SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

SCIENTIFIC AND STATISTICAL COMMITTEE

Crowne Plaza Hotel
North Charleston, SC

April 29-May 1, 2014

SUMMARY MINUTES

SSC Committee

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Amber Von Harten
Dr. Mike Errigo
Dr. Brian Cheuvront
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Myra Brouwer
Dr. Kari MacLauchlin
Dr. Julie Neer
Julie O'Dell

Observers/Participants:

Kevin Craig
Rusty Hudson
Dr. Kyle Shertzer
John Foster
Mark Brown
Dr. Erik Williams
Dr. Doug Butterworth
Leda Dunmire

Other Attendees Attached

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The Scientific and Statistical Committee of the South Atlantic Fishery Management Council convened in the Crowne Plaza Hotel, North Charleston, South Carolina, Tuesday afternoon, April 29, 2014, and was called to order at 1:00 o'clock p.m. by Chairman Luiz Barbieri.

DR. BARBIERI: Good afternoon, everybody, and welcome to the April 2014 SSC meeting. We have a very full agenda with a number of fairly long and complex items. I will count on your collaboration to keep the meeting moving on pace. For starters we're going to go around again for the official introductions starting on my left with Jeff Buckel.

DR. BUCKEL: Jeff Buckel; North Carolina State University.

DR. GRIMES: Churchill Grimes; SSC.

MS. LANGE: Anne Lange; SSC.

DR. SEDBERRY: George Sedberry; NOAA Office of National Marine Sanctuaries.

DR. VAUGHN: Doug Vaughan; SSC.

DR. BOREMAN: John Boreman; SSC; North Carolina State University.

DR. CADRIN: Steve Cadrin; SSC; University of Massachusetts.

DR. BELCHER: Carolyn Belcher; Georgia Department of Natural Resources.

DR. REICHERT: Marcel Reichert; South Carolina Department of Natural Resources.

DR. BARBIERI: Luiz Barbieri; Florida Fish and Wildlife.

MR. CARMICHAEL: John Carmichael; council staff.

DR. ERRIGO: Mike Errigo; council staff.

DR. CROSSON: Scott Crosson; Southeast Fisheries Science Center.

DR. BERKSON: Jim Berkson; NMFS Southeast Fisheries Science Center.

DR. WHITEHEAD: John Whitehead; Appalachian State University.

MR. COLLIER: Chip Collier; North Carolina Division of Marine Fisheries.

DR. YANDLE: Tracy Yandle; Emory University.

DR. JOHNSON: Eric Johnson; University of North Florida.

DR. LARKIN: Sherry Larkin; University of Florida.

DR. BARBIERI: The first order of business here after introductions is approval of the agenda. I hope you have had a chance to look through our agenda for the next couple of days. Are there any comments, suggestions, or modifications for the agenda? Hearing no comments or suggestions for the agenda, do we have consensus that the agenda stands as presented? Okay, the agenda is approved.

The next item is approval of minutes from our last meeting, the October 2013 meeting. I hope you had a chance to review our meeting minutes. Are there any comments, corrections or suggestions regarding our meeting minutes? Moving on to Item Number 2, public comment, I already received one request and we have another one, so we start with Mark Brown.

MR. BROWN: My name is Mark Brown; I'm from here in Charleston. I own and operate a charter headboat. I would just like to make a comment about the weather-related events over the past and just ask the SSC to please consider looking at environmental variables in regards to the assessments.

We've seen a lot of changes in the weather over the years and some things in regards to the way the water changes with cold water upwellings and things like this that cause the fish sometimes to move in different migratory patterns than traditional in the past; and with severe cold fronts sometimes hampering fishermen to be able to access the fish, too.

I know that is already kind of taken into consideration with the effort; but we see fish patterns change and different things, snowy grouper showing up there off of Virginia like they did as thick as they've been, and the increase in that and then sometimes the king mackerel moving. The last couple years we've had some cold water in our area, and the king fishing just hasn't been as good as what it was in the past. I would like to ask that you please consider that into the assessments and look at trying to develop some sort of a modeling of using that, too. Thank you.

MR. HUDSON: Rusty Hudson representing the East Coast Fisheries Section at this meeting. We're looking forward to working our way through the blueline tile, wreckfish, gag grouper and snowy grouper reviews. In comment, a little out of order, we've been very appreciative of the effort of the SSC with regards to the third party assessment for wreckfish.

When I deal with blueline tile and snowy from my own experience, my snowy grouper was a big part of my fishery off the east coast of Florida with the blueline tile as a bycatch. Usually 10 or 15 percent of my catch would be blueline tile. Kind of like a triggerfish, it is a bait stealer in a way. In those same regions at 2 to 300 foot of water we generally have a lot of the small, medium, and some large snowy mixed in there.

But whenever we went offshore where we call the snowy wrecks, those were generally totally mature snowy groupers; and they were clean as far as any bycatch when we were out there. There was a significant shift back in the eighties from bandit reels about '81, the bottom longline; and we looked at the blueline tile and we kind of felt like that early years of blueline tile was tainted by golden tile landings on the commercial part.

You can see that in the written comments that we have submitted forward to the SSC. I hope everybody had a chance to get that and review that. When we deal with some of the mortality situation of some species, we're looking forward to getting the Snapper Grouper Regulatory

Amendment 21 moved forward, so that you can be able to look at the changes that may make with the fishery.

Going into this gag grouper update, I went and queried some folks like my Uncle Bob, who has been fishing on gag, red snapper and stuff like that since the 1940s, still fishing to this day. We've had in place for four years, since I believe '09, the spawning season closure for shallow water groupers. We think that has been a huge help along with other kind of management efforts lately.

From our area where we have a large shelf from just below Cape Canaveral on up the line, we have seen a lot of gag grouper through that time, in recent time like a really good rebuilding chain going on; but my uncle made me have to pause and think with regards to all this cold water upwellings that we've been experiencing a lot lately, particularly after the spawning season closes.

We don't know how that has affected stuff; but it does appear that based on the gag grouper update that the last several years is going to trend towards eliminating overfishing and that we believe that we're well on the way to a rapid rebuild of the stock. We hope to be able to see that wind up benefitting the fishermen as time goes by.

Some of the statements that after the spawning season closure they find that they are having a range in different depths further north and stuff like that in order to find some decent gag grouper; and as you can see we have been catching our allocation pretty much each year, and that is in spite of the spawning season closure.

With all that said, if you wish to talk a little bit more about snowy and blueline tile and my experiences of actually living, breathing that since the seventies through the eighties; that was my main feature of my commercial fishing, and it was predominantly with bandit reels, but it was also with bottom longline. Thank you very much for this opportunity and we look forward to a very productive meeting.

DR. BARBIERI: Well, unless there are any other requests for public comment, this should conclude our public comment, our first opportunity. There will be another opportunity at the last day before we close the meeting. Mike.

DR. ERRIGO: What was in Mark Brown's public comment made me think of the king mackerel assessment; they are actually looking at using an environmental time series to adjust the catchability of king mackerel, to adjust the index of king mackerel over time using the North Atlantic oscillation, no – the southern oscillation index, I think it is, using the southern oscillation index. They are exploring using that in the model, which is very, very interesting.

We'll see how that goes; but if that does actually work out, it will be an interesting thing to carry forward and maybe for other species if the data exists to make a link between, let's say, temperature and what they notice like differences in aggregation behavior in king mackerel. That work is being done and incorporated into modeling, which is great. They are moving forward with some of it.

DR. BARBIERI: Yes, great opportunity to more explicitly integrate those environmental impacts into the assessment process, yes. Moving on to our Agenda Item Number 3; we have the Social and Economic Panel that met yesterday.

MR. CARMICHAEL: A little reorganizing of the agenda from there is going to the dolphin and wahoo we thought might be better, because they talked about things related to that; and I think it might make their report resonate better and be a little more efficient if we go ahead and get their comments on each of these items.

DR. BARBIERI: Yes; before the comprehensive total.

MR. CARMICHAEL: Yes; and then if there is anything else to add, we can hit those after these couple amendments.

DR. BARBIERI: John, would that be okay with you?

DR. WHITEHEAD: Yes, can I say one thing? We met yesterday afternoon and there were six of us. Scott Crosson, Tracy Yandle, Sherry Larkin, myself, Chris Dumas, John Hadley and Ben Blount all met. Ben and Chris are on their way back. Two of those were new. Once again, I want to say that I think it was a productive meeting and continuing the Socio-Economic Panel is a good idea for the SSC.

We met about three things that are on the agenda; and as you say, we will discuss those as we get to them. One thing that we did discuss that is not on our agenda is about potential methodologies for evaluating the economic efficiency of fishery allocations. We commented on a presentation from the Southeast Science Center. I don't want to get into the technical stuff.

John Carmichael sent out our draft recommendations and you all can read that. Two things I want to mention is that the Socio-Economic Panel believes that the research provided by the Southeast Fisheries Science Center is of excellent quality. In general we support the approaches that they're using for allocation analysis.

The second thing is that we feel the Socio-Economic Panel has been underutilized in terms of peer review of analysis; and we feel that it is a good resource for peer review of allocation analysis in a similar way as SEDAR and the way the SSC reviews biological assessments.

DR. BARBIERI: Thank you, John; and this might be something that would be good for you to include in your report, explicitly, because that is something that I think would be very helpful.

DR. CROSSON: I just wanted to comment on this. We had this discussion yesterday about setting up some sort of SEP Peer Review Process; not quite the same as SEDAR but something along those lines. I guess my concern or a comment is that doing allocation analysis can be a rather long and drawn-out process.

That is why we talked about setting up some sort of SEP review, because it is good for that process to be reviewed by your peers and by people that are involved in the SSC. I think that if that were to be the case, we would have to set up a process for dealing with this just like we've

done with other aspects of the SSC; but also the council and everything would have to learn to adapt to the fact that it is going to be a longer process.

If you send a request down for some sort of allocation analysis for a particular amendment to the Science Center – to the Social Science Research Group in the Science Center; and we're going to have to go through a peer review process, it is not going to be something that can be done immediately. Those amendments that are dealing with allocation issues are probably going to be stretched out longer than they would otherwise be. That is just my comment, just thinking about this from a practical standpoint as somebody who is often on the receiving end of these requests.

DR. BARBIERI: John, I think the next step would be to go through your – no, those would be handled by different folks, so Brian I guess you're next; moving on to the generic Accountability Measures/Dolphin Allocation Amendment.

DR. CHEUVRONT: There are two amendments – well, actually there are three amendments, but two of the amendments I worked with the SEP yesterday to go over. I think what is going to happen is that John is going to present their comments on each of those actions or what they think of those amendments.

In this amendment there are two actions. The first one is to revise the accountability measures. Actually it is not revising the accountability measures, per se; it is revising the criteria that trigger the accountability measures. They are not suggesting actually changing the accountability measures themselves.

Alternative 1 is the no action alternative, and it has all the species that we're suggesting are going to be affected by these changes that the council is considering. It is a whole bunch of snapper grouper species, and for each one it shows what the current accountability measures are. If the accountability measures are the same across multiple species, they are lumped together in a single grouping.

That is several pages actually of all of this. Then what you do is you get all the way down to wreckfish, which is kind of an interesting case, because wreckfish has an ITQ and that ITQ acts as the accountability measure for the commercial fishery. For the recreational fishery there is a recreational ACL for wreckfish.

It is quite small; but the problem is that MRIP is not really fine enough details of data collection. I think in the last five years they only had one estimate of landings for recreational wreckfish. Then golden crab is purely a commercial fishery. The Alternatives 3 and 4 in this action obviously don't apply to golden crab. Now Alternative 2, basically what it gets down to is that for the commercial fishery the AMs will be triggered under certain conditions, if certain conditions exist.

The first is they would only be put into place if the commercial ACL is exceeded; and the RA will publish a notice to reduce the commercial ACL in the following fishing year by the amount of the commercial overage only if the species is overfished. Subalternative 2B is only if the total ACL; that is, the commercial and recreational ACL combined are exceeded.

Subalternative 2C is both of those criteria must be met. Now this Subalternative 2C or the equivalent of it is already in place for the coastal migratory pelagics and the dolphin and wahoo species. The council is considering this as a way to clarify and create some consistency across multiple species as to when the AMs will actually go into place. That is Alternative 2.

Alternative 3 is essentially the same criteria but for the recreational fishery. However, because there is less certainty in the landings of the recreational fishery; in the subalternative they have added in there the length of the recreational season and the recreational ACL will not be reduced if the Regional Administrator determines, using the best scientific information available, that a reduction is unnecessary.

Now the way the recreational AMs are set up now is that there is no option for an in-season action; and that is actually creating a bit of a problem for some of the species. When you look at Alternative 4, we tried to take that into account. For example, the recreational ACL for snowy grouper is 523 fish. It is not unusual for that to be taken up in the first wave of MRIP.

Right now there isn't a way to shut down that fishery to stop it and to keep it from exceeding the ACL continuously throughout the year. What could happen is, as has happened, they have gone over the recreational ACL for snowy grouper by hundreds of percent over what they should be doing.

If the AMs are invoked, that would literally mean that there would be several years where there is no recreational fishery at all for snowy grouper. The logic behind Alternative 4 is to give the Regional Administrator the ability to shut down a recreational fishery in season if there is indication that clearly this fishery is going to bust its ACL and stop the bleeding if at all possible.

Those subalternatives are only if the species is overfished or regardless of stock status. John, do you want to wait until I get through the other Action 2? Okay; do you all have any comments that you want to make about this action and recommendations for the council at this time on what they might want to consider?

MR. COLLIER: There is the option for the commercial fishery to be able to harvest the bag limit. Where do the landings of the bag limit for the commercial guys go when that is harvested? They technically should go in the recreational sector, but are they ever intercepted?

DR. CHEUVRONT: Are you talking about like for recreational bag limit sales?

MR. COLLIER: No; when the commercial season closes, it says that the commercial guys can retain their bag limit under Option, I think, A. On and after the effective date of the notification, all sale or purchase is prohibited and harvest or possession of the species in or from the South Atlantic is limited to the bag and possession limit. Where would that bag and possession limit be sampled?

DR. CHEUVRONT: That would have to be done as part of MRIP. They could do it as recreational, because they cannot sell those fish. I think it was Amendment 15B that stopped recreational bag limit sales.

MR. COLLIER: That probably won't end up in MRIP. I know in North Carolina when our samplers are doing an interview; they ask is this a commercial trip? If they say yes; that is pretty much the end of that interview.

DR. CHEUVRONT: I think then that is something that we will have to address with the council, how they want to handle that. They may want to just pull that statement about bag limits out, but we'll bring that up with them.

DR. BARBIERI: Are there any other comments or suggestions for Brian?

DR. CHEUVRONT: The second action in here is to revise the sector allocations for dolphin. Originally this action was part of Dolphin Wahoo Amendment 5. I believe you saw it at this meeting a year ago; but at the June meeting last year the council had decided that they were going to start an allocation amendment; and that was going to start this past fall.

They pulled this action out of Dolphin Wahoo Amendment 5 to go into their allocation amendment that they were going to start last fall. Then they got involved in doing the visioning for snapper grouper, which was going to be the bulk of the allocation revision consideration. Since they already had an action for dolphin allocation, it has been discussed by the Dolphin Wahoo AP a number of times, they wanted the council to reconsider how dolphin was allocated.

This action; Alternatives 1 through 4 are the alternatives that as they existed in Dolphin Wahoo Amendment 5. Alternative 5 was added since then because they've been able to work with a longer time series for the data for dolphin. Right now let's go back up and review the alternatives.

The first alternative is currently the recreational sector is 92.46 percent of the total ACL, and dolphin is 7.54. The reason why we go to two decimal places here is we're talking an ACL of 15 million pounds roughly; this is a huge amount of fish. To get any kind of precision in the estimation of pounds, actually to get it really down to a lot of precision, we had to go out to a lot of decimal places so we just ended up rounding it just to make it easier.

Alternative 2 is prior to the Comprehensive ACL Amendment that went into effect in 2012; dolphin had what was considered a soft cap that they used to monitor landings of this fishery. The way it was set up – and it really was kind of soft and squishy when you think about it in terms of management, especially the way we do things today – it was that if commercial landings exceeded 1.5 million pounds or comprised more than 13 percent of the total landings of dolphin in the South Atlantic, the council was going to take a look at it and see if they needed to do anything about it. That is pretty squishy. However, the fishermen kind of liked that arrangement.

What we did in Alternative 2 was to establish sector allocations based on that soft cap, which is 87 percent for recreational and 13 percent for the commercial sector. Then Alternative 3 was looking at the five years of landings 2008 through 2012 is set the commercial allocation at the highest level that they had landed in that time series, which was the commercial sector would have gotten 14 percent and the recreational sector would have gotten 86 percent.

Then Alternative 4 was then to look at the average commercial landings over that same time series; and that would have set recreational sector at 90 percent and commercial sector allocation at 10 percent. Now in taking this to the Dolphin and Wahoo AP, they liked Alternative 4. The reason they liked Alternative 4 is that given the current ACL for dolphin is that would be about 1.5 million pounds; and they liked 1.5 million pounds.

I tried to explain to them this is based on percentages; that ACL can go up or down. If the ACL goes up, everybody gets more fish, including the commercial sector; and if it goes down, everybody gets less fish. They were still nonplussed by that and decided that this was the way to go, 90 percent and 10 percent. That is what they liked.

We've since now added this new Alternative 5 with three subalternatives that looks at this approach that we had used in the past where it was based on landings; 50 percent of it is based on a long-term time series and 50 percent of the allocation is based on current trends. Subalternatives 5A, 5B, and 5C are sort of theme and variations on looking at that; what years you're talking about; and 5A is using landings 1986 through 2011; and stopping at 2011 because the ACLs from the Comprehensive ACL Amendment went into place in 2012.

That was the last season before the catches were under the Comprehensive ACL. Now, of course, you also have to understand that the total ACL has never been met in this fishery. We're dealing with a situation where we've got a lot of fish, a lot of people and nobody is catching all their fish that they have been allocated.

Subalternative 5B was to look at the same sort of thing, just shifting the years one year for the short term. It still comes out to 90 percent recreational/10 percent commercial. Then Subalternative 5C is using 2006 through 2012 – it's the shorter time series – and it comes out to 91 percent recreational/9 percent commercial. The council has got to try to figure out how they want to deal with this one. Maybe the SEP might want to make their comment now, because this is the last of two actions in this amendment.

DR. WHITEHEAD: The SEP had no comment on the issue of accountability other than to agree that accountability is important for these additional species. In terms of the dolphin allocation, the SEP has commented on allocation formulas before. We continue to support those earlier comments. Without information on the economic value of commercial and recreational sectors, there is little to differentiate between alternative ad hoc formulas for sector allocations.

DR. CHEUVRONT: This is one of those rare situations at least for the South Atlantic where each sector is already getting plenty of fish. There is no pressure from one side or the other. Everybody just wants to make sure that they continue to have more fish – enough fish. They don't like the fact that the commercial sector was being constrained. There was actually one year – and I forget, it was either 2009 or 2010 – had the Comprehensive ACL Amendment been in place at that time for that season, the commercial sector would have come extremely close to reaching its sector ACL, but it would not have exceeded it; but it came very close.

MR. COLLIER: The recreational dolphin group took a reduction back in the late nineties and went to a 10-fish bag limit. Did the Socio-Economic Panel discuss their motivation for that being conservation-minded? It is not really mentioned in any of the options up here as a thing to discuss for the group.

DR. CHEUVRONT: There was also a size limit that was put in place for South Carolina and Georgia. I guess that was in the Comprehensive ACL Amendment as well; and that is not included in any of the analysis either, and I'm not sure that it really can be at this point.

DR. BARBIERI: I guess we move on. The next item will be Dolphin Wahoo Amendment 7 and Snapper Grouper Amendment 33.

DR. CHEUVRONT: I guess June last year must have been a busy meeting; because also at this meeting the council was approached by some recreational fishermen who had gone over to the Bahamas and gone fishing and were bringing back dolphin. They had filleted those fish and they received a violation when they got stopped in the U.S. EEZ. Come to find out, they were allowed to bring back snapper grouper species as fillets that was already allowed; but they were not allowed to bring back dolphin and wahoo.

The council thought about that; and at the September meeting they gave direction to staff to come up with a quick amendment with one action modeled after the snapper grouper regulation that would allow fishermen to bring back their fish from the Bahamas – particularly we're talking dolphin and wahoo – as fillets.

Well, as staff got involved in this, we found out it is not that simple. It never seems to be that simple. At the December meeting the council looked at what we were able to come up with; and they had given us some direction on further development for this. They realized what needs to happen is that after the snapper grouper regulations went into place, things had changed somewhat in the snapper grouper fishery as well; so by opening this up for dolphin and wahoo fillets, they really needed to go back and reconsider some things about snapper grouper fillets coming back from the Bahamas as well.

We researched all that. We went back to them at their March meeting with a revised document and they revised it even more; and so now what we've got is a document that has four actions in it. This is on Page 6 of the document or Page 18 if you are following along in the PDF file. We've got four actions and this kind of has some IPT markings and stuff in it that they want the council to consider at their June meeting.

The first action is to exempt dolphin and wahoo harvested lawfully in the Bahamas from regulations that require them to be landed with head and fins intact in the U.S. EEZ. Right now dolphin and wahoo that are in or from the Atlantic U.S. EEZ must be maintained with head and fins intact. That is the catch right there. If you are in possession of dolphin and wahoo in the U.S. EEZ, the head and fins currently must be intact on the fish.

The second alternative then is to allow dolphin and wahoo lawfully harvested in the Bahamas and brought into the U.S. EEZ from the Bahamas as fillets. Now, the strike-out language here is language that the council had put in. We're going to take it back to them; because if they are lawfully harvested in the Bahamas, they are required to have a passport to get in there; and to fish you have to have a cruising and fishing permit issued by the Bahamian government.

It is kind of redundant to say lawfully harvested and then list what you have to have in there. That could go into the discussion, but the council will have to make that decision. Also if you

are in the U.S. EEZ, after you have been fishing in the Bahamas and you have fillets, the vessel must be in continuous transit.

You cannot stop and fish in the U.S. EEZ on your way back from the Bahamas. Then there is a definition of what continuous transit is. Then two fillets of dolphin or wahoo, regardless of the size of the fillet, will count as one fish towards the possession limit. That is for law enforcement consideration.

The way the Bahamian regulations are written is they are allowed to have in possession on the vessel 18 fish in any combination of dolphin, wahoo, tunas and king mackerel. Since there is a wide variation in the poundage of these related 18 fish in any combination, there was no way to come up with a poundage equivalency.

The way it is set up for snapper grouper is that you can either have 20 fish or 60 pounds of fillets possession in the Bahamas. There is no poundage designation in the Bahamian regulations; so we could only go with counting fillets. The council was thinking that, well, the only way you can really do this is to only allow two fillets per fish; because if you're cutting up – even if it is a large dolphin fillet and cutting it up into smaller fillets; how are you going to know how many fish that came from unless you are going to defrost those fish into a giant fish jigsaw puzzle and put them together? That is really kind of unreasonable to expect law enforcement to do that; so the council put in this two fillet requirement. Anyway, that is the first action.

DR. BARBIERI: Comments or suggestions for Brian regarding this action?

MR. COLLIER: Should king mackerel be considered or are they currently allowed?

DR. CHEUVRONT: King mackerel would come up in another amendment, but that would be something that the council would need to look at and decide whether they want to do that or not. I don't know that king mackerel is that big of an issue coming back from the Bahamas. You don't think so, Ben?

All the fishermen I've talked to, it has been snapper grouper and dolphin and wahoo. We'll get into a little bit more of the details of that in a second of how those fishing trips work; but we're not hearing any demand for king mackerel at this point, that those be allowed to be brought back as fillets.

DR. REICHERT: Just a question for clarification; is the fillet skin on or skin off?

DR. CHEUVRONT: That is one of the actions. Actually the action is Action 3, to require skin on. Right now for this action, this is trying to get some kind of equivalency for just allowing possession of fillets in the U.S. EEZ, if you can prove you have just been fishing in the Bahamas. That is the goal of what this action is. The next action is to consider bag limit exemptions. Currently any fish that are brought from the Bahamas into the U.S. EEZ, regardless of what shape or form they are in, have to comply with U.S. possession limits, and that includes snapper grouper.

However, snapper grouper – and we'll get into that in Action 3 – you don't have to have the skin on them at this point. It is hard to identify those species. At the time the regulations went into

place, there really were very few snapper grouper regulations; but now there are species that perhaps we don't want brought into the U.S. because it is prohibited, like Nassau grouper or something like that.

There are plenty of snapper grouper different species and all that they can harvest legally. The council did not want to exempt any of those species from the U.S. EEZ bag and possession limits. Now dolphin; in the U.S. EEZ you can have up to 10 dolphin per person per day, up to 60 dolphin per day. Well, in the Bahamas you are only allowed 18 fish out of that grouping total.

If you have been fishing in the Bahamas and you are bringing dolphin back into the U.S. EEZ, you probably better not have more than 36 fillets on board that vessel, because then you would be in violation of Bahamian fishing regulations. When the council discussed this, they separated out dolphin from wahoo, because wahoo is actually an interesting case.

You are allowed two wahoo per person on the vessel. Well, in the Bahamas you would be allowed technically to have up to 18 if that is all that you are bringing back. Sometimes these vessels come back with only one or two people on them. They would otherwise be limited only to possibly four wahoo.

The council is considering allowing then up to potentially 36 wahoo fillets on board the vessel. We got into discussing with the different fishermen do they really do just wahoo trips? It turns out, yes, they do. There are times in the fall where they can go over and specifically target wahoo and bring back just wahoo and no dolphin. They really wanted to see if they could get an exemption for wahoo from this.

DR. SEDBERRY: I just have a question. When these guys go to fish in the Bahamas, they have to have a passport and some kind of fishing permit. Are they required to stop at a port and have their passport stamped?

DR. CHEUVRONT: Yes; that is a requirement. You are required within 24 hours of arriving in the Bahamas – and only the captain is allowed to leave the vessel until all the passports are stamped and the cruising and fishing permits have been obtained. The other folks are not allowed to get off the vessel until that is done.

MR. COLLIER: If you picked 2 and 3B, either "or" or "and"?

DR. CHEUVRONT: Either.

MR. COLLIER: At that point would they be allowed 36 potential fish in American waters?

DR. CHEUVRONT: No; they would only be allowed a total of 18 fish. Apparently they are catching a lot of dolphin in the summertime, which is when most of these vessels are going back and forth; but there are some folks who do specific trips just for wahoo. There probably are some wahoo that are caught incidentally.

But the Bahamian possession limit is you are only allowed to have on board 18 fish at one time. If you eat one, you can catch another one and keep it. If you've got your 18 fish; that is it; that is all you are allowed to have on board. Then Action 3 is looking at the requirement of having

fillets of dolphin and wahoo and snapper grouper species brought into the U.S. EEZ from the Bahamas, to have skin intact.

Now currently snapper grouper, which are the only fillets that are allowed, are not required to have skin intact. If this goes through – and the council has chosen preferred alternatives for this. They wanted the skin to be intact on the entire filet and not just a section of it but the entire fillet; and that is the council's preferred for snapper grouper species as well as dolphin wahoo.

DR. BARBIERI: Again; comments or questions for Brian on this action?

MR. COLLIER: Are they allowed to sell these fish when they come back to the United States?

DR. CHEUVRONT: They are not; that is a Lacey Act violation. You cannot get a commercial fishing permit as a foreign vessel in the Bahamas. To do so would be really bad news for you if you got caught. Commercial vessels could go over and get a cruising and fishing permit, but they could only fish as recreational vessels; and then they still would not be allowed to sell those fish when they came back into the U.S.

But really thinking about it, is it worth it for a commercial vessel to go all the way to Bahamian waters, get the permits and all that stuff, catch the fish and go back, because they wouldn't be allowed to fish in the U.S.? It is just economically not viable; and I just don't think it is going to happen.

However, somebody could take their commercial vessel there for personal reasons and do that if they wanted to. There is nothing to stop them from doing that. The last action is simply to require – the way the regulations are written now for snapper grouper, it only requires cruising and fishing permits.

There is no requirement to have the stamped and dated passport proving that you were in the Bahamas. The council's concern here is that you can get a cruising and fishing permit for being in the Bahamas for as long as 12 months. That is something that you can state up front. It is factored into the price of the permit. It can be for a single trip. Most people get them for three or six months, for the season, whatever they are going to do. To fish lawfully in the Bahamas, you have to have that passport.

However, there is some concern that somebody could have the Bahamian cruising and fishing permits on board their vessel, go out into the U.S. EEZ, fish, fillet those fish, and say, "Look, I've got my Bahamian cruising and fishing permits; they are valid"; and have no passports to prove that they were in the Bahamas. This action could help prevent that. Although there is some concern that if you had to prove that you were lawfully in the Bahamas; that would mean that you would have to have had that passport with you. I think law enforcement likes this action because it reinforces their point of view on how to handle this.

DR. BARBIERI: Are there any other comments or questions for Brian?

DR. WHITEHEAD: The SEP saw no issues of concern with any of the alternatives. There seems to be little biological, economic, or social cost imposed. There may be minor social and

economic benefits. The additional enforcement costs might be mitigated with a cap on the number of fillets to measure fish caught.

DR. CHEUVRONT: I thank you all. I realize that this wasn't something that was a big deal for the SSC to talk about either of these two amendments; but we are required to bring all these amendments before you and give you an opportunity to make a comment if you would like to. Those comments are always summarized in the final versions of the FMPs. Don't' feel like this was a total waste of time to do this. It is just something that is procedural that we have to go through just to cover all the bases. I appreciate your help with this.

DR. BARBIERI: No, Brian, actually we appreciate the opportunity to have this overview and stay on top of how these actions are taking place and having an opportunity to comment on some of these regulatory amendments is a plus. We appreciate your coming and requesting our input. Chairman Whitehead, do you have a full report for some of the other – would you like to comment, because John distributed to us in writing your summary notes.

DR. WHITEHEAD: There are two other things that we discussed; and one is Coastal Migratory Pelagics Amendment 24, which is on the agenda for Thursday. We'll hold off until then. The allocation discussion we had – as I indicated before, I will spare you all the technical details, but they are there for you to read if you would like. You can ask us questions if there are any; but I don't think we need to enter that into the record yet.

DR. BARBIERI: I think we are ready to move on. We are ready to move on or perhaps move back to Item Number 6. It is a quick report on the Assessment Planning Workshop. Obviously, we just concluded the workshop by the end of this morning. For those who have not followed the whole process, we started at one o'clock in the afternoon yesterday.

We had a presentation by Dr. Rick Methot describing the National Initiative that is taking place, the planning and the prioritization process for stock assessments that are being conducted by NOAA Fisheries for the national perspective. That report is actually out, posted on the website now and is open to public commenting through May 1st.

After that, they are going to incorporate those comments and revise the report and provide a final report that will be distributed to all the different regions to have additional input from councils and regional offices. We received that presentation and we discussed the criteria that was used. We saw a lot of alignment with the same exercise that we had planned on going through.

By the end of this morning, we had gone through our full list of stocks and actually triaged them in a way that we identified where they are in terms of their current status of stock assessment completion and methodology used; what would be the ideal or our ultimate goal for having that stock assessed.

Then we have a third column that listed what we could actually live with; what we felt would be sufficient for those stocks that would generate some efficiency in terms of time and resources, so we could perhaps use those resources in some other way to improve assessments for all the stocks in the region. We completed that exercise by the end of this morning.

We have a draft document that myself, Marcel, John, and Mike will be working on and finishing that draft report that lists all the main points of the discussion, all the main recommendations, and direction that came out of the workshop. We also had a subcommittee that was chaired by Jim Berkson with several members participating.

We will be looking at our regional assessment process, something like from SEDAR and beyond kind of thing that looks at the assessment process that we have in the region now and how that is being actually implemented. We'll discuss then the possibility of expanding the types of processes that we have in place to be more inclusive and more complete in the way that we look at our assessments and try to align our assessment process with our triaged list of stocks.

In a nutshell, that is the short and sweet report. I will open up for other – most of you participated. I tried to provide a summarized excerpt of what we discussed. I will open for any additional comments that members might have regarding the conduct and outcome of the workshop.

DR. CADRIN: In the factors to consider in the NMFS prioritization, the fishery importance; what is the process and how do stakeholders have input to fishery importance?

DR. BARBIERI: The short answer is I don't know operationally how they are handling this. They are looking at the importance of the fishery in terms of landings and trying to incorporate – my recollection – some of the economic importance as well. Of course, that is more detail for the commercial side of things than for the recreational, where having that value added is difficult to obtain. I don't remember, really. Those are the things that we're going to have to go back into their posted report and look at those criteria in more detail.

MR. CARMICHAEL: As I recall, one thing that Rick mentioned was they recognized the differences in assigning value and importance between commercial and recreational. It seemed like they intended to keep them separate and not just to say one overall fishery importance, which I think in our region could have a lot of influence.

One of the comments that we made was that we certainly hoped that the council and through the SSC would have an opportunity to take part in the overall ranking process and hopefully it wouldn't just be NMFS employees and whatever labs working with that. I think there is a lot of knowledge here and all of our efforts over the last couple years with ACLs and ORCS and all this stuff have really probably made this a very well-versed group in terms of our fisheries.

DR. BUCKEL: I was going to say what John said about Methot's take on keeping recreational and commercial separate; and just to follow up on that, who is going to do those calculations? Is that something that the SEP group would be tasked with? I'm just curious.

DR. BARBIERI: I don't know. I think that at some point – and to me this is one of the main values of what we did over the last couple of days during this workshop is really discuss some of those issues and see how much we align with the process that they are going through right now and get ready to engage in more detail and provide a more substantive comments later on because we already had our local discussion.

Even by identifying what we couldn't' complete or all the difficulties that we have for our region; I think we're going to be better prepared to provide more detailed comments when their report comes out. I remember some questions yesterday about how this was going to be implemented; and my recollection of Rick's response is that it was going to be basically like some guidelines and recommendations and that local regions and councils would have some discretion to add and modify that process as appropriate.

Unless we have any additional questions or comments regarding the Assessment Planning Workshop, we are going to have a report that is going to be produced at some point; details to be determined. We are going to align that with the outcome of the subcommittee report and consolidate that into a document that we can distribute to the group in the next few months.

DR. REICHERT: One of the things Rick said or recommended that we look at least the schedule through 2016. We are later asked to comment on the 2015 SEDAR schedule. That still leaves 2016, so I am wondering if we should or do we have any recommendations to the council and Steering Committee in terms of what species we would recommend for that 2016; or do you want to do that on a later date?

MR. CARMICHAEL: We can do that at the next item when we talk about SEDAR. I think that would be appropriate. I think the thought in setting up this agenda was we might get to that here under these two action items. One thing I would like to ask, Luiz, is what might we say with regard to those two action items in terms of the report here?

Is it that assessment priorities – when we planned this and we set this meeting up, we had no idea that NMFS was even working on that effort. Now we do; and I think it seemed like there wasn't really a strong willingness to go off and do something which might be totally different than what they do; so kind of wait and see what the national oversight is going to be.

That might be the comment there; let's let those parts play out. Then in terms of scheduling, well, obviously, scheduling flows from priority; so that is something again we will have to do at a later date in terms of long-term scheduling; but I think the outcome from the workshop, getting the triage and getting some identification of stocks and how we desire them to be assessed will play into that as well.

DR. BARBIERI: I think we are ready to move on to the next item.

DR. ERRIGO: I just wanted to mention – and this is partly my fault – when you guys were going over this assessment prioritization worksheet; and when we go to these decision tree species, most of them were fives, and I had pasted fives in all of them. Then I went back through and took out some that we wanted to look at more closely, like scup and some of the other ones.

Unfortunately, I meant to go back, and I forgot to go back and pull out speckled hind, Warsaw grouper and Nassau grouper for you to talk about. They got left as fives. I don't know if we have time now or maybe at the end of the SSC meeting; or if we don't have time at all this week, then perhaps another time. But I wanted to mention to you guys that we did forget to talk about speckled hind, Warsaw grouper, and Nassau grouper as where you wanted them in the prioritization matrix there. That was partially my fault. I pasted over by accident instead of leaving a blank. I just wanted to mention that.

DR. BARBIERI: Thank you, Mike; and actually there is one other item that I think we can discuss under other business. There is a Joint South Atlantic and Gulf SSC, sort of joint subcommittee that is being organized now to evaluate and basically explore where are we with Warsaw grouper and speckled hind in terms of status of the stock and development of any recommendations on how to move forward; some exploration of the state of the science on those species; how much connectivity, if any, do we have between South Atlantic and Gulf, and whether actions or management philosophy for those species in the South Atlantic is well aligned with the Gulf and vice versa.

I think at this point we have George Sedberry and Churchill Grimes, myself and Marcel as this little South Atlantic SSC Subcommittee. Others that are interested in participating are more than welcome to join us; but there are counterparts from the Gulf, and we are organizing a conference call to set up some of the planning process. We're going to have a report to present at the October meeting to the full committee.

We are going to be moving on to SEDAR activities; and if you go through our overview document, you will see that we have a number of items listed and basically three action items to be addressed. We are going to review the 2015 SEDAR Project Schedule and provide any recommendations that we feel are appropriate for the schedule.

We are going to review and approve the black grouper update terms of reference that Florida FWC will be conducting with terminal data I guess through 2013; and then recommend an assessment type for blueline tilefish, which is being addressed as part of a request from the council.

MR. CARMICHAEL: Take it away starting with Number 1; our review of 2015 is a little bit – well, it may be cursory in a way, because much of what is going to happen is rollover from SEDAR 41; which as you can see there with South Atlantic red snapper and gray triggerfish is getting started actually in August of 2014 and concluding in June of 2015, so a good bit of the capacity is going to that. That schedule is already set.

