that would be operator permits there as well. With that one, they are recommending removal of that one, because it's not really used for enforcement.

In the coastal migratory pelagics, they're talking about removing the Atlantic cobia from the stock, and these are the regulations that would be removed if that occurs. With Atlantic cobia, there is two genetic stocks of cobia in the Southeast region, and they mix somewhere off of Florida, or maybe not mix, but there is a zone of transition off of Florida, and so they're talking about moving cobia on the Atlantic coast under the Atlantic States Marine Fisheries Commission, because, in Virginia and North Carolina, where the bulk of the harvest is occurring, it occurs in state waters off those states. Then they're talking about modifying annual catch limits, annual catch targets, and accountability measures for cobia.

Then, in the spiny lobster fishery, they are talking about removing the ACL for that species, and it's been considered in the past, and the reason that they're considering it again is due to its unique life cycle, where it appears that some of the recruitment is coming from external sources, and the long larval stage of the spiny lobster. Due to those factors, there is a provision under the Magnuson-Stevens Act to consider not having an ACL for that species.

Some other ideas that came up while we've been discussing this is the elimination of the two-for-one requirement for Snapper Grouper Permit 1, and what that is, that's the unlimited permit for commercial fishermen. Right now, in order to get -- If you're an individual and you want to buy into the fishery, you have to buy two licenses in order to have one active permit.

Another item that has been discussed is sea turtle release gear, and some of the fishermen feel that it's overly burdensome for such a low frequency of occurrence, especially for smaller vessels. We need to revisit safety equipment, particularly on smaller vessels, and some of the safety equipment is difficult to get on those smaller vessels. There is some discussion of removing circle hooks. There is also some discussion of buoy gear requirements for golden tilefish and whether or not -- It's the distance off the bottom, where the hooks can be, and also the limit on the number of hooks that can be on that gear.

They want to potentially extend the time that federal permits are valid, and what they're talking about is making it two or three years, in order to reduce the federal manpower and also reduce the burden on the fishermen. There is the potential to retain fish that have been cut. Right now, if a fish has a tail that's cut, they're not allowed to bring those in, and they are seeing a substantial increase in the number of fish that are being eaten by sharks, and so they would like the potential to bring back some of the fish that have had some marks or cuts on them.

They're talking about eliminating tournament sales of fish. King mackerel and some snapper grouper species are allowed to be sold during tournaments. However, it doesn't seem to be used in Florida, and therefore it might be considered for removal. Remove the crew size restriction on when you're considered a charter or a commercial vessel, and those are -- There is definitions in the coastal migratory pelagic, dolphin wahoo, and snapper grouper fisheries, and they feel it's unfair to have some of these requirements. I will be happy to add any recommendations that you guys have or any concerns that you guys have in regard to removing certain regulations or anything that is included here.

MS. KARAZSIA: Thanks, Chip. So you're looking for some specific input, if AP members have that to provide?

DR. COLLIER: Yes.

DR. BROOKE: I am not really clear on -- I mean, I have opinions, and I think we all do, but these don't fall under anything to do with the Coral AP, as far as I can see, and I don't feel -- I mean, I feel strongly about some of them, but, others, I am absolutely not qualified to say whether they are good regulations to remove or not, and so I'm not quite sure why we're addressing this, to be honest.

DR. COLLIER: It's to give you a list of what is being considered. It's what other APs have recommended, and so you guys can make up your own recommendations for certain regulations that could be removed, if you want any to be removed at all, or if there is other regulations that you think need to be modified.

MS. STILES: I skimmed through for like keywords that looked familiar, and there is a mention of golden crab and the coral HAPCs, but the coral HAPCs -- To me, it seems like -- I mean, I would be curious to hear your opinion, and it's on page 4, and it sounds like -- I am not really sure if that has any impact, because it mentions essential fish habitat HAPCs, and so, by deleting coral HAPCs, we are still -- Coral HAPCs are essential fish habitat HAPCs, and so that seems pretty minor, and maybe that's why that's coming to us.