Obviously, it is nothing to discuss there, but I will roll down to the next big benchmark that we're looking at in 2015. The other assessments we have are updates planned in 2015 for South Atlantic red grouper, update of yellowtail snapper; update of blueline tilefish, and this is one that kind of crosses over with another item, which it could be vermilion snapper gets bumped for blueline tilefish.

Golden tilefish was the other one that were being considered. Then we also have down there the unnumbered SEDAR yet, which is like would be South Atlantic scamp and gray snapper, which will get started very late in 2015. We will probably talked a little bit about the blueline tilefish here, because it is an item that is coming up, but it is a big issue. As you know, we had the blueline tilefish assessment done. There was a lot of discussion at the council meeting about some of the odd outcomes in the projections.

Essentially what the projections did was to achieve the landings levels that were being considered, like maintaining the landings that had been observed or some fraction thereof. It was resulting in extremely high fishing mortality rates, and I think in 2014 was the year – really, Fs that were off the scale, having to remove all of the fish essentially.

It was thinking that there were some bad year classes moving through the fishery so there is very low availability and it was driving up the fishing mortality rates. Then the question that obviously got asked is how realistic is that; are those year classes really that bad? The reality is these fish start recruiting at like age three, a hundred percent at age six.

There is no juvenile indices; the terminal data was like 2012. There is pretty good lag between when you actually have data and when you actually have recruited year classes appearing in your data sets where you are projecting what is going to happen in 2014 in terms of removal. Luiz and I talked with the council about that and it has led to requests for additional projections, council taking emergency action, and further projections.

Really, what the council requested was an update as soon as possible to try and understand what is going on in that fishery and get a better handle on those year classes. A couple new years of data would obviously give us some more insight into that fishing mortality rate in 2014, give us a handle on whether or not it is really likely to expect – I think in the first set of projections we had the F was like 70. You can kind of see the sort of scale that we're talking about here.

The thought was just that was so much higher, the landings being lower, but yet that F so much higher than anything that was ever observed. You just have to question is it possible for the fishery with the effort that it has to remove that level of fish? Now, an explanation offered by the Science Center – and we'll hear about this in detail I suppose when we talk about those projections later on – was that they believe it is a situation where aggregations of fish are found and exploited.

What the model sees is it continues to see old fish, but you might be fishing down little aggregations and pieces, but then it is like all of a sudden they find a new area; so you have big removals and there are a lot of older fish. It really wreaks havoc with these models. We saw the same thing in snowy years ago where that was a pretty well-accepted phenomenon in that fishery.

That is kind of the question and certainly something that we would like to be looked at; but the bottom line is it has led to the council to request an update as soon as possible. What we're looking at is probably being able to get something done in 2015, which you guys the SSC would get here in April 2016.

Certainly, one question for you to consider here and would be appropriate is should that bump vermilion snapper or golden tilefish; and the council's preference is leaning towards vermilion snapper simply because that assessment is a little bit newer than golden tilefish. I looked back at that. Vermilion snapper's terminal year was 2011, it was not overfished and not overfishing; but it was pretty close to the reference points.

Golden tilefish terminal year was 2010. It was not overfished and not overfishing, but it was significantly farther away from its reference point. Vermilion snapper's biomass was between MSY and MSST. I think it was just like 0.98 of the MSY biomass; and golden tilefish was like 2.5 times. There is a pretty big status difference in the two fisheries, which some people had mentioned that might be something worthy to consider in terms of deciding which of these stocks gets done for blueline. Are there any thoughts here? We could address this now or we

could wait until we hear more detail about the blueline projections. I think needing to get the update supersedes that either way; so I believe we could probably address this question here.

MR. COLLIER: In the golden tilefish assessment there was some question with that 2006 year class I think that came through. It seemed like the population all of a sudden increased and that really led to the conclusion that it wasn't overfished and overfishing wasn't occurring. No matter what they did, they couldn't fix that problem in the model. Yes, it might be more recent, but there were definite issues in that stock assessment model; probably more than there were issues in the vermilion snapper model.

DR. CADRIN: Along the same lines as Chip; having been one of the SEDAR reviewers for that, there were definitely spatial issues in that assessment in which a lot of the recent productivity was coming out of northern North Carolina deep-drop fishery. The CPUE used was actually latitudinally limited to not include that productivity. This concern and this questionable result was very consistent with the sources of uncertainty that were communicated at that time.

DR. REICHERT: I agree. The question I have is since that assessment; have we gathered enough information that we can address these questions? I know for vermilion we've continued the data streams, so I think we have good data to provide an update. I am just wondering out loud if we have gathered the information. In particular, we have halted the long bottom longline; that was one of the indices that was used, be it in five year blocks, four or five year blocks. Have we gotten additional information, for instance, from landings that may help us with an update?

MR. COLLIER: In the document that Mike put together, there was an average of 1,000 samples from dependent sources per year. Actually you guys had about 1,000 samples or independent sources had about 1,000 samples per year as well. That is for the past five years.

DR. REICHERT: Independent?

MR. COLLIER: Mike might be able to speak to it a little bit more.

DR. ERRIGO: There are no numbers in the table that say how many independent samples are collected. Those are only fishery-dependent sampling numbers from TIP and other sources, other dependent sources. I don't know how many samples are collected from MARMAP and SEFIS and things like that.

DR. REICHERT: None from MARMAP since we halted the long bottom longline; since we got that 40 percent cut. Hence, my question about what additional data do we have to inform a potential update?

DR. BARBIERI: That's a good point; and that is why we're discussing this here, to weigh all the pros and cons. But there was something about the age composition, and we were trying to see what happened with that year class and look at additional ages that are coming out. I don't know how many are being collected and if we can help resolve this. We are going to probably discuss this in more detail when we review the blueline tilefish.

MR. CARMICHAEL: I think it is pretty certain the council has requested this update and they are going to want an update for this as soon as possible. If nothing else, the passage of time will at least get us a little bit past this terminal year uncertainties with that 2014. It may just move that out to the same thing happening in 2016 or 2017; but if that happens, well, that is information, too. I think as far as information we have or may not have, I don't think that is going to carry a lot of influence with the council in terms of asking for the blueline tilefish update.

DR. REICHERT: I'm not talking about blueline tilefish; I'm talking about a choice for replacing golden or vermilion with blueline. I'm not arguing a blueline update. I'm saying if we recommend to the council whether to choose golden or vermilion, then I think perhaps we should look into what additional information we've gotten since the last assessment to inform any update of either species.

MR. CARMICHAEL: To that, I don't think we know specifically. We haven't looked into it in that detail. That is what I thought that Marcel was saying; and I was fairly certain that wasn't clear across the table. The question is vermilion or golden; and maybe the SSC doesn't have a strong feeling.

DR. BARBIERI: I'm sorry, Marcel, I just misunderstood. I thought you were actually talking because of the two tilefishes.

MR. HARTIG: What we've observed in the golden tilefish fishery – and there was a lot of uncertainty about the recruitment issue – there is a big year class that entered the fishery last year. We saw it and this year it is continuing to grow. I mean they changed a grade already. There were so many of them in the fishery two years ago, that another grade was implemented in the fishery called peewees, two pounds and less.

Those fish we saw this year; now those fish are small; so the cohorts are moving through the fishery, so I think we would get some better information on the recruitment issue that really dampened the landings that could have been taken out of that fishery.

MR. CARMICHAEL: In terms of just the assessments in there, the retrospective of from one assessment to the next, golden tilefish has been much more dynamic. Vermilion has really fit very well with its projections from assessment to assessment as we've done it, maybe three times now.

I think vermilion has just in general been more stable and golden tilefish has been more volatile. I think that is one of the reasons why the council has more interest in golden tilefish over vermilion, because vermilion seems to be turning out more in line with its predictions; and golden tilefish, as mentioned, that big year class seems to be really having a big influence in the fishery.

MR. COLLIER: Is MARMAP going to increase the bottom longline survey so four years from now it might have data as opposed to –

DR. REICHERT: Well, the short answer is no. This is where we got that bump in SEAMAP funding, so we are considering – that officially doesn't start until July the 1st, but we are

considering resuming the short bottom longline; and we are discussing with SEFIS how to best approach that; but that currently does not include the long bottom longline. We can certainly discuss whether one or the other would give us a better bang for our buck, but currently the answer is no.

DR. BARBIERI: Well, we're still talking about the schedule for fall '15. At this point I'm getting the impression that despite the discussion, there are no major heartburn issues with us sticking with those species or those stocks; the update of blueline tile and the golden tilefish over vermilion.

DR. CADRIN: My one concern – again as the chair of the review for blueline tilefish – is that an update may not do it. With these data decisions of trimming the latitudinal trim; if you update the methods that were done, you are really not going to address the problem. I'm reading a report that we were concerned about the projections of future stock productivity because of that interpretation of the increased catch in the north. I understand the concern and the need for new information, but I am not sure an update really does it.

DR. BARBIERI: It is an issue of slots, SEDAR slots; I think that an update was the most that we could actually get or –

MR. CARMICHAEL: Well, no, depending on what tradeoffs you are willing to make, you can ask for anything. I can pull up that document from the Science Center where they lay out alternatives and see what they might have said about a standard. I wonder if there is opportunity – if there is really no new data or new reason to consider an alternative model; would doing it as a standard give us some flexibility to address more of the issues?

DR. BARBIERI: Steve, to that point, we could at least give the council a heads-up that this is something that as an update might have still too high a level of uncertainty and not allow the issue to get resolved. I take your point as we should recommend a standard, and they can weigh which way they can proceed with that.

MR. CARMICHAEL: If I look at Attachment 23 – and that is the Southeast Center's response to the council's request for a blueline update – the idea of doing it as a standard wasn't really considered at that time. That is probably an unanswered question, whether perhaps a standard could be done that might extend the window out a little bit. But if the SSC thinks that is the appropriate route to take, we should say that here.

DR. BARBIERI: I would phrase it exactly like Mike wrote it, that we are giving them a heads-up that the update may not be enough to get the job done and get the issue resolved and that we are recommending that they consider a standard for blueline tilefish. They will discuss with the Steering Committee to see what can be done or what else could be traded for that. All right, so anything else significant in terms of SEDAR scheduling?

MR. CARMICHAEL: The next item is the black grouper terms of reference. This is an assessment that is going to be conducted by our partners in Florida. It is an update assessment; and there is a number of default, fairly standard, SEDAR terms of reference for updates, which provide the starting point and an opportunity for you guys to make any specific changes unique to this assessment that you think might be necessary.

It is updating the assessment from SEDAR 19, using data through 2013 and essentially providing documentation of the new data considering any changes in the input data sets, update the parameter estimates and projections and provide a report. There are the default terms of reference. I will just open the floor for any discussion, questions, and additions to those.

DR. BARBIERI: Hearing none; I think I'm understanding that we have consensus that these terms of reference are considered appropriate for the black grouper update. We have Dr. Neer would have a contribution to make; a comment?

DR. NEER: I just wanted to be sure that you guys understand this is a joint assessment so the Gulf Council will also be reviewing these terms of reference. My understanding is you guys are happy with this version. As long as the Gulf doesn't take anything away from this version, you guys would be okay with that. I just wanted to be sure that is understood. They might add something, as they sometimes do, but they would not be allowed to take away.

DR. BARBIERI: Yes, thank you, Julie.

MR. COLLIER: In the review of the SEDAR 19, were there any major issues in that stock assessment that were pointed out? I know it got passed.

DR. BARBIERI: Yes, it got passed, but not with flying colors. I can tell you that we had – I'm trying to think from way back then – we had an internal kind of little data workshop. We were on the fence on whether we could carry this forward or not, because the age composition data, for, one was very weak and spotty and kind of fragmented in nature. That was a problem.

You were there for the assessment workshop, I remember. We worked through some of those and came out the other end with something; but I think the analytical team never felt fully comfortable. This is one of those low uncertainty age-structure assessments. Earlier this morning we were discussing should we go perhaps with a biomass dynamics production model? Since this is an update, I don't know if we have that option.

MR. COLLIER: That was part of the stock – the chosen model was – I can't remember which one Bob did, but there was also a biomass production model that was conducted as well.

DR. BARBIERI: We're probably going to get both; and then this is going to come before us and we're going to evaluate the appropriateness of the age-structure model and whether it stands the red face test or if we choose the biomass dynamics model as the preferred model.

MR. CARMICHAEL: Yes; one way I see this working is the recommendations last time were based on the age-structured model; so that would be the one to be updated. If both are done and if the SSCs agree to base recommendations off the production model, then that would open the door up for the next update to be done on a production model. Since the last one the recommendations were based on the other model; that is the one that really needs to be updated at this point in time.

DR. ERRIGO: I just wanted to clarify is the SSC recommending that both the age structure and the production model be updated in this update so that the results can be compared? Is it a recommendation?

DR. BARBIERI: My understanding is that this is standard practice.

MR. CARMICHAEL: I wouldn't necessarily assume anything like that base model could be viewed as just the base model from the age structure that was used to develop recommendations; so just say base model and production model to make sure that is very clear.

DR. BARBIERI: Well, good point, Mike, if you write this just to make sure that it is done that way, very good catch. John, it looks like our last action item has already been addressed.

MR. CARMICHAEL: The next item, Number 4, informational, there is a Shrimp Data Procedures Workshop. If your memory holds when we discussed Spanish mackerel, the same time we had a report on efforts in the Gulf to assess shrimp stocks. This committee was interested in seeing what could be done for shrimp stocks in the South Atlantic, which led to the realization that we really needed to figure out what data exists for shrimp in the South Atlantic.

That has been expanded to consider both the stock assessment data needs as well as the estimation of bycatch for other finfish stock assessment data needs. That has sort of been rolling around for a while; and it has got us to the point where we're going to convene here later this summer a Shrimp Data Procedures Workshop.

The goal is to inventory data that are available on shrimp fisheries; data that might be available for bycatch estimation; and then to consider methods for shrimp assessment and methods for bycatch estimation and kind of where the methods and their data need overlap with the data that we have available.

One of the things that has come out of this that is kind of unexpected is a spreadsheet inventory tool for determining what data sets exist, who has them, what kind of information they've collected, which has been very well received; and Julia Byrd did a great job putting that thing together.

We may be seeing that as a tool that might make its way into say SEDAR for tracking of data sets during data workshops and for subsequent updates and stuff. That has turned out really good, and I think it is going to help us have some good products coming out of this workshop. We have a number of people around here who will be participating in that; and we'll have a full report on that when it is done.

The next item is the SEFIS Video Index. Again around this table there was discussion when we had the report on SEFIS at the last meeting and looking forward to the red snapper assessment and saying this is a new index, there is a lot of concerns with how indices are calculated, and this could become a really big issue within the workshop; so we should do some work up front to make sure that alternatives are considered.

There are really good working papers that will go into that SEDAR 41 documenting these new data sets and how the indices are calculated. The Science Center is convening a working group with some representation from the SSC; folks that have experience with video data such as down at FWC and calling from the Gulf region as well. That will be coming up later next month. The goal of that is, as I said; is going to be a number of documents which will become part of the record for SEDAR 41 and dealing with red snapper primarily.

The next item to bring up is the gray triggerfish aging. We discussed a little bit of this – I don't know, maybe it was during this meeting as opposed to the workshop. They are already running together in my mind. There were a lot of issues with the aging of gray triggerfish back in SEDAR 32 that led to a half in the assessment efforts on gray triggerfish.

There was an age workshop held to investigate the age difficulties. I think the Science Center was the lead on that, as I understand things. I asked if there was a report in advance of this meeting and there is no report available yet. Erik Williams is coming to the meeting, I guess to be here later today or certainly for tomorrow morning, and said he could fill people in on if there are any specific questions about where that stands. My understanding is there has been maybe some resolution to the issues and work is on track to have data together for SEDAR 41; but I really don't know too much of what has gone on there. I think if anybody has any specific questions, we should hold them until Erik gets here.

DR. BARBIERI: By the way, just to refresh my mind, this is one that was I guess started and then it had to be aborted basically because then they found out that – I see, yes.

MR. CARMICHAEL: These are aged by spines, so there have been a lot of issues there about the interpretation of those structures and one group interpreting them different than other groups, and who is right. As we know with these things, unless you've got some fish you held in a tank or marked somewhere along the way, it is really daggoned hard to know exactly who is right. We seldom know the truth in fish aging.

DR. REICHERT: Our staff and Erik's staff, Jennifer Pott's group has been continuing to work on resolving that issue. It looks like we may have age compositions for the workshop, but they are still working on that. There is a lot of aging and re-aging involved in that. As you said, spines are notoriously complex to age. They've been working on that.

MR. CARMICHAEL: That's all the SEDAR items. I will show you Table 1; it is information we've been providing for a while. In this case it is a little bit different presentation. In the past we've mentioned SEDAR as being associated with a particular year; and as things have crossed over from one year to the next and bumped and changed in schedules, one might be longer than another; and that is kind of not so meaningful anymore.

Some people would look at, say, SEDAR 37 being associated with 2014 and think, well, that means it starts in 2014; another would think that means it ends in 2014 and others would think that is the data that it has.

We're kind of getting away from the years associated with the particular SEDARS and presenting it more in this format with really the two important things; what is the terminal data and then when is the assessment going to be completed and relying on that more detailed schedule as shown in that other document that shows you things like when are all the particular workshops taking place.

These are ordered – the SEDAR numbers may not always line up, because they are ordered by when the assessment is going to be complete. You start at the top, you see the things you are getting at this meeting, rolling on through the things you will get through 2016 at our April meeting. Obviously, if it is a May 2016 completion data, it means the SSC will get it at their

October meeting. Hopefully, at a glance it is going to get a little bit easier to understand what is being done when and what periods cover. That concludes the SEDAR report.

DR. REICHERT: You just answered my question, John; assessment complete in April means we will be able to review that at the April latitude on the '15 or '16 meetings?

MR. CARMICHAEL: Yes, that's correct; assessment complete means when it has been provided to SEDAR staff and say, hey, we're done with this and it is able to be distributed and disseminated in the language of the Information Quality Act that it is now available to the councils for their consideration to begin.

DR. REICHERT: Then my other remark was going back to something I said earlier; and that is the 2016 schedule. My question again is do we as an SSC want to make any recommendations to the possible 2016 schedule; although, as you said, it has been shifting a little bit.

MR. CARMICHAEL: I looked ahead to what the council has identified so far in terms of potential priorities for 2016. There is a red porgy benchmark that has been identified. There would be – assuming that vermilion gets bumped for blueline tilefish, then vermilion update would become a priority for 2016. Then other candidates that are in there are potentially dolphin and Spanish mackerel. Dolphin hasn't been done and Spanish mackerel potentially for an update. Those are some placeholders the council has mentioned in discussions in the past as a way to get started here.

DR. REICHERT: I remember white grunt was bumped because that was split in two. Has that been back on the schedule or has there been discussion in terms of when to put that on the schedule?

MR. CARMICHAEL: It has not; that might be one the SSC wants to forward.

DR. REICHERT: I think it would probably be a good idea to consider that. It has been off and on the schedule for quite a while.

DR. BARBIERI: Now, let me ask you a question, John. I see basically four slots for 2016. Are those still sort of tentative or has the council already expressed its priority for those stocks; because I'm just wondering how realistic it is for us to make additional suggestions if they have been already planning and counting on those stocks being addressed in '16.

MR. CARMICHAEL: What we would be looking at is things that would be coming done later in 2016; because, for example, you've got a number of things that you are getting in April of 2016. Really, we would be looking at things that you might be getting in October 2016 or even April of 2017. That is why, for example, I mentioned like red porgy, which is not on that list. Those are largely in terms of how we think about 2015. Those are 2015 SEDAR projects that are being done and which you're getting in April 2016. You've got to think about what stocks you might want to see done.

Julia has just showed me there is – yes, this is a little bit out of date. Scamp and gray trigger won't be available until October 2016 because of the shift of those other ones. Really, just be thinking in terms of once these are done, what are some of the next stocks you think the council

should consider. If you have one that you think is more important than the others, then we will put that at the top of the list.

DR. BARBIERI: I heard Marcel and Chip sort of leaning towards white grunt being one of those suggestions.

MR. COLLIER: I think it is a good suggestion. The hard part is going to be the spatial component of that model and if there is mixing among the two stocks. I know they were genetically different; but I can't remember what genetic techniques they used and if they were able to get mixing rates or anything like that.

DR. REICHERT: And also I think that is why this kind of midterm, long-term schedule is so important; because this may provide us an opportunity to look into that and maybe collect some data and some answers so by the time the assessment comes around we can potentially answer some of these questions.

DR. BARBIERI: We have white grunt. Again, those are going to be phrased in our report as suggestions from the SSC and not necessarily substitutions. Those are suggestions for '16, the ones that are going to be started in '16 or next.

MR. CARMICHAEL: The next SEDAR priorities. The council has identified red porgy as a benchmark; and I think hopefully folks kind of remember some of the issues from that assessment. It was the stock was plugging along; it really wasn't making a lot of progress towards rebuilding though maintaining the – basically rebuilding up around 75 percent of Fmsy, which is consistent with the law.

When the council is preventing overfishing but a stock is not responding; we are obligated and allowed essentially to continue on the path that we're on until we either figure out what is going on or the stock actually begins to respond. One question is do you consider red porgy a priority over some of the other issues that we may have before us?

DR. REICHERT: When red porgy was completed; wasn't there a question about the recruitment?

DR. BARBIERI: Yes; that was the question. There was a spike in recruitment that was historic, I think, going back to –

DR. REICHERT: No, I think it was the other way around. It was a lack of recruitment strength was difficult to explain, if I remember correctly.

DR. BARBIERI: No; what happened was way back when there was a spike in recruitment, that when you look at the stock-recruitment relationship, and it was fitting there – I think it was 1976 or '77 was a very high point that we are asking Doug and others to kind of pull out of the bottom of the memory bank, whether that was something that was – and the fact is that the most recent recruitment time series were showing basically below our MSY, lower values of recruitment in the most recent; so the stock had been rebuilding but then it kind of stopped and it wasn't reaching the rebuilding target. It was not expected to be fully rebuilt within the timeline for the rebuilding plan.

MR. CARMICHAEL: This was October 2012 when it was reviewed. The stock was overfished, no longer overfishing. The concern that was noted in the report was the low value of steepness; it was 0.41. There was some discussion about the earlier steepness estimates as well. It was done in SEDAR 1, and then it was updated in 2006, and then updated again in 2012.

I think the discussion for a benchmark was the SSC thought perhaps that something with a little more freedom than an update may help some of those issues; probably a little more free in terms of what has been allowed in updates lately. Maybe we'll talk about that in gag, because there are changes in the basis for estimation of steepness there.

If you accept that, then you might think red porgy could follow the same route and be done through an update in the future as well. Really, the only reason I can think of that we need to consider a full benchmark is if there is some major new data source or if there is a new model that we might consider.

This may be one where in terms of efficiencies an update/standard may be the more current, more flexible update; or standard may be a better route; and then that focuses white grunt. When we've discussed about white grunt in the past; the Science Center has recommended that occupy two slots because of the two northern and southern stocks. That would be two slots right there. Red porgy is an update or standard; white grunt in our normal long-term workload capabilities; we think maybe one more stock could be identified to consider.

DR. REICHERT: I think for red porgy, given the remark that you just put up, I think a standard would probably be more appropriate than yet another update since that original assessment has gotten quite old.

DR. VAUGHAN: Yes; it has been a long time since an update. I saw one in 2006, and I've been working my way through the list. Was there a more recent update?

MR. CARMICHAEL: There was one in 2012.

DR. VAUGHAN: Okay, but I would still agree with Marcel that a standard – give them some flexibility; don't lock them into –

DR. BARBIERI: Actually, I remember us discussing this; that we had SEDAR 1; remember that? SEDAR 1 was red porgy, and then we didn't have an update until much later, 2006; but then this 2012 turned out to be another update. Even then we still had questions on how the model configuration had been set up. Yes, I would agree with that.

DR. REICHERT: Then the other species we discussed today were vermilion and the dolphin wahoo, I think you mentioned earlier, John, just to complete that line.

DR. BARBIERI: John, anything else as far as SEDAR updates?

MR. CARMICHAEL: No; that's pretty good.

DR. BARBIERI: Well, we are approaching mid-afternoon, and I think our next agenda item is to get with the Wreckfish Assessment Review.

MR. CARMICHAEL: That is the next scheduled agenda item, but we need to do that tomorrow morning because Doug Butterworth will be coming in on the webinar; and there is a significant time change. It will be afternoon during our morning. It is about probably 10:00 o'clock at night down there or something. I forget with the daylight savings time change.

We told him we would do that regardless of where we are. We may do some other things ahead of this, but we would do that as scheduled in the morning, the same with the other assessment presentation. We've got a full day of assessment presentations tomorrow; but if you would like to make use of the next couple of hours, we can move on to some of these other items that just involve the staff that are here and talk about them.

DR. BARBIERI: That would be my inclination. I was just going to suggest that we take a mid-afternoon break.

DR. CROSSON: I was going to suggest that we move on to Item 15, Amendment 24, Pelagics, since the SEP just discussed that yesterday and all the members of the SEP are still here. That would definitely be a nice one to get out of the way today. That would be my suggestion.

MR. CARMICHAEL: I think that is probably good. And to give her a little warning and a moment to mentally prepare herself; I don't mind going through the research priority document first, and then she can kind of get herself where she needs to be to go over that amendment. Yes, we will pick up 13; MRIP Program changes involves a presenter that is coming later. We can do 13 then 15, and then maybe if we've still got time we'll get into your update. That would be good.

DR. BARBIERI: Okay, so let's reconvene at 3:00 o'clock. All right, folks; continuing with our fast-paced meeting; we are going to go with the research and monitoring prioritization plan before we move on to you, Kari, if that is okay.

DR. MacLAUCHLIN: That sounds fine.

DR. BARBIERI: This will be Agenda Item 13. That should be in your overview document as well. The action items required are comments on the research priorities and provide some advice to the Center on their research and monitoring prioritization plan for the 2014 through 2018 time period.

MR. CARMICHAEL: With the reauthorization of the Magnuson Act, one of the requirements put in there was for the councils to provide information back to the agency on their prioritized research needs. The South Atlantic Council has been doing this on an annual basis since that time. We update it for five-year blocks each year. The normal process is you guys review it here at this meeting. The council reviews it in June, and then we submit it to the agency after June. It has been fairly consistent over time with the needs that have been identified.

What I've done here is the highlighted items are new additions for this year. A couple years ago what we started doing was just highlighting the overall issues that are identified. I guess I need to update that to say for 2014. This is what we had last year; so we'll be putting forth for this year.

So the new things added here are, one, the first part says evaluation of the management program, including whether ACLs were met or annual accountability measures triggered; so just in response to having to implement ACLs now, obviously. One of the things the council is interested in and you guys as well, because the question has been asked here this week about whether or not ACLs are being met for these different species. That is more than just what the landings were; what were actually the management standards in place.

I'm trying to get some information on the fishery-dependent monitoring statistics. This has been a question that has been asked by the council of the Science Center quite a bit over the last 18 months, just getting an idea of really the very basics; how many lengths, how many ages are being collected; how many trips are being sampled to know well in advance of getting into a particular SEDAR data workshop whether or not we're getting adequate sampling.

Adequate is in the eye of the beholder and can be difficult to define at times, but in most cases we know that by various measures such as sampling targets that have been developed by groups for a lot of stocks, we're just not getting the number of sampled targets that we'd like.

DR. BARBIERI: John Boreman has a question.

DR. BOREMAN: John, are you taking comments or questions as you go through this or are you going to wait to the end?

MR. CARMICHAEL: Yes; I think we can do that.

DR. BOREMAN: Just on your first point there, an evaluation of whether ACLs were met or triggered; I hope that evaluation includes why? If they weren't, as we discussed yesterday, it could be like in the Mid-Atlantic we find that a lot of ACLs aren't being met because we can't sell dogfish to France anymore, among other things.

It could be more than just that the fishermen or the stock is down or whatever reason. It could be a market-related, fishery-related issue. Hopefully, the reasons will be there, too. Every year now we have the industry advisory panels prepare a fishery performance report for the SSC every year when we do our ABC settings.

That is critical because it gives us insight into what the fishermen on the water are seeing in terms of environmental conditions, but also insights into the market conditions. Species like mackerel; because of the price of fuel, they aren't spending a lot of energy going out and looking for schools of mackerels. That could be one reason why the mackerel landings are down. It is very insightful comments. That would be useful here, too, to add that.

MR. CARMICHAEL: Yes; and note there in the beginning these are items that we would like to have in a SAFE report. I think the why – I would say from the council's perspective the why is a very important part of the SAFE report. It is not just here are the outcomes, but some insight into the why is important.

Most of that is following from the prior years; the next thing down here that is highlighted is where the council is requesting that an annual report on the SEFIS program, for example, be provided in writing by October 1st of each year. What you are seeing here is just the council

trying to get more feedback from the agency in terms of what is happening, what is being done, are these things being met?

When we get a new program such as something like SEFIS; we would like to know what are we getting out of that; are we getting information? We know from MARMAP – and as we'll see here, MARMAP has regularly done a report of the results of their sampling. We would like to see that cover the full SEFIS program and all of the independent sampling that is going on, because that can be very useful to the council in understanding a lot of that why.

MR. COLLIER: Was the SAFE report done in 2013? I was trying to find that the other day and I couldn't.

DR. ERRIGO: There wasn't really one like put out, published, put on the website or anything. I did update the information in the SAFE. It was still being worked on at that time. I am hoping that the next time we're transmitted data, which will be hopefully in August with data up to 2013, that version of the SAFE report will be disseminated to the SSC and the councils and maybe even put on the website for people to see, as long as it is approved for use.

MR. CARMICHAEL: That SAFE report being snapper grouper. What has been going on is we with council staff and working with the regional office have been trying to take – and we get a data distribution from the Science Center to address SAFE reports and trying to take that and create an actual SAFE report that then is useful and enabled to be shared and distributed and all of that stuff.

One of the challenges has been lately is this past year – we'd like to have it available in September – the data just came so late that wasn't even possible with other things going on and getting the data late in August. Now, obviously Mike can't get 65 tables updated and everything in time for the September meeting.

That has just been one of the issues that we've been working on, and we're hoping that continuing to push on SAFE reports we begin to get more support in doing that and it doesn't just fall to the council; because per the law that is something the agency should be providing to the council. We're trying to keep up with it as best we can.

DR. REICHERT: In recent years I included in the overview I gave of the fishery-independent survey the trap survey. Some of the SEFIS information is in there as you can see when I give that overview again; just as a clarification.

MR. CARMICHAEL: We've continued to ask for adequate funding of MARMAP – well, it is not adequate, but at least an increase to the $850,000 annually, which would restore them to a level from the past. We know how important these program are, and we just have to put the money into these independent samplings to get that information. It is so critical.

MR. COLLIER: Is October a good time to have that report due? As a sampler, what would you think the best time is, Marcel?

DR. REICHERT: I think the video information is probably the new type of information that would be very useful. This is more a question for Todd's group or for Bonnie. It takes a little

more time to analyze the video information than it is to calculate the trap CPUE, so October I would say at the earliest.

As I said, that is much more a question for Todd or the Center in terms of when they could reasonably expect to examine all those videos and then do the analysis. Like we have the trap data available currently around this time of the year, but I think it is unreasonable to expect the same from the video data. It just takes a lot longer, a lot more involved.

DR. SEDBERRY: Just to clarify when you say October, you mean October for the previous year's analysis and not for that year's sampling.

DR. REICHERT: Yes, and I think I read somewhere that the goal is to examine all the videos late summer following the year of collection, but I may be mistaken.

DR. BOREMAN: Just a comment on that; in other words, you will be reporting in 2015 what you collected during 2014; so it really wouldn't be available for an assessment until like 2016.

DR. REICHERT: Well, this year the red snapper and gray triggerfish information is expected to be available for the data workshop in August; but we are collecting samples through September. Examining all those videos takes a considerable amount of time.

DR. BOREMAN: It is just that it is a heck of a data lag, that is all, for assessments.

DR. BARBIERI: This morning we were talking about efficiencies and how much we could free up – you know, for some of the stocks perhaps we don't need to have the ages; that we could sort of live with a production model that would free up more time to handle perhaps in a more timely manner some of those other stocks that have them; because it is a big lag there.

DR. REICHERT: The other thing – and that is something that we have discussed in the past – the more the firm the schedules are, the easier it is for the data providers to anticipate the needs and to provide the data in a timely manner; but that is not a new discussion.

MR. COLLIER: This is going to be an index, so this isn't something that can be weighted. It is going to be driving the biomass model as well as every other model that is used; so it is going to be eight months behind just to start the data workshop.

MR. CARMICHAEL: In terms of the SEDAR planning process, some time in June has kind of been the rule in the past of when you figure you will have all the data from the year before. As we mentioned, it was August before the council got just the basic landings approved and final, and this is all good, and that is why I find it kind of amusing at times when people talk about how untimely the MRIP data are when we know that actually in comparison to many of our other data sources I consider MRIP to be incredibly timely. February 15 you have data for the entire year; and every 45 days after a wave ends, you have the data.

We're nowhere near that on many of our other data sources. To me, timeliness and talking about MRIP is kind of a distraction. We need to focus on a lot of these other fisheries. It's June, it's August, and it really affects what we can do; and that is not getting a lot of the other data things such as an index where video have to be read. That takes longer.

We don't get any information in terms of expanded bycatch estimates. That is another whole bit of data processing which can't start until after that date. There are a lot of pieces that are really out there, and it really does contribute heavily to our lag in terms of getting information and being able to start assessments.

You start an assessment and it is going to take you a year to do the assessment and your data is already six to eight months old when you get started; well, that is how we get into the situation we're in, unfortunately. Soap box on that; but move on to the next highlighted item. This is all new text for this year.

This is really expressing the council's frustration; I guess I should say in a word. This is 2014, so this will be the eighth time that the council has submitted an annual research plan and been asking a couple of times the last few years – few; it has probably been four or five – just for some feedback as to what happens to these?

How are these submissions of the council translating into research priorities at the agency and what are we seeing? The reality is the core of this document has not changed in eight years and we're still waiting to hear when are we going to get the improvements? This section here is highlighting that; just that what has happened since 2007. We really need to get some feedback from the agency. The council is getting frustrated. That is leading to this being highlighted.

It really gets to two things, just any basic feedback on these plans and the SAFE report. This council has beat SAFE reports, been on that soapbox year after year after year, and everywhere we go and every regional meeting; and it is amazing that people from other regions are like you don't get SAFE reports? We're going to continue to do this, I suppose, until we get SAFE reports and continue to put this at the forefront of all of our comment opportunities.

DR. BOREMAN: Yes; we're having the same issues in the Mid-Atlantic to the point this week the NRCC is meeting. Unfortunately, I couldn't be there; but we are carrying the message to the NRCC is we're not even going to bother spending time on research plans if they just go nowhere. One of Bonnie Ponwith's favorite expressions is they become fodder for dust bunnies.

That is what we're dealing with here. The agency is limited and we're saying, look, either you're going to use this and we're going to put the effort into it; we have a structured decision-making process now that we use to put priorities for each species and then priorities for across species to come up with the top two or three of everything we're working on, what the research should focus on; why bother if it is just going to be shelved? I feel your pain, I guess.

MR. CARMICHAEL: Then the next section is just the detailed priorities. Those things were the highlights, and this gets to what the things the council thinks is most important. I'll point out this is prioritized research recommendations. Some feedback I've been asked, well, what are the council's priorities? Well, I think it is pretty clear.

The prioritized research recommendations, these are numbered, that normally implies some prioritization has happened. The number one priority of the council has been for 15 years and remains now SAFE reports. We want SAFE reports that really are fishery evaluations and not here are landings; because we all know landings are one little tip of the iceberg in terms of SAFE reports.

The council wants annual SAFE reports that really evaluate the fishery. Don't ignore things like bycatch; don't ignore things like economic realities; and make some effort to say this is what is going on in the fishery. The next one is getting adequate fishery and population monitoring programs. This changes by every year, add some more years to it.

We still struggle to get basic fishery information. We do good on landings, but what about discards? We hear a lot of fisheries aren't even sampled for discards. Well, that is very important. Under ACL management, that is very important. With the number of closures the council has, spawning season closures and quota-based closures; discards are probably growing in importance in our fishery. That is something that is definitely one of the top priorities.

DR. BARBIERI: Can I just make one comment real quickly? One thing that I don't understand in this process is how we see throughout our region some things being done that seem to be sort of like top shelf in terms of cost while some of the basics are still not being addressed. I don't understand, not having been involved in that process, how are those issues prioritized internally? How do we get to the point that we don't get bycatch? It is beyond understanding.

DR. BERKSON: The Southeast Center is doing more strategic planning regarding research priorities. They are revising really their tactical planning in terms of how to go about hitting those top priorities. I know the Center welcomes these reports and these priorities from the council and is going to do everything they can to meet them.

One of the key things that is being done is that peer review of the stock assessment process that is taking place July 8 through 10 down at the Center that Rick mentioned yesterday. Each Center is going through that process; and that is when the Southeast Center is doing theirs. I think some very good recommendations will come out of that process as well. That is what I can tell you from what I know.

DR. BOREMAN: Well, again to your point, Luiz; in the northeast we got sued over our observer program. Basically the courts have forced us into a very sophisticated process now of allocating observers, which addresses the discard issues among other things. Then the region prepared a plan and it was kicked out by the courts.

We're in Phase 2 now, but there is nothing like that in the southeast as far as I know. There is an observer program down here, but I don't think it is anywhere near as complex as the one we have in the northeast where we have to come up with a methodology for assigning observer days at sea. The answer to your question is how do we get more effort put into this is find a friend and have them sue the agency. No, that is what it did in the northeast. That has helped us bring haddock back on Georges Bank. I know I'm being a little facetious here, but that is what it took in the northeast but we've gone probably too far in the other direction.

MR. CARMICHAEL: The next one, Number 3, probably rounds out the triumvirate of top issues in the South Atlantic. This is just the data collection, the dissemination issues. It is the mini data collection programs that are going on in the region and trying to get a comprehensive handle on that.

A couple sidebar issues in there are things such as the data confidentiality issues. We struggle with that a lot here. There is a big issue within wreckfish. The council has continued to bring up

the issues of duplicative data collection programs and trying to move toward electronic reporting. It increases the timeliness and hopefully can get rid of a lot of the duplication.

The council has a lot of amendments, as you've seen if you looked at your progress reports and such, that are dealing with these data collection issues and really trying to force the issue and get these resolved after many years. Then the next couple round out a number of the long-term, big-picture items; evaluating MPAs, looking at stock status and such for our special needs stocks.

One I would like to bring up and ask if it is still necessary is Number 6, which is monitoring the mixing rates of Gulf and South Atlantic king mackerel. Given the latest assessment efforts, maybe that is something that can drop by the wayside and consider addressed through the current assessment techniques. That might be something maybe we need to wait until next year and actually see how that pans out. That is one that I think is kind of on the bubble maybe, I hope. Maybe it is one we can say was done.

DR. GRIMES: What did they do in the assessment?

MR. CARMICHAEL: It is underway now, so we haven't seen it and we don't know the final answer; but I think they are coming up with some ways to deal with it better.

DR. GRIMES: You might want to wait and find out what it did before you tell them they can quit.

MR. CARMICHAEL: Yes; that is kind of what I think, too. I think that is probably the best approach, sage advice. Number 7 is ecosystem management. Number 8 is talking about cumulative biological, economic, and social impacts of everything; again something that is also hit upon in the SAFE report.

The next section provides just the amount of detail of what the council thinks constitutes the necessary information that will deal with our managed species; and it lays it out on a fishery-by-fishery basis for the fisheries that kind of covered – well, they are mixed stocks so they are not assigned to specific fisheries. If anybody had any comments on those, I would certainly welcome them.

Then the next appendix is the stocks that have been identified as being a primary data collection species that really are targeted for age-based assessments. I think this is something that given our discussions here the last couple days are likely to change in the future. I don't know that we're quite there at this point. I think these lists of primary and secondary species will change; and maybe through the prioritization process, we can put something in here that is more timely and up to date; and maybe the agency will be more consistent with our expectations in that regard.

DR. BELCHER: To that point; I was looking at the list and I was going to ask if we needed to revisit only because blue runner is still on there; do we drop that at this point or does it stay?

MR. CARMICHAEL: I would think we're safe in doing that. That has been successfully removed so we can drop blue runner. Thank you, Carolyn.

DR. GRIMES: I don't know if anybody here is old enough to remember this except maybe Gregg over there; but back in the day, there used to be a face-to-face annual meeting between the Science Center and the council to discuss this stuff. Maybe you could request such a thing be reinitiated. Now, it is harder for you to ignore you when you sit right there in front of them.

DR. BELCHER: The only other one was under special needs' stocks. Does wreckfish drop off of special needs and go elsewhere since we've done an assessment? Yes; red snapper was the other one we had talked about.

DR. BARBIERI: Well, red snapper; my understanding is it was in special needs, because at this point there are very small landings. The fisheries-dependent data is fairly limited now.

DR. BELCHER: What about wreckfish?

DR. BARBIERI: A lot of this, by the way, I am seeing aligns very well with the discussion this morning with some of the recommendations in terms of how we are going to proceed perhaps in providing suggestions for prioritization of assessments for the next several years.

MR. CARMICHAEL: The standout here in term of the primaries is dolphin and I suppose scamp in terms of ones that we really need to get addressed; and white grunt so there is three. Yes, white grunt is up there. I think we're well aware of the issues with them.

MR. COLLIER: But that is pretty good coverage of the primary. I mean, it is getting a lot better than it used to be.

MR. CARMICHAEL: Yes; in terms of getting stocks assessed, we've done very well there, definitely.

DR. BARBIERI: What happened is we had a discussion – I don't remember if it was last April; I think it was last April – about bio-sampling of commercial and recreational number of lengths and ages that are being collected and the fact that we had identified some problems. Some stocks were not even close to meeting targets while others were blowing through the targets big time. It just seemed to be sort of random chaotic in terms of – I mean, that is the impression. Reading through that table was like how can this be?

MR. CARMICHAEL: That is one of the things – there is going to be an update down on Item 19 – is about discuss the idea of a fishery-dependent sampling workshop. It has been discussed at the council a couple of times since. Where we're headed now is, really, it is a very fundamental step, but realize that this is probably necessary. It is just much like the shrimp, inventorying all the different data collection programs, fishery-dependent data collection programs that are happening in the South Atlantic at the federal, state and potentially university level.

Comments were made at the SSC where even some folks were not fully aware of all the efforts that are under way and who is doing what. No one had quite decided who is responsible for what aspects of it; and there is a lot of overlap and there is a federal role because they are federal species, but there is a lot of federal money that comes to the states and expected that you take part in sampling a number of these species.

What was identified as probably the logical first step is just to figure out what all is under way and who has what. What I'm expecting we'll do is we'll dust off and modify that spreadsheet that Julia did such a great job on and modify it to work for overall fishery-dependent sampling. A workshop coming at some point in the future – I am going to talk to the council about what we might want to accomplish and when it could happen in June. If you have some ideas, maybe this is a bit of a foreshadowing, so give some thought to how we might want to structure such a workshop and some objectives; and maybe we can fill those in as we hit this up again near the end of the meeting.

DR. WHITEHEAD: I'm just curious if it should be opened up to fishery-independent, too. If you are going to get everyone together, then maybe get the fishery-independent programs compiled as well as fishery dependent.

MR. CARMICHAEL: I would say the reason we weren't thinking that was because we had the fishery-independent workshop back in 2010. I believe we felt we covered it. But with everyone together, it might not be a bad idea to just take a look back and see what has happened since then in addition to obviously SEFIS. Maybe there have been some other things that we should become aware of; so doing the spreadsheet, we haven't done it because it didn't exist at that time, but that might be a good idea.

DR. BOREMAN: Just a comment, if you haven't already thought of it, that you should involve ACCSP in this exercise, because this is one of their regular activities is look at bio-sampling in ports and so on.

DR. REICHERT: To Jeff's point; I think traditionally we're thinking about index development, but there are a lot of other programs going on that are a lot of shorter-lived but that provide information relative to bycatch, bycatch mortality, and life history information. I think we can do a better job to make an inventory of that data that is available. I do agree with you, but more beyond index development because that usually means long-term programs. There is a lot of information out there that sometimes surfaces at the data workshop, but sometimes not.

DR. GRIMES: I just was going to say – I think it has been mentioned a couple times already – that such a workshop seems like to me an essential prerequisite to applying these data-poor methods and really find out what data is out there. Then that would encourage the application of them by the Center or whomever.

MR. CARMICHAEL: Yes; that is a good point, you think back to that workshop that was in January and if you had what was there, then you can look at what you can do with what you have, and you can really start to make some rapid progress, which would be neat. We think just getting the basic inventories would be good and expanding it to fishery independent would be better. It is a good first step.

We have a complicated region with a lot of stuff going on. From the SSC to even the analysts don't always know what all everybody has, especially in some of those older historical data sets, which in light of those data-limited methods, that old information, that historic information can be very informative and useful with many of those techniques.

DR. CROSSON: I have a question about one of the special needs' stocks. Would this be appropriate to ask what happened with the Goliath Grouper Workshop that happened down in the Keys this winter?

DR. BARBIERI: Well, basically the outcome of that was that perhaps conducting another assessment might be – using Clay's Catch Remodel might be a viable way to go. We have a few additional sources of data and additional years of data coming in. Going that route might be the best way to go.

A little subcommittee was put together to basically compile all the new sources of data and provide an updated report to the joint committee council, which is going to meet I think it is late June – no, in July to discuss this issue and make a recommendation whether going forward with an another estimate is a good idea or whether it is going to turn out to be just inconclusive assessment again. Earlier, Scott, I was talking about this a little bit and saying that we're going to probably have more a more detailed discussion of this in our October meeting.

MR. CARMICHAEL: If there are no more comments; thank you.

DR. BARBIERI: I think it is very well put together; just a general comment that it is very comprehensive, it is meaningful. It is not like everything but the kitchen sink in terms of we want a list of everything. This is really prioritized and addressed some of the basic needs. I hope it can help move things forward.

I think we are ready to go to Kari for a discussion of the Coastal Migratory Pelagic Amendment 24. This will be Item 15 in our overview document. Kari is going to give us an overview presentation and discuss some of these amendment components. The only action that we are being requested to provide is a review and input on the options being presented.

DR. MacLAUCHLIN: We are going to go through Amendment 24. This amendment is actually still in the scoping options paper phase; so there is not a document. The council will be reviewing these options that staff has put together at the June meeting. We actually don't even have any actions and alternatives specified yet.

What I have is this discussion document that I've been using with the AP and the SEP and going through it. Like Luiz said, really looking at any additional ideas or comments for this options paper, what looks like it would work/wouldn't work, any other ideas about this. We reviewed this with the SEP and I think that they have some comments, also.

A little background on it is that the Gulf Council and the South Atlantic Council are looking at Atlantic Spanish mackerel and Gulf king mackerel. Those are the only two that are possibly going to be in here. The Gulf Council right now wants to wait to look at Gulf king mackerel until SEDAR 38 is finished.

But the South Atlantic Council wants to proceed; at least looking at options for Atlantic Spanish mackerel. What they have identified as something they want to look at is that the total ACL for Atlantic Spanish mackerel hasn't been met, but the commercial ACL has been bumped up against or even exceeded in the past few years; but then there is recreational ACL that hasn't been used.

This is Table 1; so this middle column shows the total ACL that was landed and then over here you can see the commercial ACL. It went over the past few years, but then you typically have 30 to 40 percent of the recreational ACL left over. Currently the accountability measures for the king and Spanish and cobia is that there is no payback for the sector if they go over as long as it is not overfished and the total ACL has not been exceeded.

The commercial accountability measure to pay back for that overage hasn't had to kick in yet. I also have this table in here; the caption here is incorrect. I will be putting in information that goes all the way back so we can look at how the actual commercial and recreational landings compared to the new ACLs that are coming from the latest stock assessment for Atlantic Spanish mackerel – it is going to be a little bit of an increase – how the actual landings would have compared to this new ACL coming in.

You can see in this fourth column that it is very much bumping up against the commercial landings, and exceeding the new ACL that we're going to put in. Then this column is how much the recreational landings have met that proposed ACL and then how much was left over. Really, it is this column over here that maybe the council could use to look at how much was left over if they wanted to move any from recreational to commercial.

We're looking at that; and Mike is helping me get the data that go back really far, so we can look and see if there are patterns or how this is working over a long period of time. We took it out to scoping; and I have some comments from scoping in here and then along with the AP comments as well.

Basically there was some support for in some way moving recreational ACL to commercial ACL so the total ACL could be met; but then we have some concern about the validity of MRIP data, some just general concerns about the MRIP data, and then some that it is underestimating the recreational landings and so there is not actually that much left over; different ideas like that.

Then we've also had some discussion of the value of leaving fish in the water; and then concern from the recreational sector about moving allocation and then not being able to get it back at a later time if that continues to grow. I do have in here the always complicated and lots of things happening in mackerel.

We have two amendments that are coming through, Framework Amendment 1 and Amendment 20B. They are both about to be submitted for secretarial review. That is going to increase the total Atlantic Spanish ACL to 6.063 million pounds; and then 20B is actually going to split that commercial ACL into northern zone and southern zone. The northern zone will be North Carolina north, and southern zone is North Carolina, South Carolina and that line to the Miami/Dade line.

The numbers are going to change a little bit in here as those get approved and implemented. What the discussion document and what we're looking to put together for the options paper; we have three different ways to kind of move around this ACL if this is something that the council wants to do.

The first one is permanent reallocation. The Atlantic Spanish mackerel; the first allocation was based on landings ratio from '79 through 1985; and that was in Amendment 2. It ended up being

76 percent commercial and 24 percent recreational. Well, then in Amendment 4 the council changed it to 50/50.

This was actually an allocation that wasn't based on any kind of landings ratio; it was based on fairness. Then in later years in 1998, they set the current allocations through a framework adjustment in which they could shift 10 percent between the sectors. They did that in a framework adjustment 55/45.

The framework adjustments were where the councils would do them almost every year to adjust bag limits, adjust the TAC; but once this 55/45 was in place, there was never another framework adjustment that went through to change it. It has just been there since 1998. I have some tables just for discussion if someone wanted to see what the landings ratios look like and how far back these went.

The next way to move these around would be an in-season ACL shift. There would be some kind of performance threshold that the recreational sector and/or the commercial sector would have to hit; and that would trigger actually moving part of the ACL during the season. These are the draft actions and alternatives that the staff was just trying to put together and see what these would look like and how we would actually put the language in there.

The council may like one and tweak them. The numbers are just example numbers that we threw out there. We have one where it would only shift recreational to commercial; and there would only be one trigger and that would be the performance of the recreational sector. We just have in here some sample times and then a percentage of the recreational ACL that would have not been met at that time.

Using the MRIP data coming in, the fishing year starts March, so the first wave of that fishing year would actually be MRIP Wave 2. The balance the council will have to do is that you want to give the recreational sector a chance to hit those thresholds if they can and not take it away too early, but at the same time still give the commercial an opportunity.

Then we have the recreational to commercial with two triggers; so that the commercial would have to be greater than a certain amount, recreational would have to be under a certain amount. This would just put it in the place that maybe really make those conditions where this could only happen if it really needs to happen; like the recreational really is not landing that much of their ACL and the commercial really is landing a high percentage.

Then, of course, we have some where it could go either way; so if in the future something where the commercial wasn't harvesting their ACL, that you could shift some from the recreational to commercial. These are just all ideas, either way with two triggers. That one; the language gets a little difficult. Then we just have the percentage that would be shifted in between.

We just used 5, 8, and 10 percent just to throw out some numbers, but then also we added in shift 50 percent of the remaining proportion. If the shift is triggered and the recreational sector has 40 percent left, then 20 percent would get shifted over. It would just depend on where the recreational sector was at.

If we assume that the different alternatives, we would be shifting 10 percent; if after that third wave of the fishing year recreational landings were less than 40 percent; so that would come in mid-October, and then NMFS would just publish a notice that changes the recreational ACL to whatever it is. In this case, 10 percent of the recreational ACL would go to the commercial.

NMFS would actually publish the notice for these new ACLs; and those ACLs are attached to the AMs that are in place. That would just be for the rest of the year. In the subsequent fishing year, in March it would automatically go back. That is how we're thinking this would work. Then we have a preseason ACL shift; and they do this in Mid-Atlantic with the bluefish.

They review how the commercial and recreational sectors are doing; and then at the beginning of the year they can move a certain percentage over from the recreational to the commercial. This would be kind of the same thing. We would have to actually modify our framework procedure to be able to do that. That is why we have this action in here to make that language change.

Basically how this would work was I think at the September council meeting, the South Atlantic Council would review how the commercial and recreational sectors were doing. They would make a decision of shifting a percentage of the ACL; and it would go through using an abbreviated open framework procedure.

In this case, basically the staff would put together the document and everything that we needed, get it to NMFS; and then once they approved it, they would publish the notice before March. That would only apply for one year; and then it would go back automatically to whatever the allocations are. All three of these; the council can actually set it up where all three of these things could happen.

They could make a permanent shift through a plan amendment; and then they could set up where an in-season ACL could happen or a pre-season ACL shift. We could actually do all three of these. They want to have some flexibility depending on what is happening in the fishery at the time.

That year maybe there were storms or there was something about recreational access to the fish; but at the same time, especially with the in-season trigger, the council could set that up and then it never happened because the shift never got triggered. That is what we presented to the SEP and we're just kind of tweaking these options and hoping to get some input. The next time you see it, it will be a little more fleshed out and defined of what the council wants to do. I guess I'll turn it over to John.

MR. WHITEHEAD: The SEP believes that the council needs to clarify the goal and purpose for this amendment as increasing the harvest of the mackerel species is not necessarily the same as increasing net economic benefits. For example, leaving fish in the water could provide value in terms of increasing encounters for catch-and-release anglers.

As such, reallocating fish from the recreational sector to the commercial is not automatically a situation where one sector gains without any cost to the other sector. The SEP does believe, however, that in-season triggers that reallocate fish from the recreational sector would be a useful way of increasing economic yield of the mackerel fishery.

DR. BOREMAN: In-season triggers; the commercial fishery is a census. You are going out there and you're counting the catch; but with the MRIP it is an estimate; so you do have this lag there of six weeks or so from the wave until when you actually have data that you're confident in; it has gone through QA/QC.

Then after the six weeks they need to publish this notice. That could take another week or two, maybe. So you're talking eight weeks after a wave before you can act on whatever estimate you have coming out of MRIP. I would just make sure you do a thorough analysis of the feasibility of taking that in-season adjustment approach before you launch into it or recommend it, especially if you're coming in at the end of the year in October with some recommendations to get in by the end of the year. I think that is the reason why in the Mid-Atlantic we've moved to the preseason adjustment the following year, just for that reason. It wasn't feasible to do in-season adjustments between the two fisheries.

DR. BARBIERI: I thought about the same thing, John. It is a good idea conceptually. The challenge is can we get the data processed and released and within the uncertainty parameters that are needed for us to be that responsive in season. It is a challenge to be discussed.

MR. COLLIER: In addition to that, it is a seasonal fishery where during the winter it is high in Florida; during the summer it is higher in North Carolina; so you are going to impact different areas by changing this seasonally.

DR. BARBIERI: Things to think about. The idea is to kind of identify for you, before you get too far into this, what could be some of the curve balls coming your way; so you can think about how to get them addressed or whether this is something that is even viable.

DR. MacLAUCHLIN: Well, we did have a good discussion at the SEP that was more than the recommendations about moving allocation around and all. There has been some good input.

DR. BARBIERI: Any other comments? I guess not. Thank you so much, Kari. It is good for us to have the opportunity to provide some review and recommendations. Well, moving along; we are going to jump now to Agenda Item 18 and ask that Vice-Chairman Reichert give us a fishery-independent reef fish sampling overview; our annual overview that we requested Marcel to give us.

DR. REICHERT: Thank you for providing me an opportunity to give you this update. This is similar to the one I gave last year. It is an overview of what is now called the Southeast Reef Fish Survey or SERFS. It does include some of the efforts by the SEFIS program. These are some of the slides you've seen earlier; but just as a reminder, MARMAP has been in place since '72, reef fish sampling since the late seventies.

In 2009 we got some additional funding through SEAMAP South Atlantic that has been in place since the mid-eighties; additional money for sampling reef fish. Then SEFIS came online in 2012. The big change there was the addition of the video survey. Currently the primary gear that I will give an overview of is the chevron trap. We've consistently used that since 1990.

We deploy that in depths to about 120 meters, a 90-minute soak time. We bait the traps with clupeids. Last year every trap had one or two cameras. Traditional or standard operating

procedure is two cameras. You can see that on the left-hand side; one Canon camera facing away from the trap opening, which you see here; and we have a GoPro sitting on the nose of the camera facing the other way.

Since the GoPro currently has a maximum depth of about 70 meters, if we set the traps really deep, we only have the Canon cameras on the traps. MARMAP currently has a number of traps with what we call an inside-the-trap camera; and that is sitting on the nose looking inside the camera to look at some of the species interactions. We have a PhD student currently who is working on that.

Our contemporary sampling design consists of sampling randomly of about 3,000 sampling stations of known live bottom habitat. The distance between the selected stations is at least 200 meters; in effect it is 400 meters. Currently, as we have been doing over the last couple of years, MARMAP/SEAMAP samples off of South Carolina/North Carolina, and SEFIS is sampling off of Georgia and Florida. That is mostly a logistical decision although there is some overlap.

The green line is roughly where the dividing line is. This is an overview of our sampling universe. The blue dots are our short bottom longline stations. As you can see, they are mostly distributed over South Carolina and North Carolina. Then the red Xs are the chevron trap sampling sites; and please note that they overlap, so some of the Xs are too close together to see individually.

MARMAP/SEAMAP is processing almost all of the life history data, reproduction and age data; and SEFIS is doing most of the video processing and analysis; although MARMAP has assisted last year with reading about 1,000 videos. We currently have one combined comprehensive data set. We manage the data set in collaboration with SEFIS.

These are the two primary vessels we are using, the Palmetto and the Savannah. Each vessel is out during the summertime, May through October, for currently about 50 to 60 days each year. To see some of the progression in the efforts, on average between 2006 and 2009, we sampled just under 700 traps annually. As you can see in recent years, we more than doubled that.

Last year we sampled about 1,500 traps, but that included reconnaissance traps. This is a top view of one of the traps sitting on the bottom with the Cannon camera here. You see some fish swimming around the camera. A reminder; in 2012 maybe you will remember that MARMAP had a 40 percent budget cut, which resulted in the halting of the long and short bottom longline surveys. We got some of that funding back; about 20 percent of that lost funding we got back in fiscal year ’13 and we got a little bit more back in fiscal year 2014.

We are also fortunate enough that we got some additional funding through SEAMAP, which as I mentioned earlier on several occasions may allow us to resume the short bottom longline survey this year. Unfortunately, SEFIS lost about 10 percent of its funding, which results in a 10 percent reduction of SEFIS sea days and also to some funding to MARMAP to process the life history samples and to assist with the video survey.

For the 2013 sampling year, we deployed, as I said, over 1,500 traps; 548 of those were reconnaissance traps mostly off of Florida. I will show you that in the next slide. These are the chevron trap deployments in red for the MARMAP survey; in blue for the SEFIS survey. Some

of the other colors; light blue is rod-and-reel collections for diet studies, yellow are some rod-and-reel collections for the MARMAP survey.

We did about 500 or a little under 600 other gear deployments; so that means we deployed CTDs, hook and line, as I mentioned earlier, for diet studies. Collectively we collected 68 species and over 40,000 fish that were identified, weighed and measured. For our life history we only used the trap catches and the hook-and-line data.

Within the traps, we collected life history information from 40 species and about 7,600 fish, mostly for age and reproduction. We completed the diet studies for red porgy, vermilion, gray triggerfish, and red snapper. We are currently collecting information on other groupers, squirrel fish, blueline tilefish, black sea bass and white grunt.

We are still processing the diet study samples. That takes a while to go through them and identify diet items. We hope to have some information for potential upcoming stock assessments. This map is a slide with the reconnaissance traps that we deployed this year; and this included an effort off of the NOAA Vessel Pisces.

They investigated in an area off of Florida that we had some gaps. This is the area that the Pisces will concentrate on this year to fill a gap off of northern South Carolina and southern North Carolina. Next year we hope to have a little more stations there. This is probably going to be the last effort to fill some gaps; because we feel if we fill the gaps in that area, we have a pretty good regional coverage.

In the next couple of years we will predominantly concentrate our efforts on monitoring. This is an overview of the 2013 catches of the most common species. As expected, the most common species is black sea bass but also tomtate. As I mentioned last year, red snapper is still currently our ninth most abundant species in the traps.

I'll give you a little bit of time to look at those numbers, but a lot of the managed species such as red porgy, gray triggerfish, and vermilion snapper are amongst our most abundant species, but also white grunt is collected in fairly good numbers. This is an overview of the fish that we keep for life history; as I mentioned earlier, over 7,600 fish.

Again, black sea bass, red porgy, gray triggerfish, and vermilion snapper are the most abundant species; but red snapper is up there as the fifth species in our life history collections. An overview of the CPUE, I have an overview of 14 species, chevron trap data only. I only included the monitoring stations although we have been thinking about including the reconnaissance traps if we know that they were deployed over live bottom habitat.

We selected species range, the depth range over which about 90 percent of a particular species was collected to eliminate a number of zero catches. We truncated the soak times between 45 minutes and 150 minutes; but the vast majority of the soak times are pretty close to 90 minutes. The time series is 1990 to 2013, CPUEs in fish per trap hour, although we have been discussing using a different measure of CPUE.

I will show you, as I did last year, two CPUE measures. One is the Delta GLM standardized and the nominal CPUE. AS I mentioned last year, we are investigating other ways of standardizing

the CPUE. All the slides are normalized through the long-term average. Error bars are plus or minus one standard error just to give you an idea of what the variability; and with some of the other measures we are thinking about potentially changing that.

I put an asterisk behind 1990, because, as I mentioned in previous years, that was the year after the Hurricane Hugo. Some sampling may have been affected by the Hurricane Hugo that hit South Carolina the year before. As I mentioned last year, this is the exact same slide. I realize that this is a summary overview and not an update of stock status.

The constraints, stratifications, units and models for CPUE are different or may be different than those used in some of the SEDAR stock assessments. Many of the species, although fortunately in an increasingly declining number, have not been assessed or updated through the SEDAR process. A lot of these trends and analyses have not been discussed in the SEDAR framework.

This is a reminder to me to mention that if the species' name is in green on top of the slide, it means that we currently do not routinely sample that species for life history. However, we could; so if there is a need for age and reproductive information, we can add that species to our priority species. If the SSC has any recommendations to that effect, please let us know.

Black sea bass; standardized CPUE has remained relatively high although the increase between 2010 and 2011 hasn't continued. Some of this may be due to the fact that we added so many sampling stations. Joey Ballenger has looked at this increase. That was a consistent pattern throughout the sampling season.

Bank sea bass increased through 2011 with a decrease in recent years; possibly one could speculate as a reaction to increases in black sea bass. Scamp in the last couple of years has remained relatively low; around the lowest CPUEs of the current time series. Red grouper remained under the long-term average since 2009.

This is the snowy grouper in the chevron traps. I have to say that we catch snowy grouper in very low numbers in the traps, but I just wanted to add this trap CPUE. This is one of the species we catch routinely in higher numbers on the short bottom longline. Gag; you can see I only showed here the nominal CPUE because the numbers were so low that we couldn't construct a consistent normalized Delta GLM CPUE.

These are two pictures of one gag outside the trap. This is a relatively large gag. I wondered how that animal actually got into the trap, but here you see one actually inside the trap. This is a frame of a very interesting video where this gag in the trap actually ate four tomtates. You can imagine there was some panic in the trap when that happened. Vermilion snapper; this is a species that we catch in relatively large numbers in the trap.

Red snapper; here you see that guy actually ended up in the trap. Here you see an opposite pattern, because we added sampling stations in areas where we would expect red snapper. The nominal index is actually higher than the standardized index because it corrects for changes in those areas; or it tends to or we hope that it at least corrects somewhat for those changes in sampling areas.

Red porgy; somewhat disappointing to see that the seeming increase in red porgy CPUE was interrupted last year; and we are curious to see what happens this year, whether that was possibly an anomaly. Knobbed porgy; unfortunately, still on the low point of our long-term time series. This is potentially an example where possibly the 1990 data points may not be reflective of what is happening in the population due to sampling; so that may be something we want to look into. Tomtate, white grunt; and interestingly enough also an interruption of the increase in CPUE that we saw in the last couple of years in 2013.

DR. BOREMAN: Going back to your comment about that one fish eating the tomtates in the trap; are you looking at the species that are co-occurring in the traps and factoring that into your GLM at all?

DR. REICHERT: No. Currently we are not because we only recently started collecting and analyzing that data. What we have been collecting – because we know the species composition in the trap; one of the things that PhD student is doing currently is looking at species' occurrence in the trap and see if there is a pattern; for instance, if there is a larger predator, whether that affects the other species in the trap; but we haven't done that.

That is not part of our current Delta GLM standardization. This is Stenotomus, which are scup and long-spine porgy; next, gray triggerfish. Those were the 14 species. I have a couple of other species if you are interested, but they are generally occurring in relatively low numbers. If you have an interest in other species, I can see if we have done the same analysis.

That was a quick update on some of these trap CPUEs for 2014. Our regular sampling season is May through September. We started sampling on April 22; and we are currently planning on sampling through October 18. The beginning and the tail end is usually reserved for some reconnaissance or for some diet studies.

Overall, we will continue sampling with chevron traps with two video cameras and CTD deployments. We also continue the hook-and-line sampling for the SEAMAP-funded diet studies. SEFIS with the NOAA Ship Pisces will investigate bottom off of northern South Carolina and North Carolina, as I mentioned earlier; in particular the area around Cape Fear and Onslow Bay.

Then, as I mentioned several times, we are hoping to resume the short bottom longline; and we are currently working on a plan that will include sampling more regionally. As you may remember, I showed that map with the currently established stations mostly off of South Carolina and North Carolina; and we are trying to come up with a plan to extend that down to Georgia and Florida.

But currently we have no plans or funding to resume the long bottom longline; and that is mostly to assess tilefish and other species that occur over the muddy bottom tilefish grounds. I think this is the last slide. Joey Ballenger and Wally Bubley and Tracey Smart have helped with doing the analysis for the Delta GLM and the nominal CPUE. I should definitely recognize them, but also staff at SEFIS and MARMAP and SEAMAP for helping with data collection and analyses, and, of course, the vessel crews without whom we could not do this work. If you have any questions, let me know. Interestingly, we do see several great white sharks on our videos each year. They are out there.

MR. CARMICHAEL: What a good way to discourage questions.

DR. BARBIERI: Then you had a video, right; was that last year that you had the video that all of a sudden the great white would swim by?

DR. REICHERT: Yes; that was kind of a "best of" but, yes, we had that.

DR. BUCKEL: Marcel, I know the review of the program, there were two recommendations. I'm just curious if there is any progress or plans to move in that direction. One was stratification instead of just randomly picking from the whole universe to have some type of stratification prior to picking your station. Then the other one was having a mix of fixed stations and random stations.

DR. REICHERT: Yes; let me address the second question first. We have looked at that and we are moving towards that. The reality is because of the way we are selecting our stations that we have, a number of stations that are – or a number of areas that are picked every single year; so in effect we do have a number of fixed stations.

However, one of the things that we are currently looking at, because we have expanded the sampling universe with so many stations, that we want to make sure that we continue to do that in the future. Yes; we have been looking at and we are looking at that. As to your first question, we have started discussing that; and we have come up with some ideas how to approach that.

My concern has been – and I think that is probably the main reason why we haven't implemented anything just yet. My concern is that I would like to see what the potential effect is on the index and the index development before we change our sampling design. We are currently trying to figure out how we can look into that.

We're working with Todd and Nate and others on addressing that. Obviously, the last thing you want to do is changing your sampling design and then having to conclude that you're basically having interrupted your long term index. Hopefully, by next year we have an answer to that and we can either move towards a stratified sampling design or come up with some other solution or maybe decide that may not be something we want to pursue. I have to say that adding that many stations may potentially have had the same effect; but that is also something we can look into in terms of the difference between an index of the historic MARMAP stations and including the new stations. Does that answer your question?

DR. BOREMAN: What is the basis of stratification; just depth or what?

DR. REICHERT: The basis for stratification is both depths and latitude; so it is longitude and latitude, but longitude is basically your depth strata. We're looking at, if I remember correctly, three depth strata and a number of latitudinal strata.

DR. BUCKEL: I think I missed this when you talked about it, but what were you standardizing with the Delta GLM? I know you mentioned space and I didn't know if there were any other variables; and specifically to Mark's comment earlier about the cold water; if that temperature is taken into account.

DR. REICHERT: Temperature, depth, season, latitude – well, longitude in that place, yes. I think those are the four, and I think season fell out and then year.

DR. BARBIERI: Any other questions or comments for Marcel? Marcel, thank you. It has been great to get this annual overview and discuss the progress.

MR. COLLIER: What is the difference between the GoPro cameras and the Canon cameras as far as visibility and different things like that?

DR. REICHERT: Currently the new GoPro that we've been using, without endorsing any brands, it seems that the resolution is rivaling that of the Canon camera. Within SEFIS, I think they are currently looking at comparing the Canon and the GoPro; and as the GoPro are a lot smaller, potentially moving to GoPro; but that creates some issues in terms of standardizing. If I'm not mistaken, the examinations for the video index have been done using the Canon. If we move to a GoPro, we need to make sure that we are looking at the same frame, view, and everything.

DR. BARBIERI: By the way, this is one of the topics that is going to be discussed at this late May workshop for the visual survey as well; because you have different places using different types of cameras. The cameras improve over time and the cost changes as well; so how can we standardize or develop conversion factors, basically, to calibrate your historic time series to the new technologies that are being developed.

DR. REICHERT: Yes; and the GoPro so far I have mostly – if I am not mistaken, have mostly been used to verify bottom type, maybe visibility and current and stuff like that; but I think the fish counts have all been done using the Canon videos. I can verify that with Todd and Nate if necessary.

MR. COLLIER: When are the video estimates going to be available?

DR. REICHERT: I put an e-mail in to Todd and Nate to confirm that. I think I said earlier – do you mean in general or on an annual basis or maybe both?

MR. COLLIER: Both.

DR. BARBIERI: You are getting the absolutely latest; he is checking his iPhone, because he just received something from Todd.

DR. REICHERT: Yes; I said late summer the year following the collection, and I think that is consistent with the latest information I just received. That is consistent with the fact that the red snapper and gray triggerfish information will be available for the August data workshop.

MR. COLLIER: That would make three years of data or four years of data?

DR. REICHERT: Yes; that is really a question for SEFIS.

DR. BARBIERI: We're going to come back after that workshop and bring back some of those reports. I guess Jeff will be there.

MR. CARMICHAEL: Yes; I'm sure in October we'll talk about that and the assessment will have gotten under way. Just one thing I wanted to mention, because it relates to this, is in the research plans we ask that this program be supported to the extent that the video monitoring data are done by June 1st of the year following collection.

That has been something that affected assessment timing is saying, well, you may have the other data, but we still have got to get all these videos read. Well, obviously, reading the videos is an integral part of the program so that needs to happen. The council has said June 1st as a target.

MR. COLLIER: Are staff holding up reading all those videos or are they starting to go nuts?

MR. CARMICHAEL: I'd say we don't know.

DR. BARBIERI: If Gregg is still available and up to it, yes, it will be good for us to get one more handled. We have the Oculina Closed Area Evaluation Review.

MR. WAUGH: We had hoped to have the draft report for you to review. This is the ten-year evaluation. Unfortunately, we had a couple of ice storms here and one in particular that delayed – we had to redo our timing for our webinars and get into re-noticing in the Federal Register and so forth; so that has thrown us a little bit behind.

We've got the outreach and the law enforcement components have come in, but we're still waiting on the research and monitoring. That is still being finalized. The current schedule, if we can keep to it, has that report being presented to the council at their June meeting. What we would like to do is get some guidance from you if you would be willing to receive that report via e-mail and provide some comments; funnel them to the chairman or whoever is going to be at our June meeting to give the SSC report.

The chair or that representative can present your comments and recommendations to the council in June. We don't think this is going to be too earth-shattering, because, quite frankly, there is quite a bit left to do on the law enforcement and the research and monitoring side. A bit of good news is we are waiting for the final action on our coral grant that will cover fiscal years '14 through '16.

We've restructured that to focus in large part on the Oculina Experimental Closed Area. At the end of that three-year cycle, we will have that entire Oculina Experimental Closed Area mapped and characterized. That is a big step forward into understanding what is going on within that area. That is where we stand now; and if you would be willing to look at that and provide some guidance to your chair or representative, that would be a help.

DR. BARBIERI: Yes, excellent. It sounds like something that we will have plenty of time between now and the time that we have completion of our report as well to have all of this incorporated and then comments forwarded in time for the June council meeting report. John Carmichael, what else could we take care of today?

MR. CARMICHAEL: Maybe the next item is just some work plan updates of some last things, project reports on these different projects. We talked about the fishery-dependent sampling

workshop, suggested to include inventory of fishery-independent sampling. National Standard 2 revisions; you were provided the final rule on NS-2.

One thing I do know that is under way is NMFS is in the process of reviewing the various peer review programs like SEDAR and SARC in the northeast and such and determining if they are in compliance with the latest NS-2 Guidelines. Our understanding has been that there will be something published in the Federal Register indicating that various programs are considered in compliance, because those are addressed as part of the Magnuson Act and the various guidelines.

I know that they're working on that and have had some communication with the folks working on those and submitted documentation on SEDAR. We're just kind of waiting to see that get published and get the big thumbs-up that we are in compliance. I don't know if anybody has any questions, comments, or whatnot on the NS-2 final guidelines; but they are published and they are final. If we had comments we probably should have made them during the review process.

DR. BOREMAN: Just a couple of comments; because obviously I am interested in it from a role of an SSC Chair. I think the revisions do a nice job of defining the role of the SSC in putting together best scientific information available to go to the council, what the responsibility is of the SSC.

If there are some peer review process, no matter what types of processes are out there; all information going to the council related to science have to pass through the SSC to get its blessing. The SSC needs to certify it. It is good to see that in the regulations. It is something that I had a running discussion with certain Center Directors about in the past; but I've always felt that way, so it is good to see that the lawyers all agree.

MR. CARMICHAEL: Yes; I agree. That was kind of one of the nebulous things before was what the SSC's role was in determining best scientific information available. You would make comments, but the Agency and the Center would decide what it was. We kind of got into that era where we would say, well, the SSC decides for the council what is adequate for management.

That was kind of an ad hoc approach to doing it. That was very good to see that in there. It means that there is a lot expected of you guys. There are a few little tweaks that we've made within the SEDAR process just to be in compliance. One that you might see and it won't affect SSC members; but other reviewers who come in, if we appoint someone to be a peer reviewer they need to do a conflict of interest statement. Everybody who does a peer review needs to do a conflict of interest statement. We're working on now about where do those go? While it is part of the requirements, I haven't gotten a straight answer from the agency about who collects them and where they go and who keeps up with them and all that. We're trying to work that out and you'll see some things like an opportunity for public comment being offered at SEDAR peer reviews as a way of complying with these standards.