On golden crab, it seems like they're not going to have limited effort, and it's going to be open access, which is -- I mean, I don't know. I guess maybe that addresses -- It seems sort of relevant to what we were discussing earlier, but, otherwise, I agree that I didn't see a lot of things that are specifically affecting corals. Do you see more implications here than we see?

DR. COLLIER: I do not. What I have highlighted here is what you discussed from page 4, and it's essentially just removing this. It's not much of a difference, because we go through the full amendment process in order to create coral HAPCs, and so it's not a big deal. Then, as far as the golden crab regulation that you were mentioning, it's not going to create an open access fishery. It's still going to be a limited access fishery, but it's just some of that language was required when they established the limited access, and so it's just cleaning up the books and making it more streamlined.

MS. STILES: Thank you. I don't have any other comment.

MS. KARAZSIA: Chip, is there a deadline for when you need comments by, if people think of things after this meeting?

DR. COLLIER: I am going to be sending you guys a report based on what we talked about today and any motions that you have, and those will be included in it, and, if we can have that prior to -- If you want to incorporate your own ideas into that report, you are more than welcome to do that, and, that way, the council can see all the ideas. Then, if there are certain things that the council wants to go forward with, they can recommend those. We are being a little bit more lenient on some of these ideas.

MS. KARAZSIA: Okay. Thanks. Any additional questions or recommendations for Chip at this time?

DR. BROOKE: This is just a quick one, but the lobster ACL -- I know that applies to the commercial fishery, and my gut says that's a very bad idea, but can you -- Is there a chance that if they remove the ACL on the commercial fishery that this will give the recreational guys leverage to remove it for recreational limits as well, because that would impact the corals.

DR. COLLIER: It would likely be removed for both if they remove it for one.

DR. BROOKE: That I can see impacting the benthos, and so you say that we will have an opportunity to comment on these at a later date, yes?

DR. COLLIER: I would try to get as much of your comments now. I am trying to think on the timeline of this. Some of these ideas would actually go into a fishery management plan, but some could be submitted as part of that regulatory reform, and so I think if you comment now and tell them it's not such a good idea, then they would potentially do a fishery management for it.

DR. BROOKE: Okay, and so would this be in the form of a recommendation then?

DR. COLLIER: Yes.

DR. BROOKE: Okay, and so it would be something like --

DR. FEDDERN: Just to get an idea of where this fishery is, do they meet the ACL every year?

DR. COLLIER: I believe they have exceeded the ACL for the last two or three years.

DR. FEDDERN: Both commercial and recreational?

DR. COLLIER: I believe it's -- When they have met it, they exceed the combined ACL. There is an amendment that's in process, or is in review right now, that would increase the ACL for spiny lobster, and, if that new ACL is in place, then they would not be exceeding it.

DR. BROOKE: So they exceed the ACL and so the ACL increases?

DR. COLLIER: Right, and so they have gone through the process of trying to look at -- Basically, they have been doing stock assessments and reviewing all of the biological data, and, based on all

the information that they have had, they can't determine if overfishing is occurring, and so they are looking at -- It appears that there is a new, almost, recruitment regime for spiny lobster, and it appears that they're in a higher recruitment event right now, and it's -- Therefore, the fishermen are able to catch more.

DR. BROOKE: Unless they are getting 100 percent recruitment from outside of our waters, they are still potentially impacting the spawning stock if they allow unrestricted fishing, and it's foolhardy, in my opinion, and I'm not a lobster biologist, but that's the way systems work. Unless you've got all your recruitment coming from outside, you're taking a risk, and so I have objections. Personally, I have objections to making this ACL go away, and so I would object to that one, but I can do that offline in a personal statement, and I don't think it needs to be here, unless the rest of the group --

MS. KARAZSIA: It sounds like a legitimate point that is relevant to the Coral AP.

MR. MERRIFIELD: My understanding is that all the recruitment from this comes from further south in the Caribbean and rides the currents up to the Keys. There is a lobster biologist down in -- I can't remember his name at the moment, but I've talked to him several times, and he doesn't believe that any of the harvest that goes on there is from recruitment that takes place there, but I think, if you have a statement regarding impact to coral, that you should express it.