For our regard they address transparency and define it, which is very helpful; and they make it clear that transparency is about information being available and people seeing how the process is derived. It doesn't cross over into what sometimes is viewed that the public needs to have a say in every decision; and transparency doesn't always mean it is appropriate for you to have a say in that decision, but it is appropriate for you to see all the information pertaining to it. I agree there are a lot of good things in there that help clear up some gray areas.

DR. BOREMAN: It also codifies the capabilities of SSC members to chair SEDARS or SARCS or whatever. That was something in the past; you know, we were a little reluctant when we started out having an SSC member Chair of SARC, for example, and then have that assessment come to the SSC for peer review.

Another point while I have the microphone is it also allows the SSC to overrule a SARC or a SEDAR. They may bless an assessment. This has happened in the Mid-Atlantic where an assessment passed the SARC, came to the SSC, and the SSC gave it a thumbs down. Of course, we got criticized for that; but as long as you justify why and build a case, you can basically do it.

MR. CARMICHAEL: Yes; we've been there two years ago and the first king mackerel happened; and then in the recommendations – I think it was for maybe MSST on gag from the first gag assessment – the SSC rejected it. It is nice to know we have the backing of the law now in doing those things.

The third item on here is our ABC Control Rule Workshop. The next workshop alert is coming up in October. You requested that we look at the ABC Control Rule, how it is working out and if it is time to make some tweaks, some changes, or what have you and flows from the discussions about priorities and triage and what to assess and then how we come up interpreting those assessments.

One of the things we had hoped to happen here and whether or not we do this now or we come back to this – now that you've been told about these things and we've discussed it a little and actually come up with specific recommendations is to get some idea of the TORs that you might want to do for that workshop and what kind of materials we might want to have available and how we may want to handle that process.

There was a subcommittee formed at the last meeting to work on that – it was Steve Cadrin, Luiz Barbieri, and Marcel Reichert – and just off the top of my head one thing to think about is if the committee is not ready to dive into that, maybe this afternoon if we adjourn here in the next couple of minutes, that group could get together and talk about that some and we could knock these things out pretty good.

Maybe if there are some folks interested in working on the fishery-dependent sampling workshop and another similar group that maybe wants to brainstorm a couple of ideas there; we could try to do that as well and before we adjourn here get some guidance of what you would like to see happen there.

DR. BARBIERI: Right and just to clarify – because I guess Jeff had brought this up before – the focus of the Fishery-Dependent Sampling Workshop, at least it started with the bio-sampling.

MR. CARMICHAEL: Now it is going to be independent as well.

DR. BARBIERI: Broader, yes, independent as well. It is going to have a strong component of bio-sampling, but also be inclusive of the fishery-independent data sources as well.

MR. CARMICHAEL: We will change the title to capture that.

DR. BARBIERI: Right. We don't have an actual identified timeline and list of action items associated with that one?

MR. CARMICHAEL: We don't. We have a timeline to talk to the council in June and hopefully get a sense of when it could happen. Budget is obviously a concern. If we get an idea of what we would like to do, how many people you think should be involved and when it could happen, that will help the budget decision in June.

DR. BARBIERI: If I remember correctly, we discussed this with Dr. Ponwith back last June I believe; it might have been December.

MR. CARMICHAEL: December.

DR. BARBIERI: There was some idea to coordinate with the Center in the timing and the composition of the participation of the Center in terms of the workshop itself.

MR. CARMICHAEL: Nodding in agreement.

DR. BARBIERI: Yes. I think we still would like to have some volunteers for the fisheries-sampling workshop.

MR. CARMICHAEL: Yes; organizing committee.

DR. BARBIERI: Yes, the organizing committee basically and not necessarily folks who will be attending there but definitely providing some structure in terms of development of terms of reference, charge for the group and objectives associated with the workshop. Keep in mind that we have in our report from last October, I believe, already a number of comments or recommendations that we made when we reviewed this item then. It is just a matter of picking those up and repackaging them in terms of objectives and goals; right?

MR. CARMICHAEL: That's right, aligning them more with what we want to do here as that has evolved from really focusing on sampling and really more of a focus on specific targets. Now it has really taken more of an elementary view of it, realizing that we need to do that first.

DR. BARBIERI: At the risk of sounding unfair, I cannot help but look at Vice-Chairman Reichert here.

DR. REICHERT: I have to decline; I've got too much on my plate already.

DR. BARBIERI: Well, George, I am looking for people with connections to the broad-based sampling programs. Since in your former life you were deeply involved with MARMAP, I thought you might have some – no, this is now independent as well. I mean we can go back and actually – you know, if including independent is too much to tackle all at once.

DR. GRIMES: Is this going to be an opportunity to advance the cause of a data availability workshop that would help to drive the future use of data-poor methods in stock assessments?

MR. CARMICHAEL: Yes.

DR. GRIMES: That is a worthy cause, which George would be willing to sign on to.

DR. SEDBERRY: I would suggest that someone who is retired, who has a lot of experience in the region.

DR. BARBIERI: Not to make this sound too official, but Chairman Hartig has discussed this at the council level. This is an issue in terms of bio-statistical sampling where our ability to complete our assessments is really a critical issue. At this point we don't really have a well-organized way to look.

Remember that we had those tables – and it was ACCSP – and some of the other spreadsheets and tables and matrices of how the prioritization process was being conducted for collection of the building blocks of stock assessment; lengths and ages. I got back home after October; and in talking to staff I found out that there is absolutely zero.

For the state of Florida, there are zero bio-statistical sampling for the Atlantic side. There is absolutely no funding. Through the recreational sampling program, there is no collection of bio-statistical samples. We used to have some with the commercial sampling; but funding dried up, and at this point there is no collection of lengths and ages that are conducted by the state of Florida for the Atlantic side.

I was astonished because, obviously, if we are trying to develop information, develop the data to support stock assessments; we would have to have this data. The idea of this workshop was really to discuss those things and say, okay, what processes do we have in place to prioritize the sampling?

What are the resources available in terms of funding that exist or coordination through ACCSP and through the Gulf States Commission process, which covers part of Florida? What are the processes in place and how can we come up with something that would be more comprehensive and more, I guess cohesive, an organized framework for bio-stat sampling.

MR. CARMICHAEL: I'll extract that for a good goal statement and objectives and timing. If we're going to make this happen, we'll do it as staff, but I really would appreciate a couple SSC members to serve on the organizing committee. It is really just a number of conference calls and reviewing some documents, and, yes, those are good objectives, and helping us brainstorm folks that should be there. We'll probably go with this spreadsheet inventory process. People that are out there, particularly at the states and dealing with your own sampling programs, would be helpful to consider the variables we should ask for on the spreadsheet.

By getting shrimp people, we focused a lot more on environmental stuff than we might have otherwise with some of the fish things. I think a couple state folks would be helpful on this; and maybe someone from a state that collects a lot of data we know and has a lot of sampling programs, a lot of historical ones – and what do they call that; the bio-database or something up in North Carolina I think it is, yes.

Yes, years of data going back to the seventies, we would like to let people know exist, the old Dan Moore and what not. Who knows what's in there? Just an hour a month, one weekend a month or whatever it is; that's it, an hour a week, one weekend in a month; no problem.

DR. BARBIERI: For this side here I saw Churchill and George actually stepping up to the plate, right?

DR. GRIMES: I'm willing to be a participant.

DR. SEDBERRY: I will work with council staff on this.

DR. BOREMAN: I'm not volunteering, but I just still think that ACCSP person from staff there probably should be on your steering committee, because they have gone through this process so they kind of know the ropes about what is feasible and not feasible.

DR. BARBIERI: Incidentally, I discussed this in a cursory way with Geoff White and some of the ACCSP. He will be good. I am going up to give a presentation to ASMFC I guess in a couple of three weeks and see if I can rope him into this, because he is a good guy.

MR. CARMICHAEL: We can make that happen.

DR. VAUGHAN: I think there is Steve Turner or one of his staff members – I'm trying to think of the guy's name who was at Beaufort for a while and then went down – thank you; Dave would be the ideal person to have on that.

DR. BARBIERI: But this is what I mentioned before. As we discussed this, I guess it was the December council meeting with Bonnie, sort of offline in terms of seeing what pieces we would have to have from the agency and some of the other organizations; I think she has identified NMFS staff who will be participating.

DR. VAUGHAN: Well, Dave, and I were on that committee for ACCSP from the Southeast Center for quite a few years until I retired.

DR. BARBIERI: Doug, that looks like a lot of corporate history right there that you just mentioned.

DR. VAUGHAN: I knew I shouldn't speak up.

MR. CARMICHAEL: We'll keep him in mind for a chair or something.

DR. VAUGHAN: I can be a member of the committee.

DR. BARBIERI: Okay, I think we are there.

MR. COLLIER: I'm willing to help.

DR. BARBIERI: Okay, thank you. This is really important; and if we can get this moving forward, it is going to be very informative. Now regarding the ABC Control Rule Workshop; Steve, Marcel and I will be discussing this this evening in a more collegial setting.

MR. CARMICHAEL: And report back to us at the close of the meeting?

DR. BARBIERI: At the close of the meeting, yes. We have a little set of ideas that we will report, but before closing of the meeting on Thursday.

MR. CARMICHAEL: We need to start the wreckfish promptly in the morning at nine, if you want to convene maybe at 8:45 so we can make sure we're ready to go.

DR. BARBIERI: Yes, please, let's make sure that we are here in plenty of time, because we are going to have Dr. Butterworth joining us through the webinar. The timing is critical. Be here at 8:45 at the latest, so we are all set up to get up and convene and start promptly our review at nine o'clock. With that, we will recess for the day and reconvene tomorrow morning.

(Whereupon, the meeting was recessed at 5:30 o'clock p.m., April 29, 2014.)

The Scientific and Statistical Committee of the South Atlantic Fishery Management Council reconvened in the Crowne Plaza Hotel, North Charleston, South Carolina, Wednesday morning, April 30, 2014, and was called to order at 8:45 o'clock a.m. by Chairman Luiz Barbieri.

DR. BARBIERI: We're going to get started. Our agenda is being rearranged a bit. We are going to start this morning with the wreckfish assessment review, and then proceed to the blueline tilefish projections, go to the gag and the snowy grouper assessment review and then probably change our review and discussions of the council's peer review process most likely to tomorrow morning.

John Foster from the MRIP Program should be here sometime this afternoon; and if that is the case, we're going to go ahead and have his presentation and a discussion on the MRIP program changes this afternoon. As you go through our agenda, you'll see some changes in the ordering and that is why.

MR. CARMICHAEL: Okay, Doug, if you try again, I think we are good to go.

DR. BUTTERWORTH: Are you hearing me now?

MR. CARMICHAEL: Yes, we hear you now.

DR. BUTTERWORTH: I wonder if, John, assuming what you want me to do is give a brief introduction to the paper plus the responses from the peer reviewers. Could you get that paper up on the screen?

MR. CARMICHAEL: Yes, sir, I'll have it up; and much as we did at the review, I will just page through it with your guidance.

DR. BUTTERWORTH: One thing I don't have at the moment is a picture.

MR. CARMICHAEL: You should have a picture up; we've got the screen displaying here and on audience view it looks like it is showing.

DR. BUTTERWORTH: I'm not quite sure what happened to my side. Okay, I've got it back. That should be fine, I think I've got both sound and picture, so I'll do my best not to press the wrong button.

MR. CARMICHAEL: We'll do the same.

DR. BUTTERWORTH: (No sound)

MR. CARMICHAEL: No, you go ahead; we were just having someone somewhere else that needed to be muted, so I muted them and took care of it.

DR. BUTTERWORTH: (No sound until the following) I'll take any questions; thank you.

DR. BARBIERI: Thank you, Dr. Butterworth. Before we get started with questions, I will just quickly review for the committee our list of action items and, of course, review the wreckfish benchmark assessment and consider whether it represents the best scientific information available, identify and discuss assessment uncertainties, and then provide fishing level recommendations. With that, we are going to open up for questions or comments.

DR. CADRIN: I would defer to the Chair of the review, but I'll start out hoping that Marcel comes in behind me. Many of us were involved in several stages of this review. I'll go way back to the DC-AC that was the previous basis for this ABC. I was fairly new on the SSC at that point. We had a default ABC that was based on recent average catch and the regional office had provided a DC-AC analysis.

One evening during the SSC a small group of us convened to review that analysis to give feedback and to report back the next day to the SSC on technical feedback from the DC-AC and the recommendation, and we formed a recommendation from that. This was a proposal from industry. The industry consultant came in to try to improve the scientific basis of that. There was some concern expressed around the SSC about the process there.

I think that we had done quite a bit of work; and we formed another subcommittee to develop an SSC process for review. We looked at the National Standard 2 Guidelines, which were draft at that point, which allowed for an SSC review, but we also wanted to maintain the touchstones of best science that are in the guidelines. We realized that we could not do a full SEDAR review, but we also realized the desire to have some form of SEDAR Light.

I think over the last year we have done that. This is the first time we've tried this SSC review process, so I think we need to partition our comments from the process issues, which I think is on our agenda later; from this case study. From my perspective, we've actually asked a lot of Doug and Rebecca, because it is the first time we've gone through this.

I think we've asked for a lot as far as from what they initially provided, which in my opinion is an improvement over the DC-AC, but we've asked for a lot of reruns, we've asked them to look at it in a lot of different ways, we've inspected the data, the model. In that sense I think we have gone through the process.

I think the interactions with Marcel and the growth was an improvement. I think the SSC process added value to this product as well. In the end, this is still a data-limited assessment. I think that is what we need to consider; that this may be an improvement over DC-AC. I think it adheres to the ORCS recommendation that if we can step up the ladder from DC-AC to some form of a full analytical assessment, we should feel compelled to do that. In that sense I think that we have an improved assessment that still has some issues to consider; but I think we do have a basis for catch advice here.

DR. BERKSON: First I would like to thank Doug for the work and for the presentation. It is obviously extremely helpful. Steve, your comments are good, as always. I don't know that we've asked Doug to do a lot more than would be asked of any assessment. The kinds of runs that he did and sensitivities and graphs and all the rest are typical, if not far less than what we see in many SEDARs. I think it is important to point that out.

I think I do have a process question that I would like to ask, because I'm a little confused about the meeting that was held in Charleston and what exactly that was in terms of the process; because that isn't part of the external process we put together. I've heard off and on people call that a peer review; and I don't believe that qualifies as a peer review. I don't think that was designed as a peer review. I think the SSC is doing the peer review. I want to clarify that.

DR. REICHERT: Are you referring to the meeting in November, because I don't think that was ever referred to as a peer review. That was kind of an equivalent of a data workshop type of meeting.

DR. BERKSON: That is what I was referring to; but like Doug during his presentation was talking about the peer reviewers asked for this or in response to the peer reviewers I did that. I just want to clarify I'm not quite sure who he's referring to there; and I want to make sure the SSC understands that if I am right, then this hasn't been peer reviewed yet. That is our task.

DR. BARBIERI: Right, and just to clarify, Jim, this is our first run through in the process and it is new that we actually accept third party assessments that are conducted outside of the SEDAR process. You may remember that we developed jointly with the council a number of guidelines and have a guidance document that we put together to basically set the parameters. I think Steve chaired that subcommittee that put together that set of guidelines.

Our last meeting review of that was really that we stay true to the principles outlined in the NS-2 in terms of peer review and the role of SSCs and peer review; so we were comfortable with that and the council approved that policy.

Then we are trying to work through the process; and it is kind of trial and error. An idea was, okay, for a regular SEDAR process we have a data workshop, we have an assessment workshop for a benchmark, and a review workshop. In this case, we organized jointly with the analytical team a data/assessment workshop of sorts that involved SSC members to be discussing how to help configure the model and identify parameter choices and the best source of data and go through the data.

That was the November meeting where Doug, George, Marcel, and we had Adam Litton, who did his graduate work on the growth of wreckfish, attend; and they looked at the data. It was the

typical assessment workshop type of process. That produced a number of recommendations. After that, there was a webinar review workshop. Marcel and George co-chaired that workshop; and it had myself, Steve, and Lou Coggins from the Science Center as review panel members. Yes, questions?

MR. CARMICHAEL: As I say, there was the AW; that is November. If you look at Attachment 14, that provided you the proposal, the SSC's review of the proposal, which was a September conference call of the SSC; and you also have the AW report. As Jim initially said, our peer review process does not address that component; and that is correct.

But if we go back to the evolution of this particular assessment when Dr. Butterworth first came to us, there was discussion here and the SSC supported having some type of workshop; and he requested that. He felt the best way to do this assessment was to have some type of workshop where he could discuss the configuration.

He thought that was what was going to happen when he came to that first meeting with us and it didn't. We developed a process over the next year; and then we held that workshop basically a year later, which that is what we did in November. That is true that is not part of the process. That was extra, but the SSC and the council supported it and viewed that as the best way to handle this particular assessment.

Then we had the peer review; specific, it was peer reviewed by the independent peer reviewers, as Luiz just named. That was in March and you've got that document as well. I guess the peer review is Document 13. We have separate reports from all of these different steps that lay out exactly what was done and the various ways that we've gotten here. It is more involved than maybe our process always will be; but we've tried to be responsive.

DR. BARBIERI: Just to clarify, Jim; there was a review panel composed of SSC members co-chaired by Marcel and George; and we had requested an assessment scientist from the Science Center to be helping us with that. The Center assigned Lou Coggins to be a member of that panel. We had a three-day, I believe, webinar kind of review process where there is the report with the dates and review panel participants.

In the typical review panel process, you go through the assessment and you request additional runs with different configurations and different sensitivities. That was really to kind of help broaden the analysis as Dr. Butterworth brought up and also to help better document for the SSC; so you have a broader range of assessment runs and use different of parameter values, and we can have a more thorough review of the assessment.

DR. BERKSON: Thank you for the clarification. I know we're going to talk about process tomorrow so I will leave most of my comments for that. I don't know that I'll have additional comments. Just the two things I want to point out; the two additional meetings, the webinar and the assessment meeting aren't part of our external process. Those were in addition.

I question how this peer review actually relates to and if it is consistent with National Standard 2; how that fits in particularly with the SSC review following this review when many of the panelists on that review are also SSC members. I think there are some serious questions about

how all of this comes together; but once again we can talk about that tomorrow. We don't need to probably use Dr. Butterworth's time on this.

DR. BARBIERI: Exactly. John Boreman, we were discussing some of the new principles or revised and expanded principles and guidelines in NS-2. I don't think at first glance that this conflicts with the revised NS-2 guidelines; but we can discuss all of that in more detail tomorrow. But just for your own peace of mind, so to speak; is there additional technical review, comments, or recommendations from the panel before we proceed?

DR. REICHERT: A couple of remarks. I sent Adam Litton, who is a master student at the College of Charleston, I sent his thesis on to John. He just finished that and that has some additional information that may be useful about the history of the fishery and some life history background that was actually referenced in I believe both this report and the report by Dr. Butterworth.

I had a couple of remarks that were similar to what was mentioned earlier. I would like to highlight – and that may be part of another discussion – the remark that Steve made on Page 6 about the confidentiality, because that was a discussion that came back time after time in particular relative to complicating assessments or similar assessments.

That may be something we want to pick up or that conversation we may want to pick up on a later date. Then also to remind the SSC members that we did discuss the ABC Control Rule at the tail end of our discussions kind of as a starting point for the discussions that we may want to have after we discuss some of the specifics of the assessment. That is all I had.

DR. CADRIN: Yes; in response to Jim's question about does it adhere to National Standard 2 Guidelines; I think in spirit it did, I think in practice it did. From my involvement in SEDARs and other peer reviews, we investigated issues. As far as inclusiveness, we didn't have any externals.

We didn't have funding to bring in externals with expertise on wreckfish or this modeling approach or the data approach. In that sense, it may not have been as extensive as other peer reviews. It certainly conformed to National Standard 2 Guidelines better than the evening session we had on the DC-AC.

DR. CROSSON: I don't have any technical questions about Dr. Butterworth's review. I really am glad to see the industry go forward and help us along with this. When it comes time to having a discussion about what we're going to actually do with this data and with other data that we might have; I have something significant to contribute, because Tracy and I have been studying the economics and social aspects of this fishery for the past year. I definitely would like to speak at that time, but right now I think I will leave those two until when we finish with actual technical questions.

DR. BARBIERI: Any other questions or comments?

DR. BUCKEL: I'm just curious, folks that are familiar with the biology of wreckfish, if they could comment on the difference in results from the two different stock-recruit curves gives me a

little heartburn; so what do we know? Is there anything known about Ricker versus Beverton-Holt from the folks that have worked on the biology of this critter?

DR. BARBIERI: Marcel is looking at a – because this was discussed given the different outcome, of course, of the assessment with the Ricker configuration. While he looks at that; one thing, Jeff, that to me was really helpful was looking at that revised growth curve, the updated growth curve; and the ages that were used for the growth curve.

It gave us somewhat of a different perspective on actually this potentially meta-population structure of the stock and the connectivity across the Atlantic and other areas. I came out of that discussion; and after looking at the revised or the new growth curve, I came out of that really more confident that we have adult reproduction.

We have some level of a resident population here in the southeast U.S. that is composed of a broader age range than I had before expected, reproductively capable individuals, and that we might be, you know, somewhat in that context more of a source than I had previously expected. I expected us to be more of a sink of reproductive activity in other parts of that meta-population structure. To me that was informative. I don't think everything is yet resolved in understanding the structure of the population and how that connectivity actually plays a role there, but I think we've moved forward in terms of learning more about the biology.

DR. CADRIN: That was a much more eloquent answer and appropriate from a biology standpoint, but I think Jeff's question is very considerable; because if you look at Table 4, one of the sensitivity analyses assumed a Ricker curve and the stock status determination is different. It does not have biomass above Bmsy, which I think we should consider when using these results for a catch limit.

The review panel had suggested that we consider that in our – if we go forward with a P-star approach and the stock status, that we consider the uncertainty between the stock-recruit assumptions, some of the production models, also did not suggest that the stock is above Bmsy; so that is something to consider with this assessment that we had identified.

DR. BARBIERI: Yes, Dr. Butterworth, please.

DR. BUTTERWORTH: (No sound)

DR. BARBIERI: Thank you. George had a comment or a question.

DR. SEDBERRY: I did, but I've forgotten what it was, but we'll come back to it. I think one thing that did occur to me during that discussion was that the new growth curve more closely matches what we see in this species in other parts of the world and congeners, too. The life history information, the new life history information really matches what we know about this species throughout its range and other species that are closely related to it. I think we're much closer.

DR. BUCKEL: On the biology question; I was curious do we know anything about cannibalism or overlap in these large adults with the smaller juveniles; something that might get you to a Ricker versus a Beverton-Holt?

DR. REICHERT: George, correct me if I'm wrong; the areas the juveniles and the young adults live are separated from where the adults live because they migrate up in the water column. They are associated with flotsam that move around until they are reaching a size and age at which they settle out. That is geographically believed to be in an entirely different geographical area than where the adults live. George, maybe you can elaborate on that.

DR. SEDBERRY: Yes, it is different horizontally and vertically. The juveniles are at the surface; the adults are at the bottom. The juveniles are often more abundant in the eastern Atlantic. As a matter of fact, we don't see any juveniles on the fishing grounds. We haven't seen them in the landing – very few in the landings – and we haven't seen large numbers of them from submersible observations either; so they are someplace else.

DR. BARBIERI: Are there any other questions or comments for Dr. Butterworth regarding the assessment? Marcel and George, the review panel – and I think I missed that part of the last day of the Review Panel Workshop – did go through our control rule and provided a preliminary assessment of P-star value or helped identify some of the issues. As the SSC goes through the process of assigning a P-star value here, there was some guidance provided by the panel.

DR. CROSSON: Are we moving to that section right now?

DR. BARBIERI: That is what I thought unless there are additional comments.

DR. CROSSON: I have some comments about this fishery that I would like to bring up if we're done asking Dr. Butterworth. Again, my concern was that his time is limited; he is six or seven hours away from us; so I wanted to make sure that is finished before.

DR. BARBIERI: Yes, the only issue is after the P-star I think we are going to have to discuss getting additional projections.

DR. REICHERT: I think the first question is as an SSC do we feel we need more information relative to the model runs. If that is not the case, then the next question would be the potential projections. I'm just thinking about the time difference, as Scott mentioned, and the relatively limited available time.

MR. COLLIER: Given George's last comment that most of the juveniles are seen on the eastern Atlantic; what sources or mortality are occurring over there; and is that going to have an influence on the overall stock abundance? Are we trying to chase our tails if we're trying to get the SSB when mortality is potentially occurring in other areas?

DR. SEDBERRY: Great question. I didn't mean to imply that all the juveniles are in the eastern Atlantic. They are just very abundant over there historically in surface drift net fisheries and in bottom longline fisheries in the Azores and around the Mid-Atlantic Ridge. They are also commonly seen in New England and then the northeast United States, too, associated with floating debris and buoys. We just don't see them down here in the southeast.

There is some mortality on those juveniles, but I think the drift net fishery is closed. It was a French and Italian drift net fishery. There are numbers on how many juvenile wreckfish they caught every year, but I don't believe that fishery is in existence anymore; but the bottom

longline fishery in the Azores and associated banks is still going on. They actually are targeting porgies, so they are catching juvenile wreckfish, too.

Any of the big wreckfish that they hook apparently breaks off those longlines and we see those hooks in big fish that we catch over here. There is some mortality going on in the eastern Atlantic; and the landings data are available through FAO. They fluctuate from year to year and have increased since the introduction of longlines in that fishery; but I couldn't tell you off the top of my head what the levels are right now.

DR. CROSSON: It seems that we are done with questions for Dr. Butterworth; am I correct? I am going to move on to discussion about this fishery.

DR. BARBIERI: Right; and on that point regarding Dr. Butterworth's participation here, I will leave it up to him I think in terms of specific questions about the assessment. Unless the committee has something further; and it looked like we had exhausted all the questions technically about the assessment for him; Dr. Butterworth, you are more than welcome to continue to stay and listen to the discussions.

The process entails discussion of assessment uncertainties; and we're going to have to discuss how we are going to provide fishing level recommendations for the stock. I will leave it up to you to remain connected to your convenience or disconnect if the time just goes beyond what would be reasonable on your end. We are going to continue discussions to address those two topics at the very least besides any additional other comments about the fishery that we want to discuss right now. That would be the game plan, Scott.

DR. BUTTERWORTH: If I could just – (No sound)

DR. BARBIERI: Well, the same here on our end. Thank you for participating in this process and bearing with us. This is an unusual process for us, but I think that it was great to get this work done and to work jointly with you. I think that overall we have learned more about the biology dynamics of the stock. I think we have an improved assessment process in place than what we had before. We appreciate everything that you have done as well and the presentation this morning.

DR. BUTTERWORTH: Thanks very much.

DR. CROSSON: Tracy and I have been finishing up a paper up this fishery. We're completing a social and economic study of this fishery; and it will be the first one I think in about 20 years. George, we read all of your papers as well, all of your old papers, and thanks for sending some of those to me that were pre-PDF.

The paper is not finalized yet, but we'll be sending it off to a journal soon. The main thing that we found; we did economic and social surveys of both current and former wreckfish fishermen, and we did find – at least the preliminary findings are that despite the drastic cut in the ACL and the reallocation that Amendment 20A forced into the fishery; the fishery is still profitable, which was a very positive thing to see.

I think that the ITQ that this fishery has enabled it to survive a pretty dramatic regulatory shift over the past few years. I think that probably would have wrecked a lot of other fisheries, and I guess that pun is intended. The council might consider that when looking at some other regulatory measures.

But still the process has not been without significant pain; and the fire sale quota prices that showed up in 2011 and 2012 when fishermen were reallocating amongst themselves before Amendment 20A would have forced a reallocation showed that the ITQ is not as stable as you would expect for an old ITQ.

Normally you would expect that quota sales would sell for four or five years' worth of annual profits in an old ITQ, and that is not the case. They are not even selling for two years' profits, which I think reflects the fact that there is a lot of distrust in particularly the ITQ. I spent a significant amount of time, probably to the amusement of council staff, digging through the council archives of the 1990s and early aughts trying to kind of get away from the hindsight bias when we try and remember what is happening with the fisheries or asking people what happened with the fisheries 15 years ago.

I looked through all the old advisory panel minutes and council minutes on wreckfish in the '90s and aughts. I also, of course, looked at some of the previous studies that had been done. I think the main conclusion that I found – and Tracy will hopefully concur with this – is that the main drivers for this fishery and the decline in catch in this fishery has been economic.

Over and over again, if you look at all of these – you know, I had minutes that I was looking through where fishermen were telling the council in the 1990s that we're waiting for share prices to go back up, but we're holding on to ITQs in case there are reductions in other fisheries or we are thinking that we need to get into these other fisheries, because maybe the council is going to put an ITQ in this one; so I am going to get out of the wreckfish fishery now that I have shares in it and try and fish some other stocks that I can get my history up.

Of course, the council did not introduce other ITQs; But again that was the expectation or the possibility. I think that if you look at the CPUEs for this fishery over the whole time series the ITQ has been in place, they are remarkably stable. Year after year, even as the number of boats fluctuated up and down, it has just been consistent. I think that has been brought up in this discussion.

I think that really reflects the fact that a large amount of the recruitment for this fishery, if not the majority of the recruitment for this fishery, is coming from outside the region. I think that if ever there were a case in which we should be less conservative in setting up an ABC recommendation, it is for this fishery.

Again, there haven't been any published studies in the economics literature, but there were a number of things that were brought up. There were a couple of economics professors from UNCG that did a study in the late nineties and brought it to the council's attention. They were able to show that again it was despite the fact that leasing prices, just annual leasing prices for wreckfish quota had diminished to almost nothing, which means that the fishery was generally an open fishery again in terms of allowing people in; People were still not going out there and leasing quota and catching the fish. it was economics that was driving it.

Dave Gloeckner, when he was still in Beaufort and still in graduate school at ECU finishing up his doctorate, did a regression using not just the data from the wreckfish fishery, but from all of the other fisheries that these guys get involved with; a lot of longlines and tunas. He looked at prices for these other fisheries. Again, he found that the big driver for participation and catch, overall catch in the fishery was what was going on in other fisheries.

The big drop that they did have in CPUE happened early in the fishery, really before the ITQ was even in place. It was the shrimp boats that got out because the year before the ITQ was introduced the council banned bottom longlines. Those boats could no longer make a profit. I think by the first year or the second year of the ITQ, there was really only one shrimp boat that was left and that one quickly got out.

Since then again, CPUE has been consistent. I think that this fishery has stopped shrinking; their participation rates have gone up in the past few years; but right now I think the amount of quota that is out there is too low for this fishery to really move on and expand to the next generation of wreckfish fishermen.

I think that we should consider an ABC recommendation that is higher than even the highest one that Dr. Butterworth tried out right here. He had I guess in Figure 18 something around 335,000 pounds. I would like us to consider an ABC of somewhere around 500,000 pounds and then look at what happens over the next few years; look to see if participation increases; look to see if CPUE numbers change; however you want to measure it, per day, per trip, whatever.

Really for a healthy ITQ, I am hoping that the leasing market would sort of develop again, because that has been arrested for a long time. People have not been getting into this fishery and trying it out. I really think there needs to be more room in the quota for that to take place. With five or six active boats – and I guess it is not even 235,000 pounds. It is less than that; because a certain portion of it has been allocated over to the recreational fishery – I think it is really difficult for anybody else to go out there and fish for wreckfish, because it is so far off the coast in most places.

I know there is a guy down in the Keys that are fishing for it, but most of the guys are doing it off of the Charleston Bump. To go out there, it is very fuel intensive. You are not catching a lot of other fish. There needs to be some sort of room to expand. We are so willing to sort of take away fish, because of different concerns about biological restraints.

I understand the need for doing that; but I think we are so seldom willing to give it back. Really, when we reduced the ABC recommendation all the way down to 235,000 pounds; that was a huge, huge bite out of this fishery down from a 2 million pound TAC. It seems like we're so willing to take that down, but we're only willing to give it back in these small amounts.

I think we really should be on the side of – again, I have never seen any evidence that biologically this fishery is in any kind of trouble. I think that we really should be willing to move forward and expand the ABC recommendation not all the way back up to 2 million pounds but maybe up to half a million pounds and then just see what happens over the next few years, and see if there is any kind of noticeable impact. I don't know if Tracy has anything to say. Tracy has been interviewing former wreckfish fishermen to talk about why they got out of the fishery. I don't know if you have anything to comment on that.

DR. YANDLE: Scott and I have been working on this extensively for a year, maybe a little bit more. He and I coordinated on these points he has just been making now; and I absolutely concur with it. I think the reasons you were seeing a lot of the declines in the fishery participation and in catch and so on were not being driven – I'm not a biologist so I shouldn't be saying it wasn't driven by the biology; but there is significant evidence that it was being driven by the economics of what was going on in that fishery and regulatory intervention.

Again, particularly the one I got in interviewing, and we also surveyed – we sent a survey out to every single person who had been in that fishery and left. The primary driver that we were able to identify was regulatory intervention such as the gear methods change that knocked out the shrimpers.

I would absolutely agree that the decision-making that seems to have been going on on the part of the fisherman, as far as we can tell from our research, was driven by the economics and by the regulatory intervention. It did not seem to be driven by them responding like you would typically expect from a declining fishery, than one that is declining biologically. I fully support the statement Scott just made.

DR. SEDBERRY: I just wanted to add to Scott's observation about the catch-per-unit effort that the length frequency hasn't changed at all either. We haven't looked at the sex ratios in a long time, but there is sexual dimorphism in that fish with the males being smaller and the females being larger. If there were some sex ratio changes, we might see changes in the length frequency as well, and we just haven't seen anything. To me, that is another biological indicator that the stock is in good shape.

DR. VAUGHAN: Yes; I will just chime in with George. My intimate knowledge of wreckfish is 15 years ago; but during the nineties and up until my paper that came out in 2001, I was doing annual assessments of wreckfish. I was always amazed by the consistency over the years. Once the ITQ was put in place, after that big run up in 1990 or '91 when they had almost 4 million pounds landed; but once the ITQ settled in, it was mainly the length frequency distribution was remarkably constant from year to year.

The CPUE was remarkably constant from year to year. The one thing I did notice was the dwindling of the vessels that were still playing in the game, because it went from a high five to an only five to an only three to in the last couple years an only two vessels that were participating. Since then I know more have participated, but it had gotten down to not many players.

DR. CADRIN: I understand from the assessment, the data, and other information that the resource appears to be stable or in relatively good shape. There doesn't appear that the market seems to be limiting participation, if I understood, but why should we be more cautious because of it? I understand all that; I just don't understand how it supports a conclusion of being more conservative. If anything in the PSA, it may be less susceptible. I am just trying to map into your conclusion.

DR. CROSSON: I guess again the biological factors for this fishery, the ones that George and Doug brought up about the length of the fish; and again, the CPUE hasn't changed. The

numbers of participation; I mean, these landings went from like I think 1.6 down to 1.2 all the way down to the low – well, confidential numbers – and then went right back up again.

At one point, I think the year before the ABC restriction cut the quota down or the council cut the quota down to 235,000 pounds, they landed 300-some thousand pounds the year before that kicked in; and then that was like 2011 or 2012. Then it has been cut back down again because of the new ACL.

But throughout all of that time, again you don't see anything changing in the nature of the fishery in terms of the size of the fish caught, in terms of the catch-per-unit effort. Everything just seems very stable. The fact that, as George brought up, you don't see a lot of young fish in this area – they seem to be recruiting from elsewhere – it seems to me that again it is just sort of a natural funnel of these fish moving around I guess the Atlantic Ocean in a counterclockwise motion over a long lifespan.

If there was something going on in the eastern side of the Atlantic, they were getting overfished when they were at a younger life stage; that probably would have shown up by now. Again, it just seems like it is a very consistent level of fishing, a very consistent size that the fish are caught within this very small slot of length and weight in this particular region.

I think that there is just no – And this is what I'm trying to get out, Steve; it is not a question of why should we be willing to increase it a certain amount. To my mind it is that we were too overly conservative when we ratcheted it down from 2 million pounds originally. When I am saying that we seem to be so willing to pull back in large amounts, but we only want to give forward in very small amounts; I think we were too conservative when we pulled back originally. I think that we should bring it back up to something that is more reasonable for the fishery to allow the ITQ and the fishery to develop in a more healthy, economic way.

DR. CADRIN: Thanks; I misunderstood you.

DR. BELCHER: I had a question back to Scott, too. I know you said half a million pounds, but we just had an assessment done; and if you look at your estimates of MSY, which we've been using, it is all sitting at about 300,000 pounds. How do we argue when we use MSY to kind of be our guiding cap for an OFL level?

DR. BARBIERI: If I may step in, because this discussion can take a while; and it is very interesting. I think that your input, Scott and Tracy, is extremely valuable. I think this is one of the strengths of this SSC is to have strong participation from our Socio-Economic Panel members. I think this is added value to how we make decisions here.

I think this is a very important perspective for us to get. However, we are still bound by a set of procedural sort of steps that we go through to stay true to NS-1 Guidelines and our control rule application; and the fact that we have a process for setting values for OFL and ABC when we have assessed stocks.

Not to discount that perspective; I think it has added value to the discussion as well; but I think we would like to basically go – before we get to that point, you know, go to something that is a big more along the lines of our formal process for all the other assessments, which in this case I

think we start by looking really on whether we accept this assessment as representing the best available science; looking whether our base run or reference run as recommended by the analytical team and the review panel is in agreement with your perspective.

That is what we are going to consider to be the base run. Then we go through our control rule to identify how we want to handle that buffer between OFL and ABC. Then we proceed to a catch level recommendation that follow those principles. With that, I will open for discussion on our first action item in terms of whether this assessment is accepted by the SSC as representing best scientific information available. I would like that to have some comments regarding the validity of the base run or whether we would like to have a broader envelope of plausible scenarios that we would like to see developed or looked at.

DR. CADRIN: I don't think I am disagreeing with the review process; but I think that we would consider the entire assessment, the reference case and the sensitivity runs in our evaluation of acceptable biological catch, because I think a lot of the uncertainties are captured by the entire assessment including all of those runs. The reference case probably is the best among all of them, but there is information in the sensitivity runs as well.

DR. BARBIERI: In the past – I mean, we are going to be seeing a number of other assessments and analytical products today. Where we can explore a number of sensitivities, we will always appreciate having those there to give us an idea of the impact of different parameter choices there. I need you guys to help me define what would be the plausible range that we are going to be considering. In terms of our envelope of all the sensitivities explored, which ones do you consider to be within that plausible range?

DR. CADRIN: I guess I could be more specific. The approach that we drafted up was preceding with a P-star approach from the reference case projections, but that we consider the results of sensitivity analyses in portions of the P-star control rule such as stock status; that we consider that we don't simply take stock status from the reference case, but there is uncertainty in the stock status; that all of the uncertainties in the assessment are not captured by the reference case but by the sensitivities; so that we use the projections off the reference case with consideration of the sensitivities in our P-score penalties.

MR. COLLIER: Were there any sensitivity runs that you guys think weren't biologically or just didn't make sense, you were just trying to tweak the model to see how far it would go?

DR. BARBIERI: By the way, that is where I was trying to get to, I guess, in terms of the plausible envelope there of runs.

DR. CADRIN: We actually went down that road of trying to identify what is our uncertainty among different model configurations and different models between the statistical catch at length and the production models. The first step in doing that would be just as you suggested, Chip, is eliminating non-plausible models and just keeping the plausible ones and that we could have maybe a multi-model inference of projected catch.

There is a figure in there with projections from all the different models. We thought we were already biting off a lot procedurally, and then to go down something – in the end. I talked us off the ledge. I put us on the ledge to begin with; but I talked us off the ledge by saying our P-star

approach actually allows for this; that there are uncertainties that are not captured in the best case; so we didn't go to that step. There are probably some of these sensitivity runs that are more exploratory than plausible, but we didn't get to that stage in the review. Is that fair, Marcel?

DR. REICHERT: Yes; I think you are referring to I think a remark on Page 9 of that report. I think it is that point where you said if we want to go there, this probably needs a broader discussion.

DR. CROSSON: I was thinking about Carolyn's question; and I guess this is sort of where the general oddity of being a social scientist sometimes rears its head at least on the SSC. I am not a stock assessment scientist. I did follow – if you look at the webinars, you will see that I was somebody who was observing all of it.

I have been an SSC representative through the SEDAR process for other stocks. Obviously, as somebody who is not a stock assessment scientist, I am not completely fluent in all the language. But, I look at the assumptions that go into the models, and those are the things that I think we sometimes tend to contribute value certainly to the SEDAR process.

To this, I guess my question for the stock assessment scientists like Steve – and I am asking you this not in any kind of loaded way, but just as a colleague who has more knowledge in this than I do – assuming that even the large amount of recruitment for this stock is coming from another region and drifting across from the Mid-Atlantic Ridge or even from the eastern Atlantic; does this sort of stock assessment add value in setting up some kind of evaluation for Fmsy or Bmsy?

Just knowing that there is so much recruitment coming from other areas; I guess I am just asking do you feel confident that this process then is lending credible numbers in terms of giving us recommendations for catch – and maybe George, too. I'm sorry, again I can't yield this; this is up to the Chair.

DR. BARBIERI: But, George, before we go there just one second; I think this is the critical question, Scott. Our first action item is really to whether we accept this assessment as representing best available science; so do we have credible estimates really of exploitation and biomass reference points here? Do we have stock status determination here that is credible or not, because that would dictate really how we precede according to our control rule, what tier; if this is a Tier 1 assessment versus one of the other tiers in our control rule.

We have different procedural steps that we go through as far as getting to our ABC determination. I am with you and I just wanted to sort of reframe his question in terms of spot-on in that first bullet under action; review benchmark assessment and consider if it represents the best scientific information available. If we accept this assessment as such, we are constrained to some extent to make our recommendations according to our ABC Control Rule.

DR. SEDBERRY: Okay, my comment had more to do with where these recruits are coming from. It is probably true that they are coming from the eastern Atlantic. These juveniles and the fish migrating with the hooks in them and all that indicate that they are coming from the eastern Atlantic.

But ultimately I think they come from the Charleston Bump, where they started out as an egg and drifted over to the eastern Atlantic and then migrated across. They are coming from someplace else but they started right here, maybe. I think that is true, and we have some evidence to indicate that is true. We have DNA evidence, we have the hook evidence, but we've never tagged a fish over there that has ended up over here or vice versa.

DR. BARBIERI: Scott, this is one of the things that to me was a paradigm shift for me in terms of what I have known about the biology of wreckfish, which is reading George's papers and seeing his talks over years and years. To me, the Litton Growth Curve, the range of ages that are associated with the size distribution that we have here in the area; and actually the reproductive stage of some of those fish sort of changed my idea of how that meta-population structure actually might be happening; and the fact that we may be serving more of the role, maybe not completely, but more of the role of a source then I previously expected.

DR. CADRIN: I think with the information we have before us today, I think we can consider Scott's concern about where are the recruits coming from in the assumed stock-recruit relationship. This model assumes a self-sustaining resource with the stock-recruit relationship. That may be wrong. The paradigm that George described that the eggs are coming from eastern Atlantic and settling locally – no?

DR. SEDBERRY: No, I think they could be locally and have drifted to the eastern Atlantic to develop and come all the way back around.

DR. CADRIN: In which case the stock-recruit would be valid.

DR. SEDBERRY: Yes, if that is what is going on. I think it is, but the evidence is circumstantial.

DR. CADRIN: Then it is an assumption. What we have is an assumed self-sustaining resource. That may be the best we can do; because really practically if they are completely subsidies, you would manage on a per-recruit basis. You would get the recruits that you have and try to get the maximum yield for those recruits. In comparison, a full MSY approach is more conservative than that. If we were just monitoring recruitment and getting the maximum yield out of it, we would probably have a higher exploitation rate than we have now.

DR. BARBIERI: Again, at this point – and I appreciate having George, Doug, and Church in the room, who have some history with this species, in terms of research over time; but I also appreciated during that mini review workshop – you know, after I saw the growth curve, the range of ages; and we discussed the reproductive state of some of those fish; that sort of changed – they don't have reproductive states?

DR. SEDBERRY: There is an unpublished MARMAP report that has some preliminary fecundity estimates and spawning seasonality; and that is what was used for the spawning season closure action.

DR. REICHERT: But the bulk of those ages were from the commercial catch, which are landed gutted. That was one of the recommendations that is actually in the report that says there are some issues there like sexual differentiation of the growth curves and things like that that we

currently can't get to because they are landed gutted, so we don't have that information. Just to clarify that.

DR. BARBIERI: But Wyanski did do a little bit in terms of – I mean, there were sexually mature females in ovarian stages that were reproductively active. Given the broad range of ages – I mean, it is not my idea that I had before that this was really perhaps either just a truncated, a narrow slot of ages here that were just kind of passing through.

DR. GRIMES: George mentioned that you had genetic data, but what does that show relative to stock structure?

DR. SEDBERRY: It is genetic data so it shows that they are genetically uniform across the North Atlantic, but it doesn't take too many migrations from just a few generations to mix those things up. It shows there is genetic mixing across the North Atlantic, but that may not happen every year or all the time based on the DNA evidence.

But, if you just kind of look at the length frequency distribution across the North Atlantic and the evidence; there has really been literally thousands of these hooks, European fish hooks that have shown up in American wreckfish. There is other evidence for this movement around the North Atlantic.

There are other species that do the same thing for which there is good data. Loggerhead sea turtles that nest on South Carolina beaches spend their juvenile years in the Eastern Atlantic and then migrate back to nest on the beaches when they mature. It could be that wreckfish are doing the same thing.

DR. BARBIERI: As I went through that review process, I came out of that – and I think this is a point of discussion – basically more accepting of an MSY-based assessment of wreckfish than I had when I first read the report and without seeing some of the biological information that was provided. That is basically my personal experience. We have as a committee to address still that first action item. I think this will be, Scott, a key factor on how we handle our next steps for catch level recommendation.

DR. BELCHER: I guess the question that I would throw out there only because of the best scientific information available and because 33 percent of the landings were confidential; did that have an impact on what the outcome would have been across the board for what is there? Looking just simply at the production models, three out of the five production models say it is overfished; but yet if we know that 33 percent of those are froze down at the average level; does that have a potential impact?

Because then if you look at what we did with the sensitivity runs; I mean, the preponderance of the evidence is not overfished, not undergoing overfishing; with the two that say it is overfished, overfishing based on that Ricker relationship. If we've dispelled Ricker, that almost knocks those two out; sensitivity runs put us in the overfished/overfishing. But again landings are my big question.

DR. CADRIN: Yes; we didn't have the information to answer that question. The masking of the data almost surely added uncertainty to the assessment. If we had the actual annual landings that

each of the models could have fit to, it almost certainly would have been an improvement over this averaging; but we know the direction. We don't know if that invalidates any of them or improves any of them. We don't know; we didn't see.

DR. VAUGHAN: During the data assessment workshop in November, I provided Doug with a generality on what the trends were during that – I don't know – five-, eight-year period in which the landings were "confidential." I had them from when I did the assessments; that was in the nineties when they got down to two vessels. I thought he made a run during our data workshop with sort of an alternative trend that reflected that period. It was very insensitive to that. I did my best to obscure things.

MR. CARMICHAEL: Addressing the first action bullet; there is a statement up there in Mike's notes – and Steve had made it quite a while ago early on – and he said that the assessment as a whole, the base run and the range of sensitivities and how evaluated can be considered as representing best scientific information. If we can start knocking these things out, if the committee agrees with that as a consensus point, we've made one step forward.

DR. BOREMAN: Yes; I think you left out the key word and that is "available". I have been hearing a lot of information bandied around the table here, but what was available and what is available now? Scott's analysis is available and that to me just helps me formulate in my own brain the sense of uncertainty in the assessment. But in terms of the life history, migrations, genetics and all that stuff, it is interesting to know but we have no hard information in front of us right now to use other than what is contained in the assessment and then what recently Scott has offered up.

DR. BARBIERI: Again, folks, I think we have a consensus statement right now to accept this assessment as representing best scientific information available, and I need to hear whether that consensus is really real or if there are any points of disagreement and comments that the committee would like to provide to move away from that determination.

DR. CADRIN: One way to proceed in answering this question is what other information is available for a catch recommendation if not this assessment? Do we fall back to the DC-AC, in which case I would say that this is the best scientific information available particularly in comparison to that?

DR. CROSSON: I just have a question for the Chair again, because I have – considering how much time we spent on it and thought, I have the utmost respect for our control rule and our process. It is a question for you. If we accept this as best scientific information; I haven't seen anything comparable in terms of assessment effort, but does that mean that we are bound then at that point to follow the projections from this in setting our ABC recommendations after going through the control rule? There is no room to go beyond that?

DR. BARBIERI: Yes; there are opportunities. If you go through the explicit language in National Standard 1 Guidelines, actually there is a way for the SSC to provide an ABC recommendation that would not be in accordance with our ABC Control Rule, if that is well justified and represents consensus of the committee.

I tell you this because we ran into this kind of situation in the Gulf with the Gulf SSC, and we had to consult with legal counsel. They actually consulted with the folks up in Silver Spring, and it was an expanded discussion on how tightly are we bound to the control rule? If we decide that we're going to depart from that guideline that the agency recommends, we are allowed to but we're going to have to have a strong justification to do so.

MR. CARMICHAEL: One thing to add; another part of your question seemed like it had to do with the projections that you have before you. As we know, once you have applied your control rule; that may open up the need for other projections. Once you've discussed the second bullet, the uncertainty is that can open up the opportunity for further projections.

That is completely normal; we do that all the time. Don't feel that by making this decision now you've said, okay, I've got these projections before me and that is it. That is not how it works. We know that there are opportunities for additional analysis and requests. In this case I have no idea how those would be done or what would be required or how long it may take for Dr. Butterworth to get around to doing them; or if he is even willing. But, that is just a vagary of where we are now with this particular piece of work and its logistics; but I don't think that should stand in the way of the SSC making what it thinks is the valid scientific recommendation.

DR. CROSSON: Then given the amount of time and effort and given the fact that we had members of both the Science Center and the SSC acting as reviewers, and the SSC is now reviewing this as well; as much respect as I have for what the Regional Office did with the DC-AC approach, what we have done here in setting up this process is certainly much more in depth than that. I absolutely believe that there is no better scientific available right now than this assessment. I would move that the SSC accepts that.

DR. BARBIERI: Basically you've presented your opinion there. If there is no disagreement from the committee, I guess we are going to move on to the next action item. We are actually accepting this assessment as representing best scientific information available; so now it is time to identify and discuss the assessment uncertainties.

Obviously, we had already started this process and Steve suggested as a member of the review panel the P-star analysis be conducted based on the reference case or the base case plus a few sensitivities. We might have to identify what those sensitivities would be as we go through that process.

DR. CADRIN: I think as we go through the process, we will. It will come down to stock status and the uncertainty there, using some of the production models and the Ricker run to suggest that it may not be not overfished, when it comes to incorporating all aspects of uncertainty. In those two aspects and those two different criteria, I think we can consider the sensitivity runs.

DR. BARBIERI: Steve, would you mind then walking us through since you took the lead during the review process in discussing that with the review panel and outlining those recommendations or evaluation of the criteria in our control rule, Page 11 of the report; that will be helpful as we go through and discuss then the outcomes.

DR. CADRIN: I would be happy to do that with compliments to our Chair, who I think really put this package together well. As you said, I was the one who proposed this during the review,

so we are really putting this up as a start to the discussion. We realize that this is the responsibility of the full SSC to determine the ABC. Since it appears that we have decided to go through the P-star process; this is information to start our discussion.

In a sense you will see that we've narrowed down the options rather than selected the options. As far as assessment information, this is an analytical stock assessment, but it is still data limited. Again, we think that it is not a perfect assessment with full MSY reference points. The stock-recruit functions were certainly not certain.

There was some fixing of steepness and things like this that we don't fully have an MSY reference point, so it is not a 1; but we also don't think it is a 4 either; so really 2 or 3 is where we think we have. Because of the confidentiality, there are some data gaps where we don't have annual catch. We were considering a 2; but it may be a 3 if the SSC feels this is more of a data-limited assessment even though it is a full statistical catch at length analysis. Do you want to go one by one through them?

DR. BARBIERI: Yes; that would be I think the easiest.

DR. CADRIN: We're suggesting 2 but possibly 3, in which case the penalty would be 2.5 percent or 5 percent from the 50 percent that you start with.

DR. BARBIERI: To refresh your memories from our control rule; if this is a 2, it would be we have reliable measures of exploitation or biomass but no MSY benchmarks. Proxy reference points; in this case since we have a fixed steepness, it corresponds to a proxy reference point. This would be the 2.5 percent deduction or a 3 would be we have relative measures of exploitation or biomass, absolute measures of status are unavailable; and we have proxy reference points. Is anybody willing to weigh in on this?

DR. VAUGHAN: I'll stick my nose out on this; I would lean towards a 2.

DR. BARBIERI: Is there any disagreement with that from anybody?

MR. COLLIER: When have we used 2 or 3 in the past; just to be most consistent?

DR. BARBIERI: I think in terms of the use of proxy reference points or direct MSY estimates that are based on fixed steepness; in this case we are not dealing with relative measures of exploitation. I think this would be something more akin to the outcome of a catch-free model or something that provides relative measures of exploitation or biomass. In this case we have absolute measures, but there is more uncertainty than we would have from estimating steepness.

MR. CARMICHAEL: I don't think we've used 3 very often either, in my recollection. Where we are now and when you look at those definitions, I think we kind of understand why. It really comes down to measures versus absolute measures of status. Do you have them or are you using relative? It really just doesn't seem to be happening.

That led to our discussion of not having enough resolution in this particular criterion, so I would say we seldom use 3. This tended to come down to you have the assessment and it either gives

you MSY reference points or you are using a proxy. It has tended to be 1 or 2 for pretty much every assessment we've done.

DR. BARBIERI: Okay, Doug suggested a two and we discussed the reasoning why. Unless there is disagreement, I guess we are ready for the next tier, Steve.

DR. CADRIN: The reference case has a stochastic projection with some uncertainty; but when you consider all of the sensitivity runs, a lot of model error is not included. We thought that this should be either 3 or 4. It does have nominal distributions, which would technically make it a 3; but again there are a pretty wide range of results from the sensitivity analyses, which would probably lead you more to a 4. We felt that the SSC should discuss this more. Here is where we really did talk about multi-model uncertainty and whether this tier fully accounts for that or not. We have a tier that says that not all uncertainty is accounted for, but is that adequately addressing the concern here?

DR. BARBIERI: I tend to lean towards a 4, basically, because I haven't seen a PDF of OFL of Fmsy. I am tending to go towards a 4.

DR. CADRIN: Just for clarification; Figure 19 does have the confidence limits of projected catch, so there is a PDF underlying those confidence limits; but I think the issue is bigger than that. Those confidence limits certainly don't capture all the uncertainty.

DR. BARBIERI: If we compare how this uncertainty evaluation or analysis was conducted relative to what we are used to seeing through the MCB type of process; I don't think that this is really even close to as sophisticated as the uncertainty analyzed through the MCB process. Okay, so Tier 2; it is a 4 for low; so I think we are ready to move on to stock status.

DR. CADRIN: Stock status is another in which we feel that we should consider the range of sensitivity runs. The reference case, which may be the best model that was presented, suggests that the stock is not overfished and overfishing is not occurring; but there were some sensitivity runs.

The Ricker, assuming the Ricker; we had a stock that was less than Bmsy and some of the production models as well. There was an additional source of uncertainty here on what the minimum stock size threshold was, because that is being reconsidered at the council level for many stocks. But beyond that, it is not a simple stock status determination. There is uncertainty in that which the review panel actually felt a score of 2 is appropriate, because some models did have the stock at less than Bmsy and less than the minimum stock size threshold.

DR. BARBIERI: The Review Panel recommended a Tier 2 for this dimension?

DR. CADRIN: Yes.

DR. BARBIERI: Any disagreement with that; that for stock status we are actually looking at a 2? I guess not. Thank you, Steve; go on to the next one.

DR. CADRIN: The last one was fairly algorithmic. We used the MRAG PSA, and there was a scoring for wreckfish, and that was high for vulnerability. That is on Page 7 of the MRAG PSA report; and it is data limited as well, further justifying the precautionary score.

DR. REICHERT: Just to clarify; we did have some discussion in terms of the score that was on that page.

DR. CADRIN: We went through each element of the PSA, and it was consistent with the information in the assessment.

DR. CROSSON: I don't mean to take up too much of the committee's time, but that is somewhat surprising to me. Given the fact that this fishery is executed by a very small number of people in a very specific way, why is it considered to be highly vulnerable? I know that there are biological factors and it is a slow-growing fish, but very few people encounter it. Isn't part of the PSA score with the vulnerability and susceptibility dealing with its likelihood of being encountered by fisheries?

DR. BARBIERI: Right; and that would be the susceptibility part of that.

DR. CROSSON: That is why I thought it would be more in the medium category.

DR. BARBIERI: Well, I think, Scott, this is a result of us having sort of coarsely set categories there. Basically biologically it is highly vulnerable and low productivity in terms of its propensity to biologically not be as resilient perhaps as some of the other stocks, so we just low, low, low; medium, medium, medium; high, high, high; and we didn't do some of the combinations.

DR. CROSSON: I guess I see a stock that is low productivity, high vulnerability, but low susceptibility is the way that I would look at that.

DR. CADRIN: I think the scores in the MRAG report are consistent. For desirability they have low, which is consistent with your market. For global distribution they have medium, because not all of the resource is vulnerable. As you suggested, the life history suggests it is low productivity.

Behavior, habitat, bathymetry, size at maturity, maximum size and post-capture mortality were all high, which leads it to an overall high risk ranking score. Again, we went through these and I think your market, the low desirability is expressed there. The medium availability is expressed there. Otherwise, all the other things drive it up in the risk.

DR. BARBIERI: That gives us a total score, if I did my math right, of 12.5 percent.

MR. CARMICHAEL: Just for reference; that is right within the range of so many of our assessments. I think we had this discussion when we talked about blueline, and people really felt that if you compared something like blueline to a stock assessment like black sea bass; they are substantially different.

This is substantially different than those in terms of availability of information, completeness of information about the fishery, the type of analysis. We repeatedly end up in this very narrow range of adjustments. That was our justification at the last meeting to look at this ABC Control Rule in more detail. I think in terms of outcomes, it is within reason. Given the level of assessment information, you might say maybe it is a little low in terms of an adjustment; but that is what we kind of realized and this is where our rule has been putting us. I think we applied it very objectively and done a good job on it; and that is the outcome.

DR. BARBIERI: Okay, so that gives us a P-star value to work with. That would address our second item; identify and discuss assessment uncertainties and evaluate those in light of our control rule, which we just completed. Now regarding fishing level recommendations; now that we have a P-star value, it is a matter of us discussing. Since I don't think we have a PDF here of OFL, we're going to just request projections.

MR. CARMICHAEL: I would like to go up and get some more clarification on the scoring for uncertainty. If you look at the Control Rule, what is written there really is equivalent to a score of 3, but Steve said a little more. I think that needs to be captured in these notes; because once we scroll off of this, this tends to be what we have.

I want to make sure that we get the other points here related to the uncertainty, because uncertainty is critical. It is true not all uncertainty is carried forward into projections, but there was some question about the distributions actually applying around the reference points as opposed to just some sensitivities that might be reflected around the projection results.

DR. BARBIERI: To that point, it is really a matter of I guess it is being a little more explicit on how we're going to have these projections configured. If we want them to be going beyond just a reference case and be more inclusive of some of the other sensitivities, they are going to have to be configured accordingly. I think we're going to have to be a little more prescriptive in the way they explain that.

MR. CARMICHAEL: Then our uncertainty characterization of the assessment; and I think that is not just in the projections, but with the uncertainties of the assessment. I think if you look at some of the points we talked about was the source of recruitment, the level of landings; that was an uncertainty.

Carolyn brought that up, so the role of the different stock components, the U.S. components and overall productivity; and then some questions about the status itself, which we discussed. Those were kind of the key uncertainties that I had notes on; but I think that contributes to the overall feeling of a low score in here. The distributions are provided as one distinguishing point, but it is supposed to encompass how well you think the overall assessment characterizes the uncertainty.

DR. CADRIN: I think we need to realize that we're working with a very blunt tool. Ideally our PDF of the projected catch captures our uncertainty. When it doesn't capture all the uncertainty, where penalizing P-star to compensate for the lack of an inflated PDF; I mean, technically we're turning the wrong knob here.

We really should be inflating the PDF rather than changing the risk tolerance. I think as our subcommittee last night discussed, really what we need to do is over maybe a longer term or a

medium term evaluate how this approach of penalizing the P-star performs for missing some of the variance. I don't know the answer to that.

DR. BARBIERI: To that point, just a reminder for those other committee members who might be interested, there will be another informal gathering immediately after the completion of today. The point of discussion will be continuing our review of the control rule process. Everybody is welcome to join us for that collegial gathering this afternoon.

In terms of what kinds of projections we're going to be requesting; our standard set of projections would involve a set of projections at 0.5 for OFL and then at our P-star level as determined by the control rule. One question here is how much more detail or how much more explicit do we want to be in terms of how the projection is going to be configured? In terms of inclusion of some of the other – I guess it would be sort of like states of nature that would be different if we accepted the possibility of a Ricker stock-recruitment relationship being plausible and the time horizon for projections.

DR. BELCHER: But don't we have a different issue? If we look at the Ricker, now you are looking at the fact that you are looking at a potential overfished status, so we've got a different thing that we have to deal with, correct? In all the other states that are sitting on there, most of them are saying it is not overfished and not undergoing overfishing. If the Ricker models are saying it is overfished, we have a different issue to address, right?

MR. CARMICHAEL: Yes, but my take on this possibly, from my understanding of what was said, was when you consider status; so many of the runs show you are well above the reference points; and when you factored in the Ricker, you think it could be closer to it. Did we address the Ricker sensitivity in the control rule process and calculation of our adjustment?

DR. BARBIERI: My recollection is that Steve brought that up during the discussion of the stock status to incorporate that scenario.

DR. BELCHER: Then just another again general observation. I apologize if it seems like it is overly simplistic; but getting at the recommendations coming from Scott this idea of being closer to a half a million pounds; if you look through the projections for MSY, there are about five different models that result in higher levels.

When you look, the majority of them are sitting at about 300,000 pounds or less. You see other numbers that are like 493, 543, up to 1,418 for MSY; and all of those are all tied in to an estimate of natural mortality. I don't know if that is the conversation to have as to whether or not those different potentials for natural mortality should be looked at.

It is ones where it is either fixed M or there is incremental M up to fixed M suggested on the base model. I don't know if that is helpful to think about that for the projection aspects. Again, that just seems like where you biggest release in terms of MSY is coming from, if that is a potential problem.

DR. BARBIERI: Yes; and this is true, but relative to what we had seen before, I don't think that this estimate of M is I wouldn't say reliable, but I wouldn't say that it is less reliable than most of the other ones that we deal with and they are inputted as fixed parameters.

DR. BELCHER: You're right; but I guess that is what I'm getting at is if you look and as we talk about plausibility of other models; that is where again the biggest release – I'm looking down that cascade of numbers and seeing everything below 300,000 for MSY. The only place that you see release is above 300,000 for MSY are these situations where we look at different estimates of natural mortality.

If there is no reason to argue away from it; to me it is pretty much still putting us in that capping area of around 300,000 pounds. That is all I'm saying is that in that situation where you have that dramatic a break, maybe that is the discussion to have. I don't know; I'm just throwing it on the table.

MR. CARMICHAEL: I see the question being is as you go in and you start filling in the equilibrium values such as MSY, do you take them off the base run and are people confident with that? I think that is the first decision.

DR. ERRIGO: Also just to be careful and clear; what you fill in for MSY, that is not necessarily OFL. You can fish way above MSY if your stock is way above Bmsy. You don't have to worry about that; but determining MSY, of course, is a different thing.

DR. BELCHER: I was just using that as a characteristic, though. Traditionally MSY has been our guiding point, so that is kind of like I am just looking at the parameters that we have generally used for guidance and finding it again. This potential release is coming through an issue with natural mortality. Again, if we can say that we're firm or feel more confident in that estimate of mortality, then I think obviously we're kind of looking at that level ballpark.

DR. BARBIERI: I think for the deterministic stock status determination; basically have we accepted the base case or the reference case, and I think we have. We just can fill in those. In this case, I think it would be not overfished.

MR. CARMICHAEL: Just hold up a second; let's don't get too far ahead of ourselves. The MSST is – if we based it on 75 percent of SSBmsy, which is where the council has been going for low, there is an action in place for low natural mortality stocks such as this. We would use 75 percent of SSBmsy, which would be this.

The overfished evaluation is based on MSST and not SSBmsy. That is the recovery determination. There are two questions in here. If you accept MSST based on the preferreds the council is looking at now and as we've used for many other stocks recently; we would be using this 75 percent. If we used 1 minus M, we're going to be much closer to SSBmsy, probably inappreciably separable and near enough as it makes no difference, and we don't actually have the specific numbers so we would have to leave that blank.

DR. CADRIN: I think that if possible we should present both to the council since it's under – and we did discuss this in the review as well. That was part of our scoring for stock status; that there was both uncertainty among runs and uncertainty in what the MSST was; the policy decision on what that is.

MR. CARMICHAEL: I'll make a note to ask Doug to get us that value based on the 1 minus M; I assume using the base run 0.37.

MR. COLLIER: Are those Ricker runs now; they are not overfished, are they? That would change the previous tier.

DR. BARBIERI: What we did was going through the stock status in the control rule, we considered the full range of possible scenarios there.

MR. CARMICHAEL: If you look at the sensitivities under the Ricker and using the 75 percent MSST definition, they are still overfishing but they would not be overfished. I think it probably still keeps us in the proximity of reference points and maintains the same scoring.

DR. BARBIERI: To tell the truth, biologically I don't think we have any indication – I mean, if we had some indication that we are dealing with a Ricker stock-recruitment relationship here, from what George says and Doug that doesn't seem to be the case. We haven't treated any other stock, and I don't know why we would go that way.

I can see this as an exploratory sensitivity to give us an idea of how that change would impact the outcome of the assessment. The plausibility of that scenario I don't think is there. John, correct me if I'm wrong, but I think that this would complete our review of wreckfish. We just need to now come up with – we need to identify and we have recently identified the timeframe or the time horizon for us to look at those projections.

MR. CARMICHAEL: I'm not sure I follow you.

DR. BARBIERI: Are we going to be looking at five-year projections, ten-year projections, simply because in the recent past we have been explicit about how far we're willing to go with projections; especially for the higher uncertainty assessments that would be working in a shorter time horizon for projections; just to give the committee the opportunity to discuss this issue if they so desire. This is something in terms of ABC recommendations that might come up with the council.

MR. CARMICHAEL: We have projections here that run out, what, 20 years? It comes down to how confident you are in extending them that far and how far you will extend your ABC recommendations. Keep in mind that let's say you do them for five years and you want to get an update of the projections; someone is going to have to do them.

This is a unique situation and we don't know how that will happen. It won't be as simple as writing a memo to the Science Center, obviously. The council would probably maintain whatever you have at that time if you fill this table out, say, for five years. They could maintain whatever you have at that time probably unless you came back and gave them some other reason that you would give them a different ABC. We have these projections here.

I would take the red line F over Fmsy as being the OFL. One thing to note is here in the first year that is around 440,000 pounds. Obviously, anything over 440,000 pounds, this base run suggests is overfishing. That will result in an F that exceeds Fmsy. Then as you can see, it drops – the total catch drops pretty regularly at that Fmsy level. It is approaching the 330,000 pound by the 2025 period. The first cut; 500,000 pounds doesn't seem to be supported by this stock assessment and it would result in overfishing.

DR. BARBIERI: Unless the committee would prefer to be explicit about the time horizon for projections, I think we're going to just get the projections and then have that discussion perhaps as we wrap up our report and have some more time to think about how comfortable we are with the time horizon for those projections and the ABC recommendations. Any other questions, comment or issues related to the wreckfish review?

DR. ERRIGO: Is your recommendation projections that the P-star over whatever the time period is that Dr. Butterworth projected over; I didn't quite catch that.

DR. BARBIERI: No, I would say five years maximum. Usually we go to the five or less. Given the uncertainties in this assessment, I would not go any further than five; but if folks disagree or have some other recommendation.

MR. CARMICHAEL: The first thing I'll ask Dr. Butterworth for is the MSST based on 1 minus M, the value and the status. I will ask for the actual values associated with that red line projection at Fmsy, so to see what the actual catch is and that gives you the OFL. The last question is the ABC.

Are we going to ask for a projection that results in a 27.5 percent chance of overfishing for the next five years or are we going to base it on one of these fixed landings, and we would rather see one of those? Do we want to give an OFL changing year to year based on an F basis or do we want to give a more stable recommendation based on a fixed landings level?

DR. CROSSON: Just from an economic standpoint for an ITQ, we would prefer to have stability in the landings.

MR. CARMICHAEL: That is why the council in a lot of recent assessments has asked you to consider basing OFL on something like the 75 percent of Fmsy equilibrium. When we've had stocks that weren't overfished and weren't overfishing, we've done projections and we've given them ABCs based on the equilibrium yield at 75 percent of Fmsy.

That would be another condition, another direction to consider; and that is based on the economic yield and getting the stability in the fishery. The council in general has had an unwillingness to fish down fisheries towards reference points, because that process of starting high and ratcheting down low is extremely difficult.

DR. ERRIGO: Just another reminder is that let's say we get projections for five years. What the council will most likely do is hold the ACL constant after the fifth year. If you are fishing down, like you are here for five years and then hold constant catch; if you were to do projections at that point, you most likely would find that you are probably going to be overfishing at some point and driving the stock below the MSY levels unless an update is done rather quickly. Being that this is a case where we don't know how long it will take to get an update of this assessment; that may be something you might want to consider.

DR. CADRIN: I guess I thought that the decision sequence was that we had a reference case projection that we have a P-start decision; that our ABC would be based on projected catch, the percentile of projected catch at Fmsy that meets the P-star. But then if the council would like to have more stability for an ITQ fishery, they could have an ACL that is within that ABC

constraint. It seems like that type of thing would be more of a policy decision than a scientific recommendation of ABC.

MR. CARMICHAEL: Yes; that actually is correct; the council could still do that. We have been in some scenarios where the numbers were very close, but 75 percent of Fmsy yield may have been a little higher than an ABC in a particular year because of abundance trends and trajectories. I don't foresee that in this case looking at the status determinations, though.

Conclusion then is request F projections with a 27.5 percent chance of overfishing from Dr. Butterworth. I did get a reply from him. He indicated they may be able to have that done this afternoon and get it to us before we convene perhaps tomorrow morning. I guess they would do it their morning, most likely. Also, I would point out he directed me toward this figure which showed the different catch projections and particularly the projection at Fmsy, which gives us the OFL. I appreciate him directing us toward that.

DR. ERRIGO: OFL is based on constant F at F equals Fmsy and ABC is going to be based on P-star at 27.5 percent.

DR. BARBIERI: Right. I mean that is part of the discussion that we had at our last meeting in terms of how we are going to be actually using the deterministic versus the probabilistic stock status determination and catch streams. Let's get those catch streams at some point; and if we have a chance to discuss it at this meeting, then even better, because then we can look at them and see how it is going to go. That completes all of the action items that we had outlined for the wreckfish benchmark assessment review. We are approaching lunchtime.

We'll get back at 1:00 for the blueline tilefish projections, and then we'll look at the other assessments, the gag and the snowy grouper for this afternoon. If there is time and John Foster is here, then we'll go through the MRIP Program changes today; and we'll postpone a review or the peer review process until sometime tomorrow. Unless there are any other questions or comments, we will recess for lunch and resume at 1300 hours for review of the revised blueline tilefish projections.

(Whereupon, the meeting was recessed at 11:30 o'clock a.m., April 30, 2014.)

The Scientific and Statistical Committee of the South Atlantic Fishery Management Council reconvened in the Crowne Plaza Hotel, North Charleston, South Carolina, Wednesday afternoon, April 30, 2014, and was called to order at 1:00 o'clock p.m. by Chairman Luiz Barbieri.

DR. BARBIERI: Good afternoon, everybody; we are ready to resume the SSC meeting this afternoon. As we had discussed before lunch, we're going to start this afternoon with the blueline tilefish projections review. John yesterday basically provided some overview of the situation with blueline tilefish. The fact that after the assessment review, as usually happens, we didn't have all the projections in front of us and by the time we received the projections they seemed to be unusual in nature. They did not sort of follow the expected pattern and had some very high fishing mortality estimates.

The council then requested that we look at those projections and provide some review of the projections. The SSC has asked to review these latest projections. I believe that John distributed

the latest document late morning some time, which has the latest projections for blueline tilefish. We are requested to review those projections and provide a fishing level recommendation to the council.

The council requests that given the uncertainty exhibited in the various projections provided so far, the SSC consider the interim recommendation of setting ABC at the equilibrium yield expected from fishing at 75 percent of Fmsy until an assessment update can be prepared and the current uncertainty in terminal fishing mortality rates is better understood.

You may recall our discussion yesterday of the SEDAR Schedule, how we are now looking into an update assessment for blueline tilefish to be developed. In terms of action items for us, we are going to have a presentation by Kevin Craig. The committee is asked to review the projections, identify and discuss uncertainties, provide fishing level recommendations, and consider the feasibility and discuss the risks associated with establishing ABC at the equilibrium yield at 75 percent of Fmsy until the expedited update is complete, which is scheduled for SSC full consideration in April 2016.

MR. CRAIG: Just by way of outline I divided this into three different parts; just a brief overview of the outcome of the assessment, a section on the projections, and then what Luiz didn't mentioned but we were asked to look at was some of the more recent age composition data to look into the possibility that there might have been some recent high recruitments.

The assessment was conducted through the SEDAR process. The review workshop was done in August 2013. There were three models that were presented; the catch age model or BAM, which is an age-structured model; the age-structured production model, which is similar or identical to the catch-at-age model accept that we're not estimating recruitment deviations; and then the age-aggregated production model.

The recommendation from the review workshop was that a status be determined using the catch age model or BAM-based configuration. That was presented to the SSC in October. These just show the trends and the status indicators over time. The stock was considered overfished with SSB in the terminal year over MSST equal to 0.91.

The envelope there is from the MCB analysis that shows the uncertainty in that. There is quite a bit of uncertainty in the biomass status. On the right is the exploitation status. Overfishing was considered to be occurring. F in 2011 over Fmsy was 1.29. That was the year of the deep-water closure, the terminal year of the assessment.

If you look at the average F over the last three years relative to Fmsy, it was 2.37; not nearly as much uncertainty in the exploitation status. This is just another way of looking at this. This is the phased plot from the MCB analysis where we included uncertainty and steepness over a fairly broad range, 0.32 to 0.99; also, uncertainty in natural mortality as well as the various data sources, the landing, indices, and age comps went into the assessment.

About 70 percent or 69 percent of those MCB runs were considered overfished and overfishing. The remaining 24 percent were considered overfishing, but not overfished, and very few less than 7 percent were considered not overfishing. Mike just reminded me this is based on MSST

of 1 minus M, and that is subject to review; and so the overfishing status may change if that revision is implemented; so M is fairly low in this case, 0.1.