DR. BROOKE: My biggest concern is for the recreational fishery, and that's not what they are addressing here, but, having said that, the commercial guys put out lobster pots, and they do damage coral. They have been shown that they damage coral, and so, again, I think it's legitimate for us to express concern that if they remove the ACL that the effort is going to increase, and that means more pots and potentially more damage, and, with it having no restrictions at all, I think that's just a recipe for potential disaster that would be hard to rescind, because, once you increase somebody's limit, it's really hard to back down on it, and it's unfair once they have invested in the fishery.

DR. COLLIER: Sandra, you had mentioned that if they remove the ACL, it could increase the number of pots, and there is a pot reduction plan that the Florida FWC has in place, and that's not going to change. I believe that's still in place. The size limit for spiny lobster would remain in place.

DR. BROOKE: So how are they going to increase their catch without increasing their effort?

DR. COLLIER: Right now, because it's a higher recruitment event that seems to be occurring right now, their catch is increasing, and I believe they're fishing less pots, at least on the commercial side. Now, the recreational side, I don't know as much about.

DR. BROOKE: Sure, but that is this year, and it's relying on Cuba and the Caribbean to protect their lobster stock, and so, if they stop doing that and we stop getting recruitment, you've still got this unrestricted ACL in place, which is going to be hard to reverse, I would think. I just think it's opening a door to a problem down the road, and I don't see that it's really necessary. They can increase it a little bit, but taking it away altogether seems rather an extreme move.

MR. MERRIFIELD: Chip, is this partially in response to the estimates and catch levels from the recreational that are supposed to go up quite a bit?

DR. COLLIER: No, I think the recreational catch of spiny lobster is tracked using a different system, and I can't remember how Florida does it, but they use a different system to track the recreational catch of spiny lobster.

DR. VOSS: I was just looking at the NOAA Fisheries catch data, which is pretty easily Google-able and posted online, and it incorporates both the recreational and commercial. It has oscillated up and down over the 100 percent margin for the past four years, but, in 2013, it was only 75 percent. Also, in terms of larval supply from the Caribbean and Mesoamerica, there have been some excellent studies that have demonstrated connectivity between those populations. However, the relative number of larvae that come in from each population has not been well established, to my knowledge.

DR. BROOKE: Josh, is there any local recruitment, as far as you know?

DR. VOSS: The challenge is, if you have a first-generation migrant that came from Mesoamerica that doesn't get fished out and then reproduces, its larvae's genetic signature is going to be that larvae from Mesoamerica and not from Florida, and so it masks itself as a Mesoamerican larvae when it's actually a Florida larvae.

DR. BROOKE: So these studies are probably mostly based on what, hydrodynamics and larval dispersal models as well as the genetic structure?

DR. VOSS: Exactly.

DR. BROOKE: So we don't know if there is any larval retention. Where do we go from here then, Chip?

DR. COLLIER: Well, I think, if you guys want to keep this in here, that's fine, and, if there is any other regulations or modifications that you think we need to include, we can put those in there as well. I think this is a good recommendation to provide to the council.

DR. FEDDERN: I have one more question. There was a regulation that was being proposed for fishing vessels to have every fishing vessel have a rescue vessel onboard. Well, this is great for large vessels, but I have a twenty-foot open boat, and there is no way -- There is no space that I can put a rescue vessel on my boat and still have space to do my fishery.

DR. COLLIER: Right, and that's what they're talking about with this. That was on page 11, revisit safety equipment requirements, particularly on smaller vessels.

DR. FEDDERN: Right, and I sent a letter to the Coast Guard about that, and they never did respond to anything, and so I wasn't sure if they had even read it.

DR. COLLIER: Yes, and we had a presentation that was done by the Coast Guard to the Snapper Grouper AP, and that's where this actually came up.