These are the management quantities that resulted from the assessment. This is pulled out of the assessment report so I will just highlight a couple. Fmsy was estimated at 0.302. MSY was estimated at 226,500 pounds. The yield at 75 percent Fmsy was 224,000 pounds, so that is a fairly flat part of the yield curve.

There is not much difference in the yield between MSY and 75 percent MSY. You see the status indicators there at the bottom, the F over Fmsy and SSB over MSST. One of the strengths of this assessment, as pointed out by the reviewers, is we did have consistency among the three alternative models that were considered.

This shows the exploitation of biomass status for those three models. The blue line is the base run of the BAM, the catch-at-age model. The red is the age-structured production model, and then the green is the age-aggregated production model. There wasn't any difference in status determination based on those three models. The BAM is actually intermediate between the two production models.

We've done a number of projections toward the end of the assessment and since the assessment. This is a list of what has been done. These are available in various places. Some of them are in the assessment report itself, some of them are available in these follow-up documents to the right. They tend to vary – we did both their P-star projections and F projections.

They tend to vary in the duration of the interim period when management was first applied and the duration of the projection. The latest request for projections is highlighted there in yellow; and those are the ones that I'm going to focus on here and that are described in that document that has been circulated.

These are similar to the previous ones except there was a request to update those with the most recent data from 2012 and 2013. These projections are seven-year projections. Again, the terminal year of the assessment was 2011; so the projection period is from 2012 to 2018. We updated the 2012 and 2013 landings and discards data. Those are current as of last week, although the 2013 data is still considered preliminary by the data providers.

We also assumed a catch of 224,100 pounds for 2014, which as Luiz mentioned is the equilibrium yield at 75 percent Fmsy; and that is what is being considered under the emergency action rule. We did both constant F projections at 75 percent Fmsy and Fmsy and then a P-star analysis with P-star set to 0.3 and 0.5.

A little bit more description on the projection methodology; this is the same methodology that has been used in previous SEDAR assessments. The constant F projections have been used since SEDAR 15. I believe the P-star analysis was first done in SEDAR 17. The projection model is basically an extension of the stock assessment model. It uses the same parameters that we either estimated or assumed in the assessment model.

It does incorporate the uncertainty that was characterized in the assessment; so each projection replicate – and there are 10,000 replicates – is an extension of a single randomly chosen MCB

run. As I said before, that MCB analysis incorporates uncertainty in both the data via bootstrap procedure on the landings and discards, the indices and the age comps, as well as uncertainty in key model parameters.

In the case of blueline, we did a Monte Carlos over steepness and natural mortality. The projections are initialized using the 2011 estimate of spawning stock biomass discounted by 2011 fishing and natural mortality and the average stock-recruitment to generate a predicted abundance of age one fish. We add variability to that based on the variability in recruitment that was characterized in the assessment.

We also do that for age two through four in 2012, because those are age classes where recruitment was assumed to follow the stock recruitment curve of the three terminal years of the assessment. There were no recruitment deviations estimated in that assessment for those three age classes; so we add in uncertainty or variability for those in the initialization of the projections.

There are a number of assumptions with these projections. We are assuming no structural or model uncertainty. We are basically using the catch-at-age model as it was formulated. We are assuming the selectivity patterns and the proportion of total effort among the different fisheries is constant into the future.

Although we are assuming these past recruitment residuals represent future uncertainty in recruitment and there is not implementation uncertainties; so if there is a year where an ABC or some catch is assumed, then we assumed that catch is taken exactly in that year, there is no overage or underage.

We updated the landings data; that is what you are looking at here. This is the landings time series from 1974 through 2013. The terminal year of the assessment was 2011. That is denoted by that black line on the right side of the graph. Historically the fishery has averaged about 56 percent handline, about 43 percent longline; not a lot of recreational catch until recently.

Since 2006 the recreational harvest seems to have increased to about a third of the total. That is mostly from private and charterboat. The terminal year of the assessment was the year of the deep-water closure, so you can see that catches decline in that year. Then in 2012 catches increase in both the longline and the recreational fishery; not so much in the handline fishery.

Then in 2013 recreational landings increased even further, to the point where they were about half of the total landings in that year. There is also a lot of uncertainty. As I mentioned before, these are still preliminary data for 2013. If you look at the PSE on the MRIP data for 2013, it is over 0.7; I think it is 0.73. Given that, we looked a little bit more into those 2013 MRIP numbers. This graph shows the total MRIP landings A plus B-1 intercepts. You can see 2013 is a large increase from what has been seen in the previous few years.

I did mention the uncertainty in that value, but we have seen that type of an increase before in the early and mid-2000s, similar ramp ups in the recreational fishery. We did talk to a couple of the port agents particularly off Florida where this seems to be occurring; and they did see the increased interest in blueline.

There has been a pretty rapid increase in landings in 2013 and then the shift in the spatial distribution. Historically the recreational landings have been driven by North Carolina; the line in red there. Then we see this switch in 2013 where there is an increase off of Florida. In light of that, we ran the projections in duplicate with the observed MRIP landings as well as an imputed value for 2013.

You can think of that as a sensitivity run on the projections or perhaps a way of bracketing that uncertainty in the 2013 landings. That imputed value is the arithmetic average of the MRIP landings in 2010 and 2012. You can see on that graph it is about 65 and 75,000 pounds. We excluded 2011, which was about 45,000 pounds, simply because that was the year of the closure.

This is the table from the report that has been circulated. It just shows the breakdown of the landings by fishery for these two additional years beyond the terminal year of the assessment; so 2012 is on the left; that is about 465,000 pounds.

The 2013 removals are on the right and you can see the recreational numbers highlighted there in blue. Then the column on the right is the same except for this imputed value for MRIP, the 71,466, which is in line with what was seen in 2012 and similar to what has been taken over the last three or four years.

DR. ERRIGO: Luiz, is it all right if I interject something in there relevant to this? I will make it brief. We were looking at these projections before the SSC meeting in conversations with the Regional Office. There is another piece of information that makes the 2013 MRIP removals even more uncertain than they are.

The MRIP estimated landings in weight are actually 138,000 pounds. The 310,000 pounds comes from the Science Center's estimate of the landings and weight. That is the first time I've ever seen the differences in the weight that large. We don't really know why; but that is the only time I've ever seen that.

MR. CRAIG: That's a good point. This is the SEFC weight estimation method and that is what is used in the assessment; so that is what we went with here. Mike just asked if this includes Monroe County. It does include Monroe County. It also includes about 23 percent of the identified tilefish were assigned to blueline, which is also consistent with what was done in the assessment.

DR. CADRIN: Do we know the basis between those? I mean, those are two pretty big numbers, right, with 170 and 300 or something like that? It would be good for this decision and others to know why those are so different.

MR. CRAIG: You mean the average weight or just why the numbers are so different in 2013?

DR. CADRIN: Yes; why the two methods are giving such different estimates, I guess.

MR. CRAIG: I would have to find that out. I know that the SEFC method is using an average weigh of about 4.5 pounds, which seems to be about right. That is what we saw in the assessment. I think we might have used 5 pounds in the assessment. I am not familiar with the

MRIP weight estimation procedure; but I think they are using something about half of that; one to two pounds.

MR. CARMICHAEL: This kind of opens up one of our potential can of worms and something that we just deal with. Hopefully a brief background; if people don't understand why we're talking about Science Center versus MRIP landings basis. As you know, MRIP has limited sampling of fish that actually records weight; and often there are holes in the weight observations.

If you query MRIP data, you might find for rare species records where there are numbers of fish, which is their core estimate; and there is no associated poundage of fish, because they just simply didn't sample any. MRIP is very up front that in a lot of cases with fish that don't appear very common, they are not very confident with the weight estimates.

They put a warning to that effect right on the website or at least they used to. That has been a known problem for a while. Once ACLs came along and more tracking by poundage, what the Science Center started to do is they dug into this and they came up with a more refined way; and the goal of Steve Turner and Company was to come up with a better estimate of weight for the fisheries sampled by the Southeast and MRIP, particularly for these rare occurrences.

They just use a different method of – I guess they actually use a method, which I don't think MRIP does, of borrowing of adjacent cells when there is missing data or when there is particularly low sample sizes. The goal was to give a little more stable weight and not just have, say, big swings in average weight because maybe they sampled five or six fish.

As Mike said, normally it is about the same, but in this case there is something going on with blueline. We're not quite sure; but for the most cases we've used the Science Center values, used them for quota tracking, used them for stock assessments and they've been considered to have greater reliability than just the raw estimates and expansions from MRIP.

MR. FOSTER: This is John Foster; I am with the National Marine Fisheries Service Science and Technology. I work as part of MRIP doing design and estimation work. I just wanted to mention quickly, because I won't actually be talking about this specifically during the update presentation, that in 2013 we did and actually for all of the re-estimated years as well, so going back to 2004 we have implemented a new imputation process that is much more complete than what was done previously.

In both the estimate data sets that you can download as well as the web queries, if you are looking at the estimates in weight, we provide another column that indicates the landings, the actual numbers of fish that are not represented by that weight estimate. If you see a zero, then all of the landings and numbers are reflected in that weight estimate.

I cannot speak specifically to why the two methods are giving very different answers, but I just ran a quick query; and in this particular case there were no MRIP landings in numbers that were not represented by weight. Whatever the value is for the MRIP landings and weight reflects all of the landings and numbers. Basically, yes, there are two different mean weights; and you can look at it as being two different mean weights that were used. But, again, I can't speak to this exact situation.

DR. BARBIERI: Thank you, John, obviously an important factor that needed to be clarified. I appreciate that.

MR. CRAIG: Back to the landings time series; that heading is wrong; it is not just recreational landings. This is a previous graph that shows the difference between the imputed values for 2013, which is the black circle there; and then the gray bar is the actual reported MRIP value. The difference is about 240,000 pounds; and so when you see the projections, you will see what effect that has on the outcome of the projections.

I am going to go through an example or two here. All of these are documented in the report that was circulated. This is the P-star analysis with P-star equal to 0.3; and the observed MRIP estimate, which results in a total 2013 landings of 556,000 pounds. You can see in that Panel D what we're assuming for the interim period or what was observed for the interim period 2012, 2013, and 2014. 2012 is 464,000 pounds and increases to 556,000 pounds and then down to the proposed quota of 224,000 pounds.

The Fs associated with those landings during the interim period are fairly high; you can see that in Panel B there. They are between 1 and 2.5. That results in a fairly high probability of F exceeding the F limit, which in this case is Fmsy. The first three dots in Panel A are all close to 100 percent chance of probability of overfishing.

Panel C shows the spawning stock, which is driven down over that interim period. Then the P-star kicks in in 2015; and you can see the ABC that is associated with that in that last Panel E there, somewhere between 50 and 150,000 pounds or so depending on the year. These graphs are also in the document. This is the constant F projection.

This is F at F equal MSY with the imputed 2013 landings, which results in a total of 317,000 pounds in 2013. You see a similar kind of pattern; the spawning stock declines during that interim period from 2012 to 2014. The Fs during that period are fairly high, around one or so. Then when the F equals Fmsy is applied, you start to see the spawning stock increase.

Then that bottom right panel is the landings that are associated with that constant F. This is a summary of the P-star projections that are in the report, 0.3 and a 0.5 level, with both the observed 2013 MRIP landings and the imputed value. You can see what the effect is on the projections. The difference – the effect of the 2013 value, which you can see there, is either 317,000 pounds or 550,000 pounds.

It results in a difference of about 30 to 35,000 pounds in the ABC. That is on average across that period 2015 to 2018. Similarly for the constant F projections, we show the 75 percent Fmsy and the Fmsy level; again with the observed and the imputed 2013 values. And it is fairly similar; a difference of about 33 to 44,000 pounds based on what is used for 2013.

All of this is available in tabular form in the report; and this is just to remind me to point that out. These are split into landings and discards in both numbers and weight for all of those permutations of both the P-star projections and the constant F projections. The last thing we were asked to address was is there any indication of a recent strong year class in the age composition data that might be supporting some of these high recent landings?

Just a few caveats to start out; the age composition data we have is fairly limited. We only have five to seven years in the case of the longline and the handline fishery. We only have three years in the case of the recreational fishery. We don't see a lot of age zero and age one fish in the age compositions.

Blueline lives fairly long, over 40 years; and it seems to be in these fisheries for only two to three years. With only a handful of annual age compositions, it is very difficult to pick out a progression of cohorts. Those annual comps also reflect a variety of other processes in addition to recruitment. Certainly, they are subject to annual variation and selectivity or natural mortality and so forth.

Also in the assessment something that came out is the recruitment deviations really don't seem to be heavily informed by the age comps data itself. They seem to track the landings and the indices more so than the age compositions. This is what we had to work with. These are the sample sizes for the age comps from the commercial handline and commercial longline and then the recreational fishery; both in number of fish and number of trips.

The yellow is what was actually used in the assessment; the blue is the two additional years that we looked at. On average we're getting about 125 fish a year from commercial handline from on average 46 trips. Their sample sizes start picking up around 2007, so about seven years of data from the handline fishery.

The longline fishery, a lot more fish; 640 fish on average from about the same number of trips. Sampling from the commercial longline really picked up in 2009, so we have about five years to look at. We don't have much from the recreational fishery; only about 65 fish a year from eight trips over the last three years or so.

This shows those age compositions by fishery. Each line is a particular year. The 2012 and 2013 years are shown in the heavy black, 2012 is a dashed line, and 2013 is a solid line. They seem fairly unimodal. There is nothing particularly stands out about 2012 or 2013 that is different from the other years.

The longline age comps, a similar pattern; they all seem to be fairly unimodal. We do see this slight shift to younger fish in the longline fishery in 2013. The mode there is age four; perhaps a few more three year olds than is seen in the other years. Then the recreational age comps are as you might expect given the low sample sizes; they are all over the place.

That red line is the pooled age comp from the recreational fishery that was used in the assessment. Depending on the year, you see a peak at age two, age three, or age four, but not particularly well-defined age compositions. We did just look at these visually to see if we could pick out any indications of strong year classes.

You can note there is very few age zero or age one fish that show up in any year. If you look at age twos, and I think that is 2008, we do see what looks like a higher relative proportion of age threes in 2009; but they don't necessarily show up as fours, fives, and sixes in subsequent years. Similarly, we have a slightly higher proportion of age threes in 2007, show up as age fours in 2008, but not really five, six or seven year olds.

There is no obvious signal here of very strong year classes passing through. If you look at these long enough, you might be able to pick something out, but it is certainly not any kind of a sledge hammer effect or anything. Similarly for the longline fishery, you don't see a lot of indications particularly for the years where we have good sample sizes, which is post-2009.

All of those age comps look fairly unimodal. The other thing I should mention is these are difficult fish to age, too, so there is some aging error here that could potentially be smearing things. Then these are for the recreational fishery. We see a few more age ones and twos in 2011, but they don't really seem to show up as a high abundance of twos and threes in 2012. Another way to look at this is to just look at the proportion of young fish over time where young is defined based on what is selected for in the fishery.

If you look at the handline fishery, that dotted line is a proportion of fish age one or younger from 2007 to 2013, and it is fairly flat; similarly for fish age three and younger. In the longline fishery, a similar pattern for age twos or younger, not much trend over time, an increased proportion of fish less than age four. Then in the recreational fishery, we're actually seeing a decline in the proportion of age ones and age twos over those three years.

So, just sort of a quick visual inspection of the age comps really didn't provide strong indications if there was a recent strong year class passing through. We do have low sample sizes for a number of gears, particularly handline and the recreational sector. We do see this increased proportion of younger fish in 2013.

That seemed to show up both in the recreational, the handline, and to some extent the longline. That might be the result of any number of processes; annual variation, selectivity, natural mortality and/or recruitment. There are certainly other mechanisms in addition to recruitment that might underlie these high recent landings of blueline, increases in fishing effort and/or increases in catchability. That's all I had.

DR. BARBIERI: Thank you, Kevin. Questions or comments for Kevin? I might just review briefly that maybe we can start with just generalized questions regarding the projections and then we move through our action items.

DR. CADRIN: Thanks Kevin; that helps, especially looking at the spatial patterns of the recreational catch; and it does look like a lot of that is coming from the south. Were you able to look at the commercial catch; and are we getting similar signals in the commercial catch down south?

MR. CRAIG: I don't know that; we haven't looked at that. That could be looked at, though. I was trying to remember; I think there may have been something from the review workshop – this is eight months ago – about looking at the spatial distribution of the commercial landings. I don't remember what the outcome of that was.

DR. CADRIN: We were more focused on the north; and that is why we had asked for that. There was a spatial analysis done through 2011. Looking at that – and that is Page 354; of the review workshop it is Page 23 – there is a figure there and it does show in 2011 the CPUE from commercial handline shot up for latitude 24 and I think that goes through 31; so it is the southern part.

I would be really curious to see for 2012 and last year if that was supported by the south. With the MRIP data and the uncertainties, there is kind of a smoking gun there. It would be good to see if the other portions of the fishery are showing some southern productivity. That was my first question.

I have another one, Luiz, if that is all right. Kevin, the longer-term question from the council was having some kind of interim ABC until we can have an update. From my perception of the review panel, I'm just doubtful that an update will solve the problem, because there are spatial concerns within the assessment as it's done.

The CPUE is trimmed from – correct me if I'm wrong – 28 to 42 or something like that. It is latitudinally trimmed, so we would actually miss – the problem that we've had with the recent productivity in the north – we would have the same problem now in the south – that it wouldn't be indexed. I am just wondering if an update would actually solve this concern or not. I would be interested to hear your perceptions on that.

MR. CRAIG: Well, I think that is right; and the indices, we only have one index at the end of the time series. It is trimmed to the middle of the range. If there is some increase of productivity north or south of that, we wouldn't pick it up. It seems unlikely that an update with two additional years of data, particularly if those are age compositions, that all indications aren't particularly informative about recruitment and one fishery-independent index, if that is going to be particularly useful.

Also the dynamics of blueline, they are a longer-lived species. The maturity vector; I want to say we had 50 percent mature at age two or three, but I suspect functional maturity may actually be a little bit older than that. I wouldn't expect a response to a management measure to occur in a one- to two-year timeframe.

DR. BARBIERI: Are there any other questions or comments specific for the projections that you would have for Kevin?

DR. BUCKEL: Kevin, you probably covered it and I missed it; how did you estimate how many fish would be discarded in the projections? I'm looking at the table, so you've got the landed and then the number of dead discards. I'm just curious, some of this fishery used to be as bycatch in the snowy grouper. Folks were directing on snowy and catching these as bycatch, and now there seems to be some directed fishing for blueline. I'm just curious how that would come into play with the estimates of number of dead discards.

MR. CRAIG: You are looking at the projection tables now?

DR. BUCKEL: Yes.

MR. CRAIG: In the landings that are used, we actually have estimates of discards from the various fisheries. Sometimes those are in weight; usually they are in number, and we convert them to weight. I think in the projections we just used the average ratio of discards to landings over the assessment period and partitioned it into landed fish and discarded fish that way. That was about – on average it is less than 1 percent total is discarded. We didn't calculate those on a fishery-specific basis; it was just an average that was applied.

MR. CARMICHAEL: Kevin, you showed the age compositions and I noticed the fish lived to be 40 years old; but obviously from the distribution you commented on that you don't see them in the fishery that long, so you have relatively few numbers of ages that you're working with in trying to calculate estimates on.

The decline of those age compositions is pretty steep, obviously. I guess the question that begs is do you guys consider that that is pretty good evidence of the high exploitation going on right now or is there possibly something else? Are those fish moving or for some reason unavailable to the fisheries or is something going on that is keeping those older fish from showing up; in which case to really get at that question in the future, we've got to find a way of sampling those as opposed to reducing mortality rates and seeing the population start to fill itself back out.

MR. CRAIG: I haven't seen many of those older fish. If you look at the age comps, they did show up early in the few years of the age comps that we had. There were some 14-, 15-, 16-year- old fish. Then when you look later in 2008, 2011, you don't see them anymore. There could be some portion of it could be fishing out.

There is some slight truncation in the age structure. Where the big, old fish are, I don't know. I don't really have a sense of that. This is a deep-water fishery. If there is some depth, age, size relationship, then they could be further out and not as accessible to particularly the recreational fishery.

DR. BARBIERI: Kevin, would you mind scrolling up just for us to see, because that jumped at me a little bit as well in terms of the age comps. Either there is quite a bit of juvenescence; I think you are working here with a flat-top selectivity.

MR. CRAIG: That is right.

DR. BARBIERI: So basically we're assuming that there has been a fair amount of age truncation and the stock has been severely juvenesced. That also raises some questions. That is a very sharp decline in the numbers, you know, proportion of fish older than maybe three or four or five. By that point, you are already fairly small proportions. Churchill, I don't mean to put you on the spot, but feel free to jump in, not that I'm trying to guilt you into it, but to jump in and help us discuss this from more like a – I hate to say historical perspective, right.

MR. CARMICHAEL: But you did.

DR. BARBIERI: In terms of blueline tile and what folks used to see back then.

DR. GRIMES: Way back in the dark ages. Actually, Jeff and I were just looking at the size compositions from the so-called Snowy Edge Site off North Carolina. They are surprisingly similar. Some of the larger fish, 600 millimeters and up, you can tell those size classes are diminished some, but I don't know if there is any way – I don't know how to show you this, but this is from Jeff's publication era.

DR. BUCKEL: Set in 1970s versus '05, '06.

DR. GRIMES: Right; these are '05, '06; 1970s; the olden days or whatever you were referring to.

DR. BARBIERI: That might be interesting to put up there if we have it. Can you e-mail that?

MR. CARMICHAEL: E-mail would be quickest; we might have had it at some point.

DR. BARBIERI: Keven, bear with us. Obviously, this assessment was already not just reviewed by a SEDAR review panel; it was reviewed by the SSC. We're not trying to reinvent the wheel here and re-review an assessment. We are trying to – given the uncertainties in some of the questions that the council is asking us; we're trying to generate some other sort of points, you know, toeholds for us to try and interpret what we have and address this question; consider feasibility and discuss the risks associated with establishing ABC at equilibrium yield of 75 percent at Fmsy.

I think having some perspective on historic age compositions of the fishery and the degree of juvenescence that may have happened; all of those will help us sort of develop some rationale for how we interpret. You guys have done a great job in structuring these projections, but you are already working with limited information and a number of uncertainties that are hard to deal with. Did you e-mail that to John? I just thought that you were going to put this up there.

MR. CARMICHAEL: I am; I've been getting e-mails in batches for some reason during this meeting like every 15 minutes; and I get like 10 or 12 e-mails. I'm not really sure what is going on with the network; but I'll get it around to you all as soon as I can.

DR. BARBIERI: Okay, in the meantime let's see if we can engage some more committee members into the discussion and ask Kevin any questions you might have.

DR. GRIMES: This is not relevant to the particular age composition changes, but my recollection of the review panel – Steve has already said it a couple times – one of our major concerns was the fact that there were these huge catches or large catches off of Virginia and the northern part of North Carolina that hadn't previously; and the model was constrained geographically not to include some of that. Now you've got it again off of Florida by addition of the recent years. Did I remember that right?

MR. CRAIG: Yes; we didn't really pick up on the southern thing. We were more focused on the north; plus looking back on it.

DR. GRIMES: Well, I think the southern changes with the new data, though, didn't it, just what you just did, so we didn't see that.

DR. BARBIERI: Kevin, looking at this latest document; I'm trying to find the scenario that addresses the council's request for not necessarily constant catch but to have interim – this would set for 2014 the catch at 224,000 pounds.

MR. CRAIG: Right; all of those have the observed catches for 2012 and 2013; and then if you sum the landings and discards, that is the 224.1 for 2014.

DR. BARBIERI: Then beginning at '15, that will be the yield at 75 percent of Fmsy; but that is not the equilibrium?

MR. CRAIG: That's right; the stock is not at equilibrium. It is in a depleted state, so those landings are going to be less than what the equilibrium yield at 75 percent of Fmsy would be.

DR. BARBIERI: Yes; but I wanted to bring up because of the way that the request was phrased to you guys and was discussed with the council so they understand our discussions here on how we are trying to explore some of the potential outcomes here that come out of the projections for what they requested.

MR. CRAIG: Right; there was a request for a constant landings' projection for the whole projection period at 224,100, which would be the equilibrium yield at 75 percent Fmsy. That is in a previous document; and I believe the Fs associated with that were close to 1. They were around 0.8 to 1; and so that is because it is not at an equilibrium state, so those Fs are higher. We didn't redo that projection. It wasn't in part of this recent request; it was just for the constant F projections.

DR. BARBIERI: Yes; and I was asking just so we can build a record that we discussed all of this and as we put all that stuff. As I go to give the report in June, I'm sure that there might be some of those questions to make sure that we build our record here with all the pieces that they requested to make sure that we discussed all of those.

DR. ERRIGO: I think the last the projections that were run it was realized that constant catch at the equilibrium yield of 75 percent Fmsy would result in F values that were way above Fmsy and that wouldn't comply with Magnuson. The council was interested in perhaps having ABC values set at a constant F at 75 percent of Fmsy, which are these projections, instead of the P-star of 0.3. I'll show you in comparison what the P-star 0.3 values are. What I really would like to do is put them in the same table. That will take me a minute, but let me just scroll down to the P-star 0.3 here. Here are the values of the P-star 0.3.

DR. BARBIERI: So basically at the end of our review of the assessment, just to refresh everybody's mind, there has been some correspondence between the council and the center and some discussions that not all of you may have been really connected with. I'm trying to bring those issues up so we sort of generate our list of discussion points.

MR. CARMICHAEL: This is Attachment 25; and this showed the projections of fishing at the equilibrium 75 percent of Fmsy levels. In requesting this, one of the hopes that the council had was that by bringing the landings' level down much sooner through the emergency rule in 2014; that there would be more of a payoff and that perhaps the stock could fish closer to the equilibrium level.

Then as has been reported, that resulted in Fs that were still extremely high. As you can see, they are around 0.8 beginning in 2014 and really staying at that level fishing at equilibrium 75 percent Fmsy yield. As I said, the stock biomass is low so that amount of yield is going to result in a high F.

MR. COLLIER: I guess a concern of mine is the Fs that are coming from a projection are beyond what was seen in the stock assessment; and that is a little bit of a concern. There is not much data for those projections to go forward with. It appears that it is very small age classes going through.

It is not really tracked through time if you do see a peak in it; so you're not getting a signal of a year class, and that is a little bit disconcerting. Especially if you're looking at projections; you would want to be able to follow a year class through time and see it decay; but you're not seeing that with blueline tilefish.

DR. BARBIERI: Right; and this is why we ended up to some extent in this situation of having to discuss all of this in more detail. Usually we have an assessment – I mean, basically what we've requested this morning for wreckfish; and we've worked together with the Center for quite some time and similar things.

We run through the assessment, we go through the control rule, we come up with our P-star value, and we request projections and they are usually fairly plain vanilla; and they come out the other end. The process that they have in place is very well established, very robust scientifically, and well documented.

We just get those projections and we have our yield streams for OFL and ABC; and everything is fine. It is just that there was sort of like a breakdown, a discontinuity sort of between what came out of the assessment and this prognosis of recent and future recruitment that sort of threw things off kilter for a while.

This has generated all the council requests for additional projections. It has generated the council's request for this update, which we now discussed could be a standard assessment or something that allows a more informative assessment or less uncertain assessment that takes into account if there is some issue here with the dynamics of the population, that we can take that into account and incorporate into that the entire time series of data that is being used in the assessment.

MR. CARMICHAEL: Chip brought up the point that led to a lot of this, as Luiz said, and it seems that we've heard lots of different possibilities. It's productivity to the north discussed at the review panel and productivity to the south looking like in the recreational landings knowing that the indices are just encompassing an area that really doesn't get the north or the south.

On one of the earliest discussions we had with the Science Center, in talking about this and wondering about how year class strength might be playing into it, could there be some good year class that was out there that was supporting the high landings that we saw and might carry over; you know, what might be coming along in the pipe now that deals with some of the terminal year uncertainty? The point was made that this fishery could be going through what other similar fisheries have done where they are exploiting different aggregates of fish.

You know, these things are patchily distributed out there; and those exploiting them, they find an aggregation to fish and they fish that down. To the model, you see these old fish that just show up, because they are over here in this place and they find them; and then maybe they don't' see them for a while and then they find another bunch of old fish.

We saw that in snowy grouper years ago, and that was well documented there. That is another thing that could contribute to supporting these landings when you look back and seeing old fish and not getting as high an F as you might think when you just project forward and you can't tell your model that, oh, they are going to find some more fish or productivity in the south will step up, or productivity in the north will step up.

All that is just uncertainties; and at some point here today this committee needs to decide how to make a recommendation for the council. Based on what you said when you looked at this assessment the last time, it would be either 30 percent P-star with the most accurate version we have now, which I would take as the latest projections with the revisions to the landings and accounting for a reduction taking place in the 2014 year in response to the emergency rule.

Mike, is that one of those columns there? I think that would show the landings that the council is looking at. Just assuming that you say yes, these latest projections, those are the best available science; that is our recommendation; all those other uncertainties we have really no way of dealing with them, so that becomes the landings' level.

Dr. BARBIERI: Besides that, the next bullet down in terms of our action items is to consider the feasibility and discuss the risks associated with establishing ABC or in this case at the equilibrium yield at 75 percent Fmsy, which as Kevin showed us since the stock is not in equilibrium; that is an easy point to make; that it would be very risky and would lead the stock to actually be under overfishing; and it would not be applicable to the situation given the scenario that is envisioned by the assessment.

It is a tough question, but we have already reviewed the projections, we have already identified and are discussing all those uncertainties. We're going to have to make a recommendation here for ABC and OFL yield streams. What came out of the assessment, remember, our P-star control rule process was 0.3 for P-star. We have to have those huge streams that Mike has projected for P-star of 0.3 yields at that level and the equivalent at 0.5 for OFL.

DR. CADRIN: Just a question for clarification; the scenario that you and John had just depicted of using these projections; which recreational catch and which total catch value are you suggesting that we use? Going back to Table 1; do we use the imputed or the recent average recreational catch? I think that is one of the bigger issues.

In fact, as we develop this in the feedback to the council, I think it may be more informative to verify the recent increase in catch and the geographic pattern of the recent increase in catch. That might be more informative than an assessment update. If we could reconcile the two methods between MRIP and the Center's approach to it; that may actually be more fruitful than an update. First is a question, which do we use; and then we may want to have some further recommendation to the council that those be explored.

DR. BARBIERI: Yes, absolutely.

DR. ERRIGO: Just one thing is that the Regional Office is using the actual estimate from the Science Center to track the ACLs; and that is what is on the website and on the books as the actual landings for 2013 for the deep-water complex.

DR. BARBIERI: But this assessment as well as pretty much all the other assessments in recent memory used this alternative method that the Center uses to estimate the average.

DR. ERRIGO: The assessment used the numbers from the Science Center, which used the alternative weight. It is a different way of estimating the weight of the landings than MRIP uses. They used the Southeast Center's methodology for weight estimates of recreational landings in the assessment. That is what's used in the assessment.

Of course, they have also in certain situations thrown out certain estimates in certain years that were thought to be not trustworthy, let's say; such as there was an estimate for Monroe County landings in a certain year that were like 70,000 pounds that came from a single intercept; that is not the case here, but that has happened also.

MR. CARMICHAEL: I think Steve was asking relative to this table which shows the different recreational options in 2013 being 310 versus 71; this is out of the presentation.

DR. BARBIERI: Yes; and that is obviously a very large difference there. John Foster explained how the MRIP method – I mean, basically, John, you are saying that the MRIP estimation method for that average weight has recently changed or been recently updated.

MR. FOSTER: That's right. Would you like me to give a very quick feel about –

DR. BARBIERI: That would be good.

MR. CARMICHAEL: Just one point of reference; if you look at the latest projections that we e-mailed out, they show at P-star 0.3 is like Table 6; and then I think Table 8 they show for the different landings' level. When you use the different recreational landings; because they are just a proportion it doesn't have as much an impact as you might think, but it does double essentially the allowable harvest for 2015.

It would be 28,000 pounds under the higher level there, the 310; and then about 57,000 pounds under the lower level for the recreational, which gives you a lower total landings. It is twice as much or half as much depending on which perspective you're at; but obviously it is 10 percent to less to slightly more of the 224 that we're looking at for the emergency rule, and much, much less than what is in there now based on the ABC recommendations based on catch and the acceptance of the argument about a developing fishery that is minimally impacting the resource.

MR. FOSTER: The way that the MRIP landings and weight estimates are calculated that you would get from the website or in the MRIP estimate data sets; it follows the same basic methodology that is used for the landings and numbers. We calculate a weighted mean catch or mean landings per angler trip from the intercept data. It is weighted in the sense that it uses the survey sample weights to calculate that weighted mean or the mean of the landings and weight mean for each trip.

That is then expanded by the effort estimate, just as it is done for landings in numbers. The real difference I would imagine is coming from how the missing weights – the individual fish weights are imputed between the Center's method and our method, the MRIP method. The MRIP method does not use any external data sources.

It just uses the available survey data; and it works with imputation cells that start very specific; so within the same state, wave, mode of fishing, area fished and all of those types of trip characteristics. Then if data are not available to make those imputations, those cells become larger and more general where we try to stay within state and mode as long as possible; but eventually it will collapse up to, say; sub-region, you know, the entire South Atlantic, for example, to bring in available data to make the imputations to fill in the missing length weights.

Prior to just filling in a complete length/weight pair for a given fish, we do length/weight modeling; so if we have a length value present, we would generate a weight value from that length. But again we don't bring in any external data from outside the APIS, the intercept survey.

MR. CRAIG: Luiz, let me just make one thing clear; I am not sure if it was clear in the presentation. It is about this slide here. These different MRIP numbers have nothing to do with the weight estimation procedure. That 310,368, which that is just the actual MRIP numbers that have been run through the SEFC weight estimation procedure; and then the 2013 alternate is the same thing, it is an average of 2010 and 2012. That difference – those are consistent in terms of how they're dealing with the mean weight. The alternative one is just an average of two recent years.

MR. CARMICHAEL: You might want to say why not 2011.

MR. CRAIG: Well, 2011 was a closure year and so the recreational landings were down. They were down around 45,000 pounds; 2010 and 2012 they are around 65 to 75,000 pounds. That is why 2011 was excluded.

DR. BARBIERI: Okay, I guess I misunderstood that part or misremembered it. But for that at 310, 368, the MRIP values are 174 something?

DR. ERRIGO: For 2013, the values from the MRIP Website; if you just look at the South Atlantic, it is about 138,000 pounds. That does not include Monroe County. I did pull Monroe County; and I can't remember it was like another 30, 40, 50,000 pounds. I have it if you really need to know. But it is like 170 to 180,000 pounds with Monroe County; and like 2,000 pounds of discards if you've used the average weight from the assessment of a blueline tile or something like that.

DR. BARBIERI: So not quite half of the 310.

MR. CARMICHAEL: But certainly bracketed by these alternatives here.

DR. BARBIERI: Folks, we're going to have to move forward here and make some decisions. We are all struggling, of course, with uncertainties and issues that are not perhaps very clear to us in terms of differences and values and all. This is what we have at this point; and, Mike, if you can put back the other table that you had; so those are the scenarios in terms of yield streams, and "T" I think are the table numbers, Mike?

DR. ERRIGO: Yes; the Ts are the table numbers, although I removed the table number from the P-stars to fit the rest of the description of what it was. It is Table Number 6 and 8. I'll put that back.

MR. CARMICHAEL: I think we've got to view this as a series of questions. Maybe the easy question is the equilibrium yield at 75 percent of Fmsy; does the committee agree that would result in overfishing, excessive risk, and should not be considered as a fixed landings' level until the next update is completed?

DR. BARBIERI: Right; and I'm sorry if I assumed that already had been in agreement. Thank you, John, because this is a key issue for us to include in our report. Looking at our action items; the council asked us to consider the feasibility and discuss the risks. Seeing the results that Kevin presented or put up in one of those documents about the fact that the stock is not in equilibrium; so using that ABC at equilibrium yield at F 75 percent MSY is not really a viable option; and it would be risky and not feasible. Any objections to that?

MR. CARMICHAEL: Then the next question is are you content with your basis of projections at 30 percent chance of overfishing occurring; or would you modify that recommendation and use the 75 percent of Fmsy yield in the interim until the next update? That would be the columns that Mike had that shows you the result on that spreadsheet.

DR. BARBIERI: Yes; so we would have the two yield streams there for a P-star of 0.3, which is the outcome of our application of the ABC Control Rule about the actual estimate or the imputed average; and then an alternative yield stream that would be F at 75 percent of Fmsy.

DR. ERRIGO: Maybe you guys should decide whether you want to use your ABC Control Rule and the projections at the P-start value or whether you're okay with using the projection at a constant F of 75 percent of Fmsy. Then I can show you the differences between the actual estimates and the imputed averages; because then I need to add another column with the imputed average for F equals 75 percent of Fmsy.

MR. CARMICHAEL: Work on that while we make these decisions.

DR. BARBIERI: You understand that if we go to a recommendation of a yield stream for ABC, a yield stream at yields at F equal to 75 percent of Fmsy; we are actually departing from applying our ABC Control Rule, which is allowed as we discussed this morning. Yes, we would be, right? In that case we would have to justify very well why we made that decision. It is allowed within the guidelines that we depart from setting ABC as determined by application of the ABC Control Rule as long as we have a strong justification and a general consensus of the committee to go that way.

MR. CARMICHAEL: I think maybe ask it in terms of does anyone wish to speak on behalf of modifying the recommendation that you've made earlier on this assessment following your review of this entire assessment? Does anyone wish to speak on behalf of modifying your basis for establishing ABC; and then if not, we'll move right on to imputed versus estimates.

DR. BELCHER: I think I'm kind of confused. If we just said 75 percent Fmsy is not feasible; why are we looking at the yields at 75 percent?

DR. BARBIERI: One; what the council had originally requested was yield at the equilibrium value for Fmsy.

MR. CARMICHAEL: They looked at fixed landings using the equilibrium yield at 75 percent of Fmsy, which is our typical rule of thumb for OY. Because we are not at equilibrium, that results in high Fs. The other alternative is fixed fishing mortality rate at the 75 percent of Fmsy gives you lower yield, because it is that rate times lower current stock abundance.

DR. BARBIERI: At the current level, the stock is not at equilibrium. What we are hearing is that we're going to stick with the P-star – you know, application of ABC Control Rule and the P-star value. We're going to have OFLs at the P-star – the yield stream at 0.5 P-star; and we're going to have the ABC's yield streams at the P-star at 30 percent.

Now, the next decision to make is going back to the table. There are the values now of ABC; and the decision to make is whether we use the actual estimated or the imputed average in terms of coming up with those yield streams. This is the discussion that we just had about the differences in methodologies.

DR. BUCKEL: Yes; given a really high PSE was 0.7 on the 2013; so I would vote for the imputed average.

DR. ERRIGO: None of these are MRIP estimates for weight.

(Inaudible remark)

DR. ERRIGO: Yes, but the PSE was for weight and not for number. The PSE for number might be lower. I don't know what it is; I could actually look it up.

DR. CADRIN: I support that recommendation. In addition to the PSE, which I think is relevant, the large difference in estimates between the Center and MRIP Program would be another reason to have concern about that number; and until that gets resolved, a recent average I think is responsible.

MR. COLLIER: It is not unheard of in SEDARS to average two different values from MRIP or for the recreational estimates either. It has been done in other assessments.

MR. CARMICHAEL: Particularly when there seems to be a one-year significant trend. As we've mentioned the average; so we see 2012; we know 2010 average was 71; so clearly 2010 had to be like 73. We sort of have landings at that magnitude and then, bam, you've got 2010 comes out at 310; and that is right. It has been quite common to do this type of thing.

DR. BELCHER: Just a point of clarification; when we're coming up with the numbers for how close we're getting to ACL, is that coming from the MRIP numbers that we're getting and we're waiting on Wave information or is that actually coming from the Science Center; you know, when we're getting the update reports to see at what point we're shutting the fishery down?

MR. CARMICHAEL: The Regional Office is using the poundage estimates with the refinements of the Science Center and not the values straight from MRIP when they track the

quotas. But as we said, that is sort of separate than these, because that is a number that falls between these two.

DR. BARBIERI: Okay, so I guess we are done if we look at our list of action items. This took a little longer than expected, I guess, but we did generate quite a bit of documentation on the record of discussion of the main points and concerns. We have all of that documented there.

DR. BERKSON: Erik Williams just took two minutes to explain to me a little bit more background about where that average came from and why that may not be optimum. I'm wondering if we could ask him to come to the microphone and give everyone the same background he just gave me.

DR. BARBIERI: That would help, yes.

DR. WILLIAMS: Erik Williams, from the Southeast Fisheries Science Center. Just to be clear that what Kevin presented was the Southeast Science Center MRIP Estimate, but that imputed average was just an average of the last two years; as he correctly characterizes, just a sensitivity run.

It is actually not really what I would call an equally feasible run, because what you were debating was the Southeast Fisheries Science Center MRIP Estimate versus the actual MRIP/MRIP estimates; and that MRIP/MRIP estimate is higher than that average. If you go with this average that we presented as just a sensitivity run, it is below both of those. It really doesn't have any I wouldn't say feasibility in that sense. Really, the debate is between whether to use the Southeast Science Center MRIP numbers or the actual MRIP/MRIP numbers. Those are both higher than that average. I just want to make that clear.

DR. BARBIERI: Yes; I'm glad you did, because this was kind of important.

DR. WILLIAMS: Unfortunately what you're missing is the MRIP/MRIP weight estimates. We didn't do a projection with those. That is what is not before you, unfortunately. But we bracketed it; and if you really wanted to, we could do a rough back-of-the-envelope calculation and linearly interpolate.

I think that would be within the ballpark to figure out what that would actually be for the ABC; or we go through the memo process and you guys ask us to redo another projection analysis if you want it down to the nearest pound. I think a linear interpolation would probably get the job done.

DR. BARBIERI: I think the issue of the MRIP/MRIP estimates came up basically because it was trying to be a point of clarification of differences that different parts of the agency, I guess, were finding different numbers.

MR. CARMICHAEL: Are there changes in the MRIP estimation process in 2013? You guys have argued about that down in the Gulf with red snapper. Is that at play in what is giving this big increase, because thus far another part of the concern is that it is a huge spike in recreational landings in the MRIP sector; and you don't see it in the commercial longline, they went down?

You don't see it in the headboat; they went down in 2013. What is sort of the explanation of why MRIP seems to be so far afield?

DR. BARBIERI: This is going to be the core of the discussion with John Foster a little later. It is what we in all the different Gulf States have been discussing is some differences in methodologies of how the field portion, the intercept portion of the survey. The implementation of that survey has been modified; and that modification is really an attempt to continue improving the survey over time; but it is generating some complications because the differences in numbers now are difficult for us to tease apart between what are real differences versus just methodological differences.

I think we didn't have too much of an opportunity, I guess resources, to have a side by side over the entire time series of sampling that would allow that calibration factor to be developed. That is basically – I can tell you in the Gulf it has been a major point of contention, because it is generating some different numbers.

There is a fair degree of comfort all around with the new numbers giving improvements with the survey and improvements with the estimation methods; but until we can have more of a calibration exercise in place, we don't really know how to compare the two things in terms of apples and apples.

MS. LANGE: My take on the original discussion was not so much a concern of how the Center calculated the MRIP numbers versus how MRIP calculated them, but the fact that 2013 number was so out of line with everything else, which leads you to question the number. Whether it is 170 something or 300; they are both way out of whack.

There is lack of confidence apparently in how accurate they are to reality. Using the average is what I thought we were talking about, because it seemed more reasonable at this point, the average from the previous year's. whichever system we're using, whichever MRIP number. I don't know that – Erik, go ahead.

DR. WILLIAMS: We spent a lot of time investigating this number, too, because when we saw it, it stood out to us as well. We actually went as far as to track down – we talked to Beverly Sauls, who tracked down the sampler who made one of the intercepts. This estimate is largely being driven by two intercepts that were made; and one of them involved the sampler actually measuring the fish at the dock. We have pretty good confidence in that one intercept.

The other is just one of the reported catch kind of intercepts. On top of that, she talked to the samplers some more about what's been going on in that area; and that sampler confirmed that there has been kind of an increased targeting for blueline tilefish; that that sampler has been seeing more tilefish being brought into that area. I'll just throw that into the mix. I'm just conveying exactly what was conveyed to me.

MS. LANGE: Well, I guess I don't know whether it would be considered more conservative, since using the lower number increases the target, but I would feel more comfortable I think using the average since there is some question. You're only talking about one actual or two actual observations.

DR. BARBIERI: Considering the scenario or the suggestion that Anne just made, what is the –

MR. CARMICHAEL: We're probably asking for a standard assessment soon. This has been viewed all along as a – this is a recommendation in place for a short period of time. There are obviously a lot of questions about the recreational landings; what they were in 2013, what they are in a lot of years. It is an uncertainty; so do you comment on the uncertainty or do you use one of these or do you ask for yet another projection run that comes up somewhere between these two scenarios? I think they will all carry an uncertainty; 28,000 pounds of landings or thereabouts riding on the range.

DR. BARBIERI: We have a recommendation there on the board. If you will look on the right-hand side, that goes with the tables that Mike has developed. Are there any comments from the committee that would modify those recommendations as written or we stick with those? Mike, can you post –

MR. CARMICHAEL: Or you interpolate in between.

DR. BARBIERI: Yes. Erik suggested just provide us a linear interpolation, and that might be – you know, instead of us having to either/or, one side or another, we stick somewhere in the middle; and to me that seems to be a reasonable compromise. I'm kind of leaning towards that myself.

DR. CADRIN: I was going to say the same thing is that using all the same justifications that we were going to use for the imputed; that even better would be to use the MRIP/MRIP estimate and simply interpolate between the results of these based on the intermediate catch that would be produced. I think all of the justifications we laid out support this recommendation. If that number is available, I think it would be better than the imputed average.

MS. LANGE: Okay, I guess then if we're going to use the raw original MRIP number for 2013; shouldn't that be what we use in all the years? Are we just getting more and more mixed up?

DR. CADRIN: I guess I'll use your own words is that we're really concerned about that flyer in 2013, the PSE, the difference in the two numbers were the justifications I heard; and that is the estimate that we're concerned about that we feel needs to be looked into. I don't feel the need to replace the entire series.

MR. CRAIG: One thing I could add is the PSEs were much lower during the mid-2000s when we saw that initial ramp-up in the recreational landings. I don't know the exact magnitude, but I want to say 0.3, 0.4 or somewhere in that range; so 2013 was anomalous not just in terms of the landings, but we've had those high landings before with smaller PSEs.

DR. CADRIN: On that, Mike can correct me if I'm wrong, but we looked into the previous spike in landings from the north and those were relatively well sampled and had very good PSEs. This is a little bit different.

DR. ERRIGO: Erik had mentioned it already, but this enormous spike is coming from – I think it is mostly coming from Monroe County. In Monroe County in 2013 there were two intercepts. It is the effort that expands this number. The MRIP estimates, if you look at the raw intercept

data, there are two intercepts; a total of like four or five; no, eight fish, maybe; no, four or five fish, something like that. Then it expands to about 100,000 pounds for the MRIP data; and then, of course, the Science Center has a different way of doing their weight expansion.

DR. BARBIERI: Steve, would you still suggest that we modify the interpolation of those?

DR. CADRIN: Yes.

DR. BARBIERI: Mike, let's write down what we want to get done; and then we complete this part, we take a break and we get ready for gag.

MR. CARMICHAEL: Luiz, clarify if it is interpretation between the values we saw or if it is have the projection done with the MRIP estimate of 2013 poundage, and then interpolate.

DR. BARBIERI: That is my understanding of what Steve requested.

DR. CADRIN: I was really just basing it on what Erik said. I think that if we have an intermediate catch based on the MRIP/MRIP number that we can interpolate between the two projections provided here; that we don't need any alternative projections.

MR. CARMICHAEL: I think that sounds perfectly reasonable. It is an approximation to that in lieu of getting other projections – and we have the numbers here – interpolate between those two values, and Mike will do that over the break and include that in the report.

DR. BELCHER: Just one quick question; so based on some of the things that are coming up for concerns; can we recommend an update for this species or does it have to be bumped up a level? I know certain assumptions – we had it happen with bonnethead. We were doing a standard and it was the issue of you ended up having to split stocks, but that is not within the scope of a standard. If we're talking about expanding a range, is that going to be outside of the scope of an update?

DR. BARBIERI: Actually, we discussed this yesterday. I think our recommendation going forward was to upgrade this already to a standard. We have it in our notes as part of the SEDAR scheduling. Chairman Hartig; do you have some words of wisdom for us?

MR. HARTIG: No words of wisdom, but I would like to take this opportunity to sincerely thank Kevin and the assessment group for on a very short timeframe to be able to get this before the SSC for the review; and realizing that, thank you.

DR. BARBIERI: Absolutely! We have seen so much correspondence between us and the center and the council and the center and we had conference calls. We have document after document and projections after projections being prepared. We really appreciate the center's cooperation and working with us to get to this point. With that, we're going to take a five-minute break.

It is time for us to reengage for the afternoon. We have a full and eventful afternoon ahead of us. The next item on the agenda is for us to go through the gag update. We have Dr. Kyle Shertzer to give us a presentation on the gag update.

DR. SHERTZER: I'm going to present first the gag update and then the snowy grouper standard back to back. This is the gag update. Just a quick outline of the presentation; I'll give a little bit of background and then some discussion of the data from SEDAR 10, which was the last benchmark assessment of gag, and then what updates and modifications were made to the data; and then the assessment methods and results; again some review of the SEDAR 10 assessment model and then modifications that were made for this update; then results and then projections.

First a little bit of background; as I said, this is an update assessment. I think this may only be the third update that we've presented to the South Atlantic after vermilion and red porgy. In these updates the modeling is done really in-house with the Southeast Fisheries Science Center with some help from those who are providing data. Then the review is done here by the SSC.

The goals here are, one, to update the model; and really we just focused on the one model that was used for management. We did try to strike a balance between sticking with what was done in SEDAR 10, but also to allow some minor modifications if they are intended to improve what we think might improve the assessment; but we really do try to stick to the benchmark assessment as the default.

This is a gross summary of the regulations. There are more detailed regulations than this, but the major changes I think are represented here. In 1992 a 20-inch limit went into place for both the recreational and the commercial. In 1999 that was increased to 24 inches. Starting after that, there were some more limits in terms of seasonal quotas and trip limits.

One of the major ones in 2010 was the spawning season closure that runs from January through April. Then in 2012 there was a fall closure to the commercial fishery due to reaching the quota. The regulation periods that are modeled in the assessment basically follow the size limit, so up until 1992, and then 1992 through '98; and then '99 onward are treated as blocks for estimating different selectivities for the two different sectors.

SEDAR 10 focused on two different models, which were at that time considered two different states of nature. One had an increasing catchability over time; the other had a constant catchability. The one that was used for management was the constant catchability, so that is really what the focus is here.

We did not even consider the one with the increasing catchability. Results from SEDAR 10, it was found in 2004 that F relative to Fmsy was at 1.3; so overfishing but it was not overfished. It was near the MSST limit at 1.1, but it was not found to be overfished. A new definition of MSST is under consideration right now.

This update assessment considers both of the definitions of MSST; the first one 1 minus M, which was used in SEDAR 10; but then also the 75 percent SSBmsy, which is most likely going to be the definition of MSST after the next council meeting. The data for this assessment; there are landings data from four different fleets, the commercial handline and the commercial diving – commercial landings are fitted in gutted weight – and then two different fleets for the recreational sector, the headboat; and then the general recreational, which would be everything else but headboat. Those are fitted in numbers of fish. Then there were three different time series of discards, commercial handline, recreational headboat and then the general recreational. Those are all in numbers of fish.

To give you an idea of the scale of the landings and the discards, the two panels on the left are the landings, so these are landings in numbers on the top left; to give you an idea of both the scale and how it breaks out by fleet, so an increasing pattern of landings up until the mid-1980s and then some decrease since then. The bottom left panel shows what the proportions are among the different fleets. You can see it is mostly general recreational and commercial handline.

The two right-hand panels show the discards, so you can see just a general ramp-up of discards in terms of the scale; but if you look at where they are breaking out, it is largely the general recreational fleet where the discards are coming from. Age and length composition data for the landings are both ages and lengths; so we have that for the commercial handline and the commercial diving.

We also have them from headboat and general recreational; and those were combined for fitting. A single selectivity was used for the two different recreational fleets. Then there were no age or length compositions for discards; so the discard selectivity was assumed in SEDAR 10 as a domed-shaped selectivity.

That was done by shifting the estimated selectivities for landings to two ages younger and taking a difference in the two different selectivities; the one that was for landings and then the one that was for the younger fish; so the difference would end up being dome-shaped. Indices of abundance; there were three fishery-dependent indices, general recreational, commercial handline and the headboat.

Then there were no fishery-independent indices in SEDAR 10. Plotted alongside each other, this is what the three different indices look like. Other features that came into play were taken as they were estimated in SEDAR 10. They were not re-estimated here. These are the life history characteristics, natural mortality. This used a Lorenzen age-based curve that was scaled to the Hoenig estimate of 0.14.

Estimates of somatic growth had the length and weight at age that was estimated for SEDAR 10. The von Bertalanffy parameters were estimated within the assessment model in SEDAR 10; so those were re-estimated in the update. Female maturity at age was kept the same and all males were assumed mature.

There was a time-varying sex ratio that varied by blocks. That was kept the same up until the new years; and then there was new data that were provided to fill in the years that were added for the update. Discard mortalities were kept the same for the recreational fleets at 0.25; and for the commercial handline it is 0.4.

Some modifications to the data from SEDAR 10; in many cases just the eight additional years were added. That was done either using the SEDAR 10 methodology or whatever is considered to be current methodology. For example, for commercial landings, the Southeast Center Miami is using a little bit of a different method now than they were using then; so whatever is considered to be the best methodology was used for generating the data.

The major exceptions that I listed here were anytime the data were model-based; so if they were coming from a GLM as in the commercial discards or for the indices a Delta GLM; those were refitted using all of the relevant data; so with the additional years, which may end up changing

the earlier years as well, but they did use the same methods that were used in SEDAR 10. The general recreational index was not updated; so that was just used straight as it was in SEDAR 10, so it did not have the additional years.

That was not updated essentially because there were no personnel available to do it. There was nobody who had the experience with the MRIP data from the Southeast Center who was available to update that index. I wasn't overly concerned about that because as you'll see later the assessment actually ignores that index. For the most part it had extremely high CDs; and the assessment really doesn't track it, anyway. Just from the assessment point of view; I wasn't really concerned about not updating that index.

The commercial index was not extended to the terminal year of 2012. It was only extended to 2011. Again, that was because of the closure in 2012 in the fall that I think made the ability of the index to track abundance questionable. It calls that into question; so that is run up through 2011. The general recreational fleet, which was previously based on the MRFSS methodology is now based on MRIP methodology.

Age comps that were fitted in SEDAR 10; the age comps used ages of 0 to 20-plus. There are very few ages that are observed at zero and there are very few age older than 13. For this update, ages 1 through 12-plus were used to avoid the high representation of zeros in the multinomial data. Then the effective sample size of age and length compositions was based on the number of trips that were sampled rather than the number of fish.

That is something that we've been doing routinely now in SEDAR assessments. I think it's a better representation of the effective sample size. I thought I would just show this plot. This is from the MRIP Website that compares the MRFSS and MRIP estimates for 2004 through 2011; so there is fairly strong agreement between them. Maybe I should pause here in case there are questions about the data.

MR. COLLIER: You had the index for commercial going through 2011, but the recreational bag limit changed down to one fish, right? One fish that could be either – one of the three-fish aggregate could be either gag or black grouper. Do you think it should continue when you have the option of one of those two species? It was mentioned that you didn't see them hitting the upper bounds of the bag limit, but catching one would be hitting the upper bounds.

DR. SHERTZER: Yes; just looking at how frequently they were hitting that, it didn't seem like they were bumping up against it frequently enough to make it an issue.

MR. COLLIER: But one fish would be getting to the bag limit for gag; isn't it a one-fish bag limit?

DR. SHERTZER: Yes; it is not looked at on a per angler basis for the headboats. It is looked at on a vessel basis. They can and I think do, but probably the truth is somewhere in the middle there where some anglers probably do bump up against the bag limit and would return fish.

DR. BARBIERI: Are there any other questions for Kyle? I guess not; Kyle, go ahead.

DR. SHERTZER: Moving on to the assessment methods and results; the model structure is really the same as in SEDAR 10. That hasn't changed a lot. It is still a catch-age formulation that is fit to the data using maximum likelihood. The spawner-recruit model is a Beverton-Holt model with lognormal error in the recruitment residuals.

The natural mortality is age-based following the Lorenzen curve. Selectivities are also age-based; and those were allowed to vary across those three regulation blocks that I had mentioned. The dominant fleets were considered to be flat-topped using the logistic model. Commercial diving and all the discards was dome-shaped.

Landings were predicted using the Baranov Catch Equation; and because this is a protogynous stock, the spawning stock biomass was based on the total mature biomass so that includes the males and the females.

DR. BARBIERI: Kyle, excuse me, refresh my memory; for SEDAR 10 was the spawning stock also based on males and females?

DR. SHERTZER: Yes. Okay, now a couple of slides on the modifications; one that I think is probably one of the bigger changes is in how the initialization is done. In this assessment it is looking at an equilibrium age structure in 1962 given an initial F, which was taken to be 0.03, which is about the value that came from SEDAR 10 in that year.

Given an F and the natural mortality rate and the selectivities, you can compute what the equilibrium age structure should be. Then the recruitment deviations were started in 1972. The recruitment follows the spawner-recruit curve precisely until 1972, and then the deviations are permissible.

The ages that were modeled were 1 to 16-plus, and the SEDAR 10 model used ages 0 to 20-plus. The updated model for BAM has the ability to have priors on some of the parameters. The normal priors were used here on some of the selectivity parameters; on the von Bertalanffy parameters, which again were estimated in this assessment; and then the standard deviation of recruitment in log space.

SEDAR 10, the older BAM did not have that capability. Also the CV of size at age in SEDAR 10 was estimated as an age-specific vector; so there was a different CV for every single age. Here it is just a constant CV across the ages, which is more standard now, and it avoids some strange results where you might have a maximum size at age that is larger for younger fish than for older fish, which you can get if you have an age-dependent CV of size at age.

Then the dome-shaped selectivity, where it was used for different fleets, had a different function. Instead of a double logistic model, which was what was used in SEDAR 10, it used a negative exponential to describe the descending limb. This is actually a model that we've put into BAM that was recommended by Dr. Butterworth for the menhaden assessment. We liked his suggestion so implemented it in BAM.

Double logistic was okay, but it had its troubles in that it had to be rescaled to achieve a maximum of one and often parameters wouldn't be estimable because of that. Some additional modifications, the component weights to the different data sources; in SEDAR 10 those were

chosen by the assessment workshop. In here they are done through an iterative reweighting process to the age and length composition data that initially included indices in the iterative reweighting process.

The fit to the indices was degraded to the degree that it didn't seem like a good idea. The weights on the indices are the natural weights from the CVs that were estimated from the Delta GLM process. The likelihood function that is used to compute spawner-recruit deviations is based strictly on the negative log likelihood rather than in SEDAR 10, which used a sum of squares penalty.

This doesn't put in an additional parameter, which is that standard deviation in log space of recruitment that I'd mentioned earlier. Steepness was another change. In SEDAR 10 steepness was estimated at the upper bound. Some further investigation of that – in fact we published a paper on it – showed that it doesn't necessarily mean that steepness is that high. It means that you're having trouble estimating steepness; and there is probably just not information in the data to estimate steepness.

Here instead it was fixed at 0.84; and that is the mode of the meta-analysis that Paul Conn and I did on demersal stocks. We used the 0.84 from the mode and then the full distribution, which is a baited distribution, is brought into the uncertainty analysis. This assessment also has a bias correction for the benchmarks, which was not used in SEDAR 10.

The values for F that are reported are somewhat different in the sense that these are apical Fs; and in SEDAR 10 they were the sum of full Fs by fleet. Maybe that is a detail that isn't even worth mentioning; but if somebody really cares to understand why those are different, I can talk to you after the talk or perhaps during if you really care that much.

Then the uncertainty was estimated through a Monte Carlos Bootstrap Approach. That is what we're trying to use more and more in SEDAR assessments; and it has really become standard now. It didn't become standard until after SEDAR 10; so the SEDAR 10 uncertainty in benchmarks was just estimated through bootstrapping the spawner-recruitment for residuals.

It was very much an underestimate of the true uncertainty. Back then uncertainty didn't matter as much. Just to show what the effects of some of these modifications mean – I'm sorry these are somewhat scrunched up, but the top panels are showing F over Fmsy and the bottom panels are showing SSB over MSST.

The left two panels are showing the difference in just changes in the model. Steepness is the same in this case so both of them at the upper bound of 0.95; and the data are from SEDAR 10, so these are the old data but the new model versus the old model. You can see that the F over Fmsy with the updated BAM is a bit lower than it was from SEDAR 10. You can also see that in the lower panel that the SSB over MSST is a bit higher using the current BAM than it would have been from the SEDAR 10 model.

Then these middle panels show the same thing, but now steepness in the update model is changed to 0.84 instead of 0.95. They are a little bit more similar. You can see some of the divergence starting around in the early 1990s in terms of results from the previous run where the steepness values were the same.

Then the right-hand panels show the full set of changes; so now the updated model, the lower steepness, and then all of the data changes. I have taken a little bit of time – I haven't had much time to investigate this divergence in the early nineties, but this is really showing that it is coming from the data. I've tried to look at what data sources it's coming from.

I can tell you it is not the landings, changes to the landings; it is not changes to discards and it is not changes to the indices. That leaves the comp data or also the differences in sample sizes, effective sample sizes in the comp data. I haven't been able to track down exactly which source of data this is coming from. That is about as narrow as I've been able to go.

The next set of slides shows fits to the data. These are length comps from the commercial handline. Each panel will show the year and then the effective sample size, numbers of trips. I'm going to run through these fairly quickly, but I'm going to stop and highlight some problem areas in the fits.

Time is going down the panels here and then starts back up. These are length comps to the commercial handline continued. This is the last length comp to the commercial handline; and then the length comps to the commercial diving starts next. There were four additional years of commercial diving that were included from the earlier years that were not in the SEDAR 10 benchmark.

Then the length comps from the headboat start – 1972 was the first year of composition data. These are continued, continued, continued. Then the age comps start. This is the commercial handline; and this was something I wanted to highlight, which is what I think is maybe a problem area in this assessment; that the early age comps from the commercial handline – this is in 1979 – are overestimating the plus group, so this is in age 12-plus.

If there weren't something sitting over the top of the next two panels, you might see the same thing in the plus group. You can see it in '79, '80, and '81; and then unfortunately there is a gap in the age comps until '92. It is overestimating this plus group, the 12-plus. I will say that this was also a feature in SEDAR 10; although it is much less visible because it was a plus group of 20, so it was run out so there is more years of mortality before you see the overestimate in the plus group.

Also, I am not sure why this is an issue here; it may be partly in the data, too. These earlier age comps I believe were only from South Carolina from a special sampling program that MARMAP was doing. They were believed to be collected at random, so they were used in SEDAR 10. But they do have some smaller sample sizes and they are not the same sampling program from which the later data were taken. This is a continuation of the age comps. They all look pretty good except for those first few years.

The next set is the commercial diving and these have very low sample sizes; and then the early headboat age comps start and you see the same type of pattern, not quite as bad; starting in 1978 the overprediction of the plus group, '79 and '80, and then the problem sort of disappears as the eighties progress. Then the remaining years of the age comp fits.

These are fits to the landings. These are the commercial handline landings on the left and the commercial handline discards on the right. All the landings and discards fit fairly well; and that

is by design that we forced the model to fit the landings and discards well. These are commercial diving landings. These are the headboat landings and then headboat discards on the right; and then the recreational landings, general recreational landings on the left and discards on the right. This is a fit to the index of abundance from the commercial handline, so it is fitting that index well.

This is the fit to the headboat index. It misses some of the lower values in the early years, but otherwise the pattern of residuals, which is shown in the bottom panel, looks fairly well spread around zero. Then this is the fit to the general recreational index; the one that I said that it fairly well ignores and it still does.

The top panel is from the update and I threw in the SEDAR 10 fit so you could see that it is really tracking in the same way. The reason for this is because the two recreational fleets share selectivities; so the pattern is going to be the same between the two. Because the CVs are so high on this general recreational index, the model is tracking the headboat index more closely than the general recreational.

These are not fits to data anymore but some other results. This is the pattern in the spawning stock biomass through time; so this pattern of decrease and it has been fairly stable. In the last few decades, in the terminal years it is above MSST but below SSBmsy, so it is sort of near the target and above the threshold.

This is the 1 minus M MSST. I should also point out that the 75 percent MSST is lower; so anytime you see that it is not overfished by the 1 minus M definition, it is also not overfished by the 75 percent definition. Time series of recruitment in the top panel and then the time series of the recruitment residuals in the bottom panel -- I did want to point out the lower values that we're seeing towards the end of the assessment, which did seem fairly well supported in the data; and the reason I point that out is because it does play a role in the projections, because we have some poor recruitment coming into the projection years.

The spawner-recruit curve, you can see why there is very little information on steepness. The panel on the left shows the fishing mortality rate relative to Fmsy, so it has been overfishing for the last few decades; but you can see in the terminal year is not overfishing. We've been using sort of as the standard for gauging overfishing the three-year geometric average from the last three years. The last year is not overfishing. The geometric average of the last three would be overfishing.

The right-hand panel shows how the fishing rates are broken out by fleet. Much of it is the commercial handline. Uncertainty again was done through the Monte Carlos Bootstrap Approach, 4,000 trials. There were a couple of hundred that did not converge and so those were tossed out. The ones that were retained, there were 3,775.

For the Bootstrap Monte Carolos Approach, it has got the two components. The bootstrap one is the first on the data. In that case the parts that have lognormal likelihoods, the data were regenerated using a parametric bootstrap on the original data where the CVs were the ones that were applied in the fitting. Then the multinomial parts were regenerated by resampling the numbers of fish from each year and then reassigning them to bins with the probabilities that were equal to the original data.

The Monte Carlos part draws parameter values at random from various distributions; so in this case the natural mortality rate was drawn from a uniform distribution. It had the mean that was equal to the base value of 0.14 and bounds at 0.1 and 0.18. Whatever value was chosen at random was used to scale the Lorenzen M.

The steepness values were drawn from the beta distribution that I had mentioned previously that had bounds at 0.32 and 0.99; and those bounds were chosen because those were the bounds on the data that were used in the meta-analysis; so there weren't any steepness values lower than 0.32. Then the initial F that was used for the equilibrium calculations at the start of the assessment were drawn from a uniform distribution that had the mean equal of 0.03, which was the value from the base run, and plus or minus 50 percent.

DR. BARBIERI: Kyle, let me interrupt you for a second. Is this the latest improvement to the MCB implementation? I don't remember seeing the initialization be included in that. That seems to be a plus to have the ability to bootstrap the uncertainty in the initialization process.

DR. SHERTZER: Well, yes and no; and it might be the first time I'm presenting it, but it is not the first time it was done. The only reason it might be the first time I'm presenting it is because I'm doing this in reverse order. Snowy was actually assessed before gag was assessed; and we did it snowy. This is almost identical to what was done in snowy.

In principle we could put any value here from the assessment; any of the fixed parameter values could be included in the Monte Carlos. Then we try to choose the ones we think are the more important ones or might be the more important ones; we don't always know going in which ones. There were some sensitivity analyses done that I'm not going to present, but they are in the report that looked at these three things just so you can see the direction that each of these would push the assessment results.

These are the results from the MCB in terms of uncertainty and the benchmarks at the top left. I guess I won't talk much about each of these, but I did want to point out that the distribution of FMSY is probably one of the more symmetric ones I've seen come out of the MCB runs. Also, we've been trying to lately present the MLE, maximum likelihood estimates, from the base run alongside the median estimates from the MCBs, because it seems like the SSC in the last year has been considering this idea of using medians rather than the point estimates from the base run; so both of those are here.

Then these are the phase plot, the scatter plot of the stock and fishery status. The top panel is using the 1 minus M definition of MSST, which is the Y axis SSB over MSST, plotted against the geometric mean terminal F relative to Fmsy. These green crosshairs are the 95 percent confidence intervals, which I realize you can barely see on the screen, and they cross at the base run.

Most of these plots or most of these runs are in the same quadrant that the base runs would be in; so 90 percent of these runs are winding up with this result of overfishing by a little bit but not overfished. If you use the 75 percent definition of MSST, then none of the runs were ending up in the overfished. This is a similar picture showing a similar thing but just the distributions of them.

DR. CADRIN: Kyle, on the solid line, just for clarification, is that a biased-corrected MLE estimate?

DR. SHERTZER: It has the bias correction from the spawner-recruit curve, but it is not bias-corrected in the sense of correcting it from this distribution.

DR. CADRIN: Because this one seems inconsistent with your F relative to Fmsy where your MLE there is above 1; but in your previous ones – actually if you go up to Slide 40 I think it is – you have the time series of F relative to Fmsy, and it comes in below 1. Are those inconsistent?

DR. SHERTZER: No; it is this bit about – this is the terminal year; and what I'm presenting in the other places is the geometric mean of the last three years.

DR. BARBIERI: Which, by the way, has been standard practice for quite a while given the uncertainty in that terminal estimate of F for that terminal year.

DR. SHERTZER: This is just showing the bulk of the distribution of those results as agreeing with the base run that the stock is not overfished. This bottom right panel is showing that the bulk of the distribution is agreeing that it is overfishing. I don't have anything to really say about this slide; I just included it in case you needed it for reference. I guess I would say the estimate is the base run estimate and it also has the medians and then the standard errors that come out of the MCB. Again, I'll pause and ask if there are questions about the assessment or the assessment results.

DR. BARBIERI: Any questions for Kyle regarding the assessment results? Kyle, I have one. It has to do with the outcome of the reference points. If you look at the stock status determination table; I agree that it is an improvement to have the steepness fixed instead of going with a proxy SPR value that we use, you know, just a fixed steepness from that prior, which is informed by the meta-analysis.

I was a bit surprised to see that because of that or a combination of that and some other parameters, it ended up corresponding – the Fmsy corresponds to an F of 57 percent SPR, which from a policy perspective would kind of change our – if you look there, the value at Fmsy and some of the associated F, X percent SPR; you see that for the third one it is like an F 50 percent relative to the Fmsy. How did you react to this? Did you say, oh, it was simply an outcome of the assessment?

DR. SHERTZER: Yes; it is simply an outcome. There are so many pieces that go into whether they would line up, including the selectivities relative to maturity and growth, and all of those things are playing into that. I guess there are some studies that say F 40 percent might be a good first guess, but I don't think there is anything saying that there is not a very large range around that. For any particular stock, I wouldn't say F 40 is necessarily a good first guess. It didn't surprise me necessarily to see it being fit closer to 50 something percent; yes, F 57.

DR. BARBIERI: Well, and if this is an outcome, it is an outcome of the assessment. I think for us in terms of assessment outcome versus the council's management policy, it is something that I think that we need to kind of discuss with them; because in a way it is quite a bit more conservative than perhaps what they expect that to be according to their risk policy.

DR. SHERTZER: My thoughts on that are you've pretty well stated them in your intro remarks there that we don't have necessarily anything hard to go on for what SPR value is a good proxy for this stock, but we do have the meta-analysis on steepness. There is this one-to-one correspondence between the two. If you choose one, you are sort of fixing what the other one would be; so my thoughts are there is prior information on fixing one but not the other. In that case it is better to fix steepness than to choose the SPR.

DR. BARBIERI: I don't disagree. If you think about SPR as a way to bank spawning stock biomass and say, okay, since I actually cannot estimate what the productivity of the stock is, the data is not informative enough; I am going to put some spawning stock biomass, in this case males and females in the bank, to make sure that whatever variability in recruitment might be happening in the future, at least I'm producing enough reproduction to keep the balance in the black.

What made me think of this is as we look at the value that came out, using that same steepness estimate, which is well informed and makes sense rationally to be used; for snowy grouper it came out to be the Fmsy close to F 26 percent SPR, which in that case may or may not be conservative enough.

I'm just trying to see how as we fixed steepness and how that value then is used across different assessments, how that is impacting those estimates of reference points in a way that causes some fundamental, I think, philosophical changes in the policy-setting that the council uses to manage. Just a comment, because I do feel that at least we need to let them know, I mean, the assessment; I think all the methodology used, the model, the way that this is configured.

None of this is that unusual and outside what would be expected, but the fact that we had that one change I think warrants us to let the policymakers know that this is causing a shift in the way that we're evaluating how much we need to bank in terms of spawning stock biomass and generates quite a bit more conservative policy for how they manage gag. If no other comments or questions, I guess we are ready to move on.

MR. HARTIG: Kyle, in the changes between the two assessments; what is driving the decrease in productivity primarily? Do you have an answer for that; do you have a feeling? I don't think steepness was really causing that much of a difference. I think Mike gave us a little rundown on what he had thought was the different drivers in the assessment, but I was just wondering if you had any ideas on that.

DR. SHERTZER: I think the comp data are having a large effect. I think steepness probably is having more of an effect than you see in the F over Fmsy, because that is the ratio. It may be having an effect on what the absolute values are that we would be looking at in a table like this. Also the initialization was a major difference I think between the two, so that might be playing a role as well as particularly on what the virgin biomass might be.

DR. BARBIERI: Are there any other questions or comments for Kyle? If not, Kyle, I think we are ready for the projections.

DR. SHERTZER: Okay, these are fairly standard. They carry forward the uncertainties from the MCB, so anything that was estimated in each of the MCB runs would have been carried forward,

so that would have been the initial abundance at age in the projections; so the 2013 abundance at age, the spawner-recruit function, the natural mortality, discard mortality, selectivities, recruitment deviations, and then the growth parameters that were estimated.

Then the uncertainty in Fmsy uses that distribution that we looked at from the MCB runs; and these are 10-year projections so they go out to the year 2022. F in 2013 and '14 was set equal to the average; the geometric mean from 2010 through 2012. This is for that interim period between when the assessment ends and when the new management was assumed to start in 2015.

Then two types of projections were used, the constant F ones, which used the F current, Fmsy and 75 percent Fmsy; and then P-star projections, which used P-star of 0.3 and 0.5. I did want to mention that it made I would say a slight modification to help P-star projections were done. These are still very much P-star projections, but they are done as F-based projections rather than as catch-based projections; so F is fixed rather than catch being fixed.

We still get the desired P-stars, but the improvement is that these projections run in minutes rather than days; and they also have a nice feature in that populations or the model populations don't go extinct like they might in the fixed-catch scenario where the model population can't sustain that level of harvest.

I think it is an improvement in how we might be able to do P-star projections. It also has a nice effect – it has better consistency, I think, between what we do with these Fmsy projections are now identical to what we're calling the P-star 0.5; so when you're trying to look at what OFL would be, there is not this dichotomy between doing two different types of projections.

Also, it would have this advantage because with your control rule, that when stocks are rebuilding and we're using an F rebuild type strategy that is an F-based projection; once the stock is rebuilt and we switch over to a P-star type projection, the methodologies aren't different. They are a very similar methodology so there wouldn't be that dichotomy.

I just chose one picture as an example to show from – these are the F current projections. You can see at the beginning of the projection that the spawning stock is decreasing. That is largely due to, like I was saying earlier, the pulse of the poor recruitment that is coming into play in the future.

You can see in the bottom left panel how that plays out in terms of the probability of that spawning stock biomass is above MSST. Then the rest of these slides again are just tables that I included for reference. I don't need to really look at them unless you need them for recommending ABCs. This has the F current, the Fmsy, 75 percent Fmsy, and then the two P-star projections. I believe that is it for gag.

DR. BARBIERI: Thank you, Kyle. Are there questions or comments for Kyle regarding the assessment or projections?

MR. CARMICHAEL: Kyle mentioned something right at the end in the projections, and I know it is something they've talked about before, but maybe we should talk about it a little bit, and it is the change in doing the P-stars. In the past when you looked at the P-stars, you would see a different F from year to year and a different landings level; so they were neither fixed Fs nor

fixed landings; and I think that is why they took forever for those things to run and it was problematic. I think it is a good change that they are going to be able to be done quicker.

For example, in these, if you look at like projection table in the Document 22, it shows an F of 0.23 at the 30 percent. I'm just wondering how you guys go about that; and maybe a little more detail on how this operates that you determine that is the appropriate F. Is that kind of based on the terminal year or some equilibrium over all conditions? How does that equate to giving you the 30 percent P-star over that period and within each year?

DR. SHERTZER: The way it is calculated is by taking the distribution of Fmsy and then maintaining that distribution by asking the question what would you need to scale that back by? What would you multiply it by a proportion of 1 in order to get a second distribution that if you took just double integrals – the same P-star calculations that we would do before – what is the amount that you have to shift Fmsy to the left by in order to get P-star of 0.3?

That is the proportion that you shift it by and then it turns into just a similar projection as the 75 percent; but instead of 75 percent, it is whatever that proportion is of Fmsy. Because we're doing this based on MCBs, you would have a different F for every single projection, because it would be that proportion of that particular Fmsy from that MCB iteration.

MR. CARMICHAEL: It is the distribution of the equilibrium Fmsy? Well, yes, I guess it would – never mind. Right, the ones that you show there; pictures really help.

DR. SHERTZER: This distribution here; so we take the distribution of Fmsy and what do we need to multiply that by to shift it to the left in order so that the double integral of that is equal to 0.3 or 0.5; 0.5 is easy, you don't shift; if anything, you multiply it by 1. For that reason, that is why the P-star of 0.5 is the same as the Fmsy projections so then there is not that difference that we were seeing before.

DR. BARBIERI: That is a major improvement and it is going to help a lot in moving things forward.

DR. SHERTZER: I should point out one difference in the results that you should be aware of, though, is that there is a consequence. Before we had a single ABC that was applied and we had a multiple Fs because that single ABC was applied to multiple populations at different age structures. Now the results aren't a single ABC or a single catch level, it is a distribution. What are presented in these tables are the medians of those distributions.

DR. CADRIN: Maybe it is late in the day, but I didn't follow the answer. I don't understand why in this slide the P-star of 0.5 F is 0.27; but then your projection results for a P-star of 0.3 are not the same 0.27; because if I understand the P-star approach, it is an OFL projection at Fmsy, and we use a percentile of the projected catch.

I understand that the median F may not equal the model estimate of Fmsy, and so there needs to be some adjustment; but I don't understand why they are different between those two scenarios. There should be a shifting to get to the median Fmsy. That should be done in the bottom table, but why is it a different shift if you are looking for a different percentile of the distribution? I guess I'll state the question a different way.

If we had an OFL projection, we would want the median catch to be associated with the median Fmsy. It seems to me we could do a series of different P-stars off the same projection, just using a different percentile of the OFL projection. But as you showed these two tables is my understanding is not correct; that you need to have two different projections to do two different P-star derivations. What am I missing?

DR. SHERTZER: Each of these is an F-based projection; and that F is chosen as a proportion of Fmsy. That proportion is determined by the P-star. If P-star is smaller, you would need to shift farther from the FMSY distribution, farther to the left in order to get a smaller P-star.

DR. CADRIN: I guess I don't understand Prager and Shertzer as much as I should, because I thought that those were Fmsy projections and you use a different percentile of the distribution based on your P-star decision. We can talk about this later if this is not important.

DR. SHERTZER: Yes; I'm not sure if I'm following the question. I guess what is different here from what we were doing before is that what we're calling F current – before we were still doing this double integral between Fmsy and F current or F now, not that average F current, but F now in the projections; so what is different here is that the F now is a fixed distribution. It is just taking Fmsy and shifting it; so F now is fixed.

Before it was calculated every single year of the projection given whatever that ABC would be and fix the ABC; and then you would have to calculate that distribution of F now given your distribution that you see of around abundance at age. That is why it took so long to run those things is because it was an optimization within an optimization. Here there is nothing being optimized anymore; it is just basically a straight F projection.

DR. BARBIERI: Are there any additional questions or comments for Kyle? Well, if not, let me go back to our list of action items and refresh your memory. As our standard practice, we need to review the gag grouper assessment update and consider if it represents the best available scientific information or best scientific information available.

Then identify and discuss assessment uncertainties, which we're in the process of doing; provide fishing level recommendations – we have two yield streams there at P-star levels already generated – and provide guidance on the next assessment type and timing. I will go back to the first bullet. Assuming that we are all satisfied with the results and the methodology applied in this assessment update; are there any concerns with us considering it the best scientific available?

MR. COLLIER: The video survey and the new work going on I think would definitely improve this stock assessment. I don't think it is quite ready yet. I think that should be a strong consideration going forward for some of these where we lost indices in this. They weren't continued forward.

They weren't the greatest indices to begin with when you are looking at dependent indices. The independent index I think would have been a great improvement for this overall model; and it should be considered for future updates and different things like that. If we just have to wait two years to get the independent data, it would be a much improvement over a continuation of an update just using dependent sources.

DR. REICHERT: A little caution there, because I don't have any information on the N in the videos. The trap survey data have not been used because our encounter rate is so low. It could be that will be dramatically improved in the video index. I just want to temper possible expectations, because I haven't seen the data just yet. You're talking about a considerable improvement. That may be the case, but it may not.

MR. COLLIER: I think most of the analysts would say an independent index is much better than the dependent index.

DR. SHERTZER: I would completely agree with what Chip just said. That is in my mind one of the biggest weaknesses of this assessment is there is just not a fishery-independent index. SEDAR 41, we will attempt to bring in the video survey data. Hopefully, after that has been through a benchmark assessment, we can build that into standard assessments in the future.

DR. REICHERT: I don't necessarily disagree with that. It is just that may not provide the same value for all species is all I am saying.

DR. BARBIERI: Okay, I think that was a separate comment. For an update in this case we couldn't really include any additional indices, any additional data series; so it would not be an option to include a fisheries-independent monitoring program.

DR. CADRIN: It seems to me that the revisions from SEDAR 10 in the data or the model are reasonable and well documented and that this would be the best basis for a catch recommendation.

DR. BARBIERI: We have consensus, then, that this represents the best scientific information available and can be used for catch-level recommendations. Identify and discuss assessment uncertainties; we have discussed this and it is well documented in the assessment update report. Anything additional that the committee would like to add to basically help explain any issues that might exist?

DR. CADRIN: This is really just a question and it is not a suggestion. In our tiering for P-star for uncertainty criterion, the fact that this went to Monte Carlos Bootstrap from what was a bootstrapping of just the spawner-recruit; has it elevated that tier?

If I understand the desire for Monte Carlos Bootstrap, it is to try to incorporate all of the uncertainties not just in the data fitting but in some of the assumed parameters. Have we elevated a tier there? Is P-star of 0.3 still appropriate considering that modification?

DR. BARBIERI: That is a good question. Perhaps what we can do is just go over our control rule again and see where we end up on the other end. I think that even for the original benchmark, which is somewhat stale at this point; but even for that we had already considered a level. I think it was Tier 2 that we considered for that. Three, the original one?

MR. COLLIER: The assessment was a 1; the uncertainty was a 3.

DR. BARBIERI: Oh, the uncertainty was a 3; well, I guess Steve is right.

MR. CARMICHAEL: Yes; and when we do an update or any new assessment, we hope that you will go through your control rule again and make sure that all your decisions are still valid based on this new assessment. I think that is an upcoming step.

DR. BARBIERI: Let's go ahead then and –

MR. CARMICHAEL: Are you done with the uncertainties?

DR. BARBIERI: Yes. Well, that would change our perception of the uncertainty assessment or characterization here; and that would switch the P-star to a smaller value, which means more work for you, Kyle.

MR. CARMICHAEL: The point I want to make clear is that the original assessment at SEDAR 10 predated P-stars. When the ABC Control Rule was derived, the committee members at the time went through and gave an assignment for each stock based on where they looked at each stock and evaluated all the past assessments.

That is where gag came out with a critical value of 30 percent P-star. The adjustment was 20 percent; we came up with a P-star of 30 percent. It hasn't really been through as robust an evaluation as many of the others; so getting into that would be great.

DR. BARBIERI: Well, then let's go ahead and do that. If we can then go for assessment information, I think we're still in Tier 2; reliable measures of exploitation of biomass, no MSY benchmarks. Proxy reference points; we don't really have proxy reference points but we have a fixed steepness. We have that 2.5 percent for first dimension of Tier 1. The uncertainty characterization –

MR. COLLIER: Well, before we go from there; that is different than what is in the ABC Control Rule now, which had a 1 for that. The reason for that is the newest information on fixing steepness and how that is basically a proxy for a benchmark.

MR. CARMICHAEL: I would say in a way there has been an evolution of the committee's thinking with regard to that point.

DR. CADRIN: I think it's broader than that. I think there has been an evolution of our understanding of the interaction between SPR and steepness. These recent publications by Mangle and others I think are pretty convincing that you essentially have a proxy for Fmsy when you fix steepness.

DR. BARBIERI: Yes; it is a good point. Okay, for the second tier; uncertainty characterization, we have complete, high, medium, low, and none. The last time I believe we had, what was that, medium?

MR. CARMICHAEL: It is a 3.

DR. BARBIERI: Yes; and in this case I personally feel that this would be a high uncertainty characterization.

MR. CARMICHAEL: Due to the improvement in the bootstrap and the inclusion of more variables and bringing it up to the current highest level of SEDAR assessments, it raises that from what you had before.

DR. BARBIERI: I think that Kyle said that the last assessment it didn't even really have an MCB type of procedure in place yet. It was just a bootstrap; so this would be a 2 for Tier 2. Then for stock status, we have not overfished but undergoing overfishing. That would be Number 3.

MR. CARMICHAEL: Now that we're there, I think the committee may want to think about that. The reason I bring this up is that there is a noticeable trend in the fishing mortality rate. The current fishing mortality rate, just the terminal year is not overfishing; but if you use an average of the last three years where those last two years were higher, it is overfishing.

I understand we've often used that average; but if it is just fluttering around some values, then an average makes sense, but it has such a clear trajectory I think the committee should have some discussion on for this stock what is the appropriate measure of the terminal fishing mortality?

DR. CADRIN: What is the status determination criterion in the plan?

MR. CARMICHAEL: It would be Fmsy; but I don't think it has a criteria such as average of last three years.

DR. CADRIN: That is not specified in the plan?

MR. CARMICHAEL: No; that is a recommendation of the committee here.

DR. BARBIERI: What has been happening is given the uncertainty in that terminal F estimate; it has become basically standard practice to come up with an estimate of terminal fishing mortality that is based on a geometric mean of the last three years. We have done this, Kyle may remember, ever since SEDAR 9. I think that was red grouper. I'm trying to remember when we started.

MR. CARMICHAEL: I don't think that was used in SEDAR 10. Well, SEDAR 9 wouldn't have been red grouper.

DR. BARBIERI: No; not SEDAR 9, SEDAR 13 or 19 – ten plus nine that is what I meant.

DR. CADRIN: In that decision – I don't know the right answer there, but there have also been some regulation changes during that period as well. Looking at Kyle's Slide 5; you've had seasonal quotas and trip limits in the commercial fishery in the last couple years, which might explain the trend. The trend may be real and not just a model estimate uncertainty.

DR. BARBIERI: Right; the analytical team usually applies the methodologies that across the board regionally within SEDAR have been considered standard practice and best available science from that perspective. We have the prerogative here to look at this differently if we don't feel that is applicable necessarily in this particular situation.

MR. CARMICHAEL: I just want the committee to understand the council members will be asking the chair and I if they looked at this figure, well, how is it that in the last years we're below and you used the average in this case when you have such a clear and marked trend? As we know, just because we've done things for various reasons in the past, we still have to consider the unique circumstances of each stock. We want to make sure that if we stick with the three-year average, then you guys are standing behind that saying that you do believe overfishing is occurring in the terminal year.

DR. CADRIN: As a clarification – and please correct me if I'm wrong – in 2012 there was an early closure because the fishery was approaching an ACL, which really imposes an interesting heterogeneity in that three-year period. In one of them there is this Marowski's we don't overfish anymore, right, we've ended overfishing.

Because of accountability measures and ACLs, it really makes – so that last point was decidedly not overfishing, because the fishery was closed as it approached the catch associated with overfishing. In the previous two years it was not. I think it justifies treating that last year differently.

DR. BARBIERI: I don't disagree; I think that makes perfect sense. We've just got to make sure that we capture some of this justification in our report. I don't think that invalidates by any means the way that the assessment was conducted or the outcome of the assessment by any means.

The analytical team did application of best and standard methodologies and the committee can request something different given some of the issues that have been implemented lately. We can go back and change the stock status determination in that sense if we trust that the estimate of terminal fishing mortality is reflective of the actual.

DR. CADRIN: Yes, I'm sorry, I am just thinking through this. My first approach was are these three different estimates? If there is a trend, do you not want to average them? In one sense regulations suggest that they are three different parameter values; but then the next is procedurally.

If we've had a fishery shut down to avoid overfishing, the model suggests that was successful; should we then conclude that overfishing occurred? There is some mixed messaging there that we either need to clear up with our decision or we need to explain. If we say that overfishing continued, we need to be very explicit about that it does appear that shutdown of the fishery avoided overfishing in the last year.

DR. SHERTZER: In case it plays into your discussion at all; in the next assessment what you're going to see is nearly the opposite; that the terminal year is overfishing but the geometric mean of the last three is not. There have been closures in the last several years too; just so you are aware of that so you don't find yourself in an inconsistency in about an hour.

DR. CADRIN: We're going beyond the decision, but discards went up in the last year as well, which makes sense with the recreational closure. Discards went up because of no possession, I presume; but still enough that the overall catch was reduced enough that the estimate of F was less than Fmsy.

DR. ERRIGO: One other interesting point about that trend is that the significant decreases in F start I think at the same year that the spawning season closure started, just suggesting that there was some reaction to regulations; meaning that perhaps also the regulatory closure in 2012 did actually have an impact. They do seem to sync up very well; the steep drops sync up very well with regulatory changes.

DR. CADRIN: Kyle, in the MCB output do you get confidence limits for F by year? For the time series of fishing mortality estimates, maybe apical F; do we have confidence limits to see if the model suggests that they are different estimates or not?

DR. SHERTZER: Yes; we've got a range of Fs for each year. I haven't computed those annually, but they could be computed.

DR. CADRIN: You don't have output we can look at?

DR. SHERTZER: I don't have it on hand.

MR. CARMICHAEL: We've framed the issue well.

DR. BARBIERI: Yes; I think we have; and it is a matter of us making a determination here. I can see from a practical perspective what Steve brought up and the fact that we have that fishing mortality progressively decreasing; if you can put up there, Kyle.

MR. CARMICHAEL: What would you like to see?

DR. BARBIERI: Just a trajectory of F against – because you had it right there.

MR. COLLIER: Another point based on what Steve was saying, although the commercial fishery was closed down, the recreational fishery didn't even come close to getting to their ACL in those two years, 2012/2013. The commercial fishery actually exceeded their ACL in 2009, '10, and '11; but we didn't have ACLs back then.

DR. BARBIERI: Looking at those error bars would be informative, too.

DR. ERRIGO: To clarify; this is not just F, this is F over Fmsy. It includes the error in Fmsy as well – the uncertainty in Fmsy as well as the uncertainty in the values of F in each of the error bars. I was just looking if there was F there; but in this report there is not.

DR. BARBIERI: Right; but, Kyle, and first circle back to that discussion about the estimate of Fmsy, and the fact that it really represents fairly conservative in terms of reference points; if we look at that from the perspective of SPR, that is an F 57 percent SPR. I mean, even an F 50 percent SPR would be considered conservative.

When you look at that F over Fmsy ratio, we would end up with potentially different outcomes even for that geometric mean; had we had a less conservative, more in the ballpark of F 40 percent, the equivalency for Fmsy? Do you have a comment first?

MR. COLLIER: Well, one of the reasons that we always go with a geometric mean is because in the past it was such a rapid increase in fishing mortality. This one is just the opposite. It is an extremely rapid decrease going from almost 2 down to less than 1. Our reasoning probably in years past was the exact opposite of this. That is just something for consideration.

DR. SHERTZER: The reasoning wasn't so much because of any particular trend; it was just because it is more highly variable than say spawning biomass measure.

DR. BARBIERI: Well, because that is a ratio, in that case there is a ratio; how many of those points end up above the line or closer to the line if the denominator is actually smaller; or larger actually in this case? The value – and this to me is why it is relevant – usually we work in a ballpark of F 30 through F 40 as we consider values in this case for Fmsy, you know, proxies along those lines.

Here we are talking of an Fmsy that is well estimated. All the rationale for doing that, I don't blame him one bit, because I think it follows the – it is a conundrum that we find ourselves, because it turns out to be for whatever combination of factors in the assessment a very conservative F value that banks basically 60 percent of spawning stock biomass.

DR. CADRIN: Yes; this plot on the right was the one I was requesting. I think it shows that the last three years are not significantly different from each other. The trend in the point estimates for this decision about averaging is probably less informative than the confidence limits. They suggest that this is an imprecise estimate of F over Fmsy; and for that reason you want a time average.

I think regardless of the direction -- I guess as Kyle answered Chip's question, it is more because it is imprecise for a variable estimate; so based on that figure I think my opinion would be to proceed with the normal operating procedures with the three-year average; but to clearly report back to the council that our most recent estimate is below Fmsy partially due because of the restricted catch and the commercial closure; but still our best estimate of current fishing mortality is slightly above Fmsy. I think this plot on the right means a lot to me.

DR. BARBIERI: Right; but at the same time, and if you look at those bands – and I know that they are not really likelihood distributions or probability distributions; but there is so much larger band of uncertainty above the line than below it; you know, that it says, okay – I mean, I interpret that as a small probability that our last year is going to be below the line.

DR. BELCHER: I was going to say doesn't the phase plot kind of support that as well? When we looked at it, it was 92 percent of the values indicated it was in the overfishing state?

DR. BARBIERI: But that was the opposite.

MR. CARMICHAEL: I assume we'll provide the probabilistic outcomes. That is our normal practice, so those will go with it. I think Steve's explanation is very good and it justifies the caution that those point estimates in that particular plot is view and should address the concerns.

DR. BARBIERI: In that case, Steve, you feel that sticking with the geometric mean is justifiable given the phase plot, which is fairly certain about the likelihood of those outcomes there.

MR. CARMICHAEL: Given the uncertainty around the individual point estimates particularly in the terminal year; but I think there should be a comment that there is some possibility that closing the fishery could have possibly ended overfishing and certainly kept it from being much higher and had a positive impact on fishing mortality rates.

DR. BARBIERI: I don't mean to overextend this discussion. My idea is I think that the council would be expecting us to provide some rationale and some recommendation to them. They are not going to be able to go through this thought process themselves and fully understand exactly what happened and why we're making this choice in recommendation.

I just want to make sure that we have that discussion that we are ready to present to them this as what we recommended; this is the reason why. That put us back to the P-star evaluation, and we stick with the stock status of 3; stock is either overfished or undergoing overfishing. That is a 5 percent penalty.

Then for Tier 4, the productivity and susceptibility; we had before a risk analysis of 3, Level 3, high risk. I think that is still the case given the life history and population dynamics biology of gag grouper. Now we have a 20 percent and a P-star of 0.3; but this was done for real while the other one had not been, to tell the truth, because we didn't have –

DR. BELCHER: Well, it was a tradeoff in categories, too.

DR. BARBIERI: Right; and now we have that well documented. Okay, so identify and discuss an assessment uncertainty; that has been exhaustively discussed. Provide a fishing level recommendation; we have yield streams at P-star 0.5 for OFL and a P-star 0.3 for ABC. Our last agenda item for this is to provide guidance on the next assessment type and timing.

DR. BELCHER: I guess to start, it would be at least a standard if there are new data types to be considered, because obviously an update doesn't do that.

DR. BARBIERI: At minimum a standard assessment; preferably a benchmark.

DR. BELCHER: That's correct.

DR. REICHERT: The other thing; I think our general interval is like once every five years or at least that is kind of what we discussed for these types of species. Perhaps we should consider a so much shorter interval because that would potentially add a fishery-independent index to the assessment. As Kyle said and Chip reiterated; that may be an important change. Maybe perhaps three to four years; I just want to throw that timeframe out there.

DR. BARBIERI: You mean from now; because we are recommending the next assessment be conducted, when and what type. This is an update that did not integrate the fishery-independent indices.

MR. COLLIER: Refresh my memory on what the limitations are with a standard compared to a benchmark.

DR. BARBIERI: You can add additional data series and you have more flexibility in conducting the assessment, but you don't need to start from scratch in terms of evaluating every single model configuration and parameter input or data streams that might be input.

DR. SHERTZER: Yes; I think if it is something that has already been through a benchmark, for example, the video survey by then will have been through SEDAR 41, so that would be fair game to build into a standard. Then the other difference I guess is it doesn't go to a CIE Review; it comes here.

MR. CARMICHAEL: I don't think it quite wraps it up, because there is another issue related to those average estimates related to the landings in the projections. Is it right that the landings in these projections are higher than the ABC? Using just the default assumption of F-based in 2013 and 2014 in the interim period; so it is that average F; so it crosses over into that discussion about the closure that occurred in 2012, which throws the terminal F down.

But then you use that average F that is 0.38; you're showing landings there in 2013 and 2014 that are higher than the ACL. Basically the projections are having the council not implement those closures and having landings that exceed the catch limits and resulting in overfishing. In 2013 and 2014; so I guess the question is did we have a closure in 2013 and did we keep landings under the ACL, and will we do that again this year? See the landings over a million pounds and the ACL is like 694.

DR. BARBIERI: I thought that for the retrospect, I guess that data was not available, Kyle, right, in terms of inputs for these projections. I thought that we had actual landings but not for '13 and '14. Well, one thing that we can do is –

MR. CARMICHAEL: I would assume we have projected landings for 2012.

MR. WAUGH: It seems the council – and we've had some discussion amongst the council members in prepping for this – they would be interested in seeing the projection with 2013 using the actual landings. They are preliminary right now, but we do have 2013 an estimate of landings and then for 2014 use the ACL.

The way the projections have been done now you're including between 200 – well, in 2013 you are assuming landings were 300,000 pounds higher than the ACL; and in actual fact the landings are considerably below the ACL. Then for 2014 you are about 200,000 pounds above the ACL. I know you are doing the projections with F. If we can use the F associated with that level of landings, that would give from the discussions we've had a more realistic projection of what the yields would be.

DR. BARBIERI: Kyle, I know that officially we're going to have to submit a memo requesting those additional projections; but since you're sitting right there and you are the brains behind this operation; does this sound like something that would be doable within the near future?

DR. SHERTZER: We can certainly do the mixed-type projections where we match landings at the beginning and then switch over to an F-based projection. That is not necessarily hard to do; but I would need the values.

DR. BARBIERI: Okay, let's go with that, because that might actually provide a better scenario for everybody to understand what is going on. Does that complete our review of gag? I think we have addressed all the action items. We can populate the table separately and review that tomorrow some time during our overview document review.

We have some time to go and do those kinds of things separately. I would love to have a break, but I don't think we can afford one given the extended time. Kyle, if you are ready, I think we are ready to move on to the snowy grouper standard assessment review.

DR. SHERTZER: Okay, switching gears to snowy grouper; this one was a standard assessment rather than an update. The same set of topics to be covered here; the background, the data assessment, and the projections. I should mention SEDAR 4 was the last benchmark assessment of snowy. This is going back quite some time. The terminal year of data I believe was 2002 in that assessment.

Under the standard assessment, new data sources were considered. There was an assessment panel; so this was not done completely in-house like an update would be. The assessment panel met last summer through a series of webinars. This is SEDAR 36; but SEDAR 32, which included blueline tilefish, was ongoing at the same time.

We did try to piggyback as much as possible in SEDAR 32; so when decisions were being made during that benchmark assessment, if they made sense – because we were talking about two different deep-water species of blueline and snowy; if it made sense to follow the protocols of SEDAR 32, then that was also done in SEDAR 36.

The review comes here rather than to a CIE review. The goals here are to update and improve the data and also the assessment model from SEDAR 4. We did try to stick to SEDAR 4 as a default; but if there was an improvement that could be made or a new data source that could be included, then that was done.

This summarizes the results from SEDAR 4. This did find overfishing in 2002 relative to Fmsy. Then the stock was found to be overfished relative to MSST. It was actually SEDAR 4 where we first proposed this idea of using 75 percent of SSBmsy to compute MSST; and that was because the M values were low enough that there was really too small of a difference it seemed between SSBmsy and MSST; so it made sense then to have a little bit of a larger buffer between the two.

Based on SEDAR 4, which found the stock to be overfished, a rebuilding plan was put into place that had a terminal year of 2039. Because it is under a rebuilding plan, MSST is somewhat irrelevant here; and it is really SSBmsy, the rebuilding target that is relevant. One of the topics that were discussed at length during the assessment workshop and also the data workshop webinars was what to use as the northern boundary.

We looked at the data that were available north of North Carolina. For the commercial there is almost no landings or discards that were available north of North Carolina. In most years it was zero. In the years of the highest, it was about 0.6 percent. There were no lengths or ages available. Then there was a commercial index that was considered from the logbook data; but that had very few trips that were north of 37 degrees latitude.

For the recreational sector, again very few data available. In Delaware 2012 there were six fish that were counted; discards, there were some from New York. In 2012 there were no lengths. There were a few fish that were aged from Virginia, all from one trip. The headboat survey does not sample north of the North Carolina Line.

There is almost no data north of North Carolina. For that reason, we decided that this assessment was really a South Atlantic assessment; so it is Florida through North Carolina. That is something to consider; but to make this really clean, any data that were available from north of North Carolina were removed. They were not fitted.

We are aware that there has been some development of the fishery off of Virginia over this last decade; but it does seem like the proportion of the total stock that is north of North Carolina is probably somewhat small relative to the rest of the South Atlantic. It was brought up, too, that any spawning biomass that is there is not likely to be contributing much to stock productivity just because of the oceanographic currents.

There were about 7,700 new ages that were available since SEDAR 4. Because of all the new ages and new life history information, much of the life history characteristics were re-estimated; so this included the growth curve, the female maturity at age, the transition to males – again, this is another protogynous hermaphrodite – and also the whole weight to gutted weight conversion.

Just to show the comparison, this is the difference in growth that was estimated between SEDAR 36 and SEDAR 4; so a little bit larger size at age in SEDAR 36. These are the reproductive characteristics. This blue line is the new female maturity curve relative to this orange line, which is the SEDAR 4 maturity curve.

The newer estimate shows a shallower slope; so a slower transition to maturity for the females. Then the proportion male in SEDAR 36; whatever color this thing is, versus the green one from SEDAR 4; so they are transitioning a little bit younger toward male according to the new data that is used in SEDAR 36. Mustard; it is mustard.

The point estimate of natural mortality for this stock was 0.12. Again, we did use an age-based maturity curve. I believe it was SEDAR 4 that was the first to use the Lorenzen curve, but SEDAR 36 made a modification from that and went with the Charnov age-based curve. This was again following what was being done in SEDAR 32. It is probably something we will stick with in the future until the next best one comes along.

The data that were fit by the assessment; in this assessment the landings and discards were combined. There is not a lot of information on discards. The mortality rate of discards, because it is a deep-water species, was assumed to be 100 percent; but again the dead discards are lumped with the landings and fitting.

Then there were three fleets that were modeled, the commercial handline and the commercial longline, which are fitted in whole weight; and then the recreational which is a combined headboat and general recreational fleet; and that is matched in numbers of fish. There were four indices of abundance that were considered; only three of them were used in the base case. We had two fishery-independent indices, the chevron trap from MARMAP and the vertical longline from MARMAP.

Then there was a headboat index that was also fitted; and a commercial handline index that was not used in SEDAR 4; it was considered and rejected. It was in this assessment considered and then used in a sensitivity run, but not in the base run.

The MARMAP vertical longline did not have the terminal year because of cuts to their funding. The headboat index did not have the terminal two years because of regulations that went into place. The age and length comps were available for each of the fleets, but not in all of the years. This plot shows the landings just to give you an idea of the scale of the landings again.

This is over time on this left panel the increase in landings over time and then a decrease. The proportions by fleet are shown in the right panel. Most of it is commercial handline; but you can see in the terminal year that there is a lot more general recreational landings; in fact, it is over 50 percent in the terminal year is recreational.

The spaghetti plot of indices; much variability in the MARMAP indices because of low sample sizes. For the age-and-length composition data; we did have ages and lengths for all of the fleets that were modeled, commercial handline and commercial longline. The recreational fleet was combined with headboat and general recreational. We did have the general recreational comp data for this assessment. The SEDAR 4 assessment only had headboat data.

We did not have any comp data for discards; but again those weren't modeled separately; they were just lumped in with the total removals. We had a number of fish criterion for each year that had to be met for comp data for that year to be used; so at least 25 fish. That was done in SEDAR 4, and was also done in SEDAR 36. We also used a number of trip criterion in SEDAR 36 following SEDAR 32.

In addition, we gave priority to the age comps so in years where there were both age comps and length comps available; we did not use the length comps and we fit only to the age comps for any given fleet. That is something that has become standard in our SEDAR assessments as well, based on a CIE Review recommendation.

Then the MARMAP age comps here were used instead of length comps. Those ages were not available in SEDAR 4, but they were used in SEDAR 36. This slide really shows the breakdown of all of the data across all of the years. If you care to look at it later, it is available. Again the comparison of MRFSS and MRIP estimates; they are very similar for this species across the years that were examined from 2004 to 2011. That was it for the data. I'll pause if there are questions about the data.

DR. BARBIERI: Are there any questions about the snowy standard assessment data inputs?

DR. CADRIN: The reason for starting in '74 besides '62?

DR. SHERTZER: It was based on when the comp – well, actually I guess I have to go back to this slide. It is when the comp data started to become available; so we had length comps from the wreck starting in '74. I guess what is not shown here are the years prior where we don't have the data shown.

DR. CADRIN: Right; so rather than having a burn in with NOAA recruitment deviations, something like that; just starting when you have age comps?

DR. SHERTZER: Yes, and try to estimate the initial composition. The model is very similar to what was used for gag; the same basic Beaufort Assessment Model structure. Again the spawning; I won't spend much time on this slide, but again because it was a protogynous stock, the spawning stock is based on total mature biomass of males and females combined.

I thought I would highlight where the differences are between SEDAR 4 and SEDAR 36. The first one is that this is just an updated version of BAM and there are some improvements in how we're doing likelihoods and general programming improvements. The uncertainty; in SEDAR 4 that was actually the first time we attempted the MCB, and then we got away from it because it was a lot of work and uncertainty really wasn't useful then or even being considered then; so we figured it was a lot of work for nothing.

We got away from it; but now that uncertainty is important again, we're using it again; similar methods here. The assessment period before was '62 to 2002; and we started it a little bit later for the reasons we just discussed that we think we can estimate the initial spawning or the initial abundance at age starting in 1974; and then the terminal year is 2012.

The ages that were modeled were zero to 35 plus. Now there are very few fish that are reaching that age; also very few fish of age zero that are observed. The ages that are modeled here are 1 to 25 plus, which is old enough for the life history characteristics really to saturate at least the ones that are important for the population dynamics.

The ages that were fitted in SEDAR 4 were the same as those modeled, zero to 35 plus in this assessment. Because there are very few fish observed that were older than 14; then 14 was used as the plus group for fitting the age comp data to avoid all those zeros in the multinomial likelihood.

As stated earlier, we had this number of fish criterion of 25 to be included in the comps. That was repeated for SEDAR 36; but we also had this number of trips criterion of at least five trips had to be represented; and that was following what was being done in SEDAR 32. There was no bias correction in SEDAR 4 for the benchmarks; and there is one for SEDAR 36.

Steepness was different in SEDAR 4. It was fixed at 0.7. It could not be estimated in SEDAR 4, and that is still the case, but it was fixed at 0.7 in SEDAR 4 and there was a lognormal distribution that was applied. That was based on some of Myer's data for some of the deep-water demersal species.

In SEDAR 36 we're using the more updated version of that which uses a beta distribution and the mode for the base run is 0.84; so similar to what was done in gag. This next line is about the output in F being a little bit different. The initialization is also different. In SEDAR 4 it was then an equilibrium age structure but was forced to be at 90 percent of the unfished level.

Then in this case for SEDAR 36, the initialization starts in 74; and then the initial age structure is estimated. Selectivities; SEDAR 4 used flat-top selectivities for commercial longline gear; and it used dome-shaped selectivities for the MARMAP vertical longline, the MARMAP chevron trap,

commercial handline and recreational. Then it had this descending limb from the headboat selectivity that changed linearly between '77 and '91.

It is a little bit different here; the selectivities were the same, but except for a few cases we're highlighting. One is that the MARMAP vertical longline and the commercial handline were considered to be flat-topped in this assessment. That was based on examinations of the comp data, the age comp data that looked very similar to the similar descending limb as what we saw in the longline gear.

Then the recreational selectivity varied as time blocks; it maintained the time blocks that were used in SEDAR 4, but it didn't have this linear change between '77 and '91. It just had a fixed block in that time period. Then it used this more stable function for the dome-shaped selectivity that we talked about for gag.

That is not the double logistic, but instead we used a negative exponential for the descending limb. Those are the primary differences between the two assessment models. Then just to show some differences in the results; this was the top panel, F over Fmsy over time. SEDAR 36 is the solid line with the open circles; so it is estimating over the same time period so a lower F over Fmsy than was estimated in SEDAR 4. The trend in SSB over SSBmsy is very similar over the time period where they overlap; that is the bottom panel.

I'll run through the fits to the data. I'll scroll these pretty quickly; but if you want to look at something more carefully, then let me know. These are the length comps to the commercial handline. This next set is the length of comps to the commercial longline; then the length comps to the commercial recreational; then age comps starting with the MARMAP chevron trap and then the vertical longline from MARMAP; then age comps from the commercial handline; then commercial longline. We had only a few age comps from the recreational fleet.

This is a fit to the commercial handline removals, the landings plus dead discards, the fit to the commercial longline removals; and then the recreational removals. This is the fit to the MARMAP chevron trap surveys. It is sort of tracking the general trend but not all of the ups and downs, which is a good thing in this case because they are highly variable and a stock like this would not be expected to be fluctuating to that degree.

This is the MARMAP vertical longline; headboat index. Then this shows the trend of spawning stock over time; so a decrease in the beginning but since the late 1990s has been a trend of increase; so it is not yet back up to the target but it is going in the right direction for a stock that is under a rebuilding plan.

Predictions of recruitment over time are in the top panel, and then those residuals in the bottom panel; almost a full sign wave. The Beverton-Holt Recruitment Curve; the left panel shows F over Fmsy over time. This is what I was mentioning earlier. The terminal year is showing overfishing; but if you were to look at the geometric mean for the last three, it is not. Then the right-hand panel is showing the breakout of where F is coming from for the different fleets.

Generally it is a lot of mostly commercial handline. In the mid-1990s there was a lot of commercial longline F. But this terminal year, just like in the landings, a lot more of it is recreational. Uncertainty; these slides are the same as gag so I will skip this. The Monte Carlos

bits were exactly the same as for gag, except for M is centered around 0.12 rather than 0.14. Distribution of Fmsy; a little bit more of a tail than we saw for gag. It is not quite as symmetric.

The phase plot showing SSB over SSBmsy on the Y axis and F over Fmsy in the X axis. This looks like a typo; this should say through 2012; so it is 2010 through 2012 and not 2011. But again the bulk of the runs from the MCB analysis agree with the base run that you are seeing the stock that is not yet recovered to SSBmsy, but is also not undergoing overfishing.

If you look at those distributions, they look like this from the MCB runs; so 89 percent of those distributions of spawning stock relative to spawning stock at MSY agree that it is not yet recovered. About 11 percent of this distribution would say that the stock is recovered. Then for the F over Fmsy, 76 percent of the distribution is below 1, so that is agreeing with the base runs that it is not overfishing. Management quantities, in case you need them for reference.

DR. BARBIERI: By the way, Kyle, I'm going to have the same comment I mentioned before for the previous slide, but in the other direction. Again, I feel your pain in a way. In us trying here for our region to come up with improvements to our assessment process and the way that we conduct these assessments; I think that this idea of fixing steepness and having that value come out of the prior distribution is a plus.

But, unfortunately, we solve one problem and we kind of fall into another one. In this case, to have an Fmsy that corresponds to 26 percent SPR for a species that lives to be 44 plus and has lower natural mortality rates is a little bit counterintuitive. Again, how to resolve this, because we can't really estimate steepness and we've got to come up with something reasonable; but unfortunately we are still in a little bit of a bind in the way that productivity of the stock I think is being used for our estimation of reference points that might be still complicated.

If you look there, F 30 percent