DR. FEDDERN: The problem is that these regulations -- Most people don't think of a fishing vessel as a small vessel, but, in south Florida here, fishing vessels can be very small, even skiffs, for at least the marine life fishery anyway, where the fishery is a so-called small-scale fishery with very small fish and very small facilities needed, and they just don't put a size limit or size base for some of these regulations.

DR. COLLIER: Right.

MS. KARAZSIA: Any additional questions or comments at this time? It sounds like we might have some additional opportunity to think and pass recommendations on as a next step after this meeting.

DR. BROOKE: I am fine with moving on, Jocelyn, and everybody else.

MS. KARAZSIA: Okay. I don't want to rush the conversation, but I also want to be mindful of time, in case others have commitments that they need to get to. The next item on our agenda is elections.

DR. COLLIER: We had a previous Chair, Stephen Blair, who did a great job chairing us. Unfortunately, he had retired, and so we need to replace the Chair, and Jocelyn did a great job leading this meeting as Vice Chair, and so, if we could get nominations for both Chair and Vice Chair, that would be great.

MS. STILES: Jocelyn.

DR. BROOKE: Definitely Jocelyn for Chair would be my vote.

DR. COLLIER: Jocelyn, are you willing to serve?

MS. KARAZSIA: Yes.

DR. COLLIER: This puts her in an odd situation. Are there any objections? Hearing no objections, then Jocelyn is the Chair.

DR. BROOKE: Excellent choice.

DR. COLLIER: All right, and so now we need a Vice Chair.

MS. KARAZSIA: I would like to nominate Sandra.

DR. BROOKE: Okay. We will talk later.

DR. COLLIER: Sandra, are you willing to serve?

DR. BROOKE: Yes, I am, if the committee feels that I can do a good job, but I would also nominate Josh, actually. I think he could do a good job, also.

DR. COLLIER: Josh, are you willing to serve?

DR. VOSS: I very much appreciate the nomination, Sandra. However, I may be very overcommitted shortly.

DR. BROOKE: Fair enough.

DR. COLLIER: Are there any other nominations?

DR. BROOKE: Actually, I would bring up a point. What about these term limits, Jocelyn, because I have been on here for a while now, and am I about to get booted off?

DR. COLLIER: You are not. I have looked at yours, and so you started back in December of 2008, and you were reappointed in 2012, and we haven't had too many meetings, and so you haven't started your third term yet.

DR. BROOKE: So I'm not off the hook that way. Okay. All right.

MS. STILES: So, if we don't have meetings, then it doesn't count as part of your time?

DR. COLLIER: Correct. Are there any objections to having Sandra as the Vice Chair? Congratulations.

DR. BROOKE: Thank you very much.

MS. KARAZSIA: Thank you, Sandra, for agreeing to serve. I guess now, moving forward to Agenda Item 8, which is Other Business, does anyone have any other matters that they would like to bring to the attention of the advisory panel today?

DR. COLLIER: I am not seeing any.

MS. KARAZSIA: Okay. Should we move forward towards public comment?

DR. COLLIER: Yes.

MS. KARAZSIA: Do we have public comment? For those who joined later in the call, we did make a revision to the agenda to allow for public comment throughout the meeting. If we have any additional public comments or public commenter on the line --

DR. COLLIER: What I have pulled up here is from the -- If you click on this link right here, the link to public comments, we allow the public to provide comments to the AP, and, unfortunately, there were no comments that were provided for this meeting, and I am not seeing any hands raised to provide public comment right now.

MS. KARAZSIA: Okay. Well, thank you, all, for your participation today. I also want to especially thank Mike Merrifield and Brad Whipple from the Golden Crab Advisory Panel for your insights. I think you helped us navigate through some difficult topics, and we appreciate your comments. With that, I will adjourn the meeting. Meeting adjourned.

DR. COLLIER: Thank you, all, very much.

(Whereupon, the meeting was adjourned on May 9, 2018.)

_____Date: _____

Transcribed By:
Amanda Thomas
May 31, 2018

CORAL AP WEBINAR MEETING MAY 9, 2018

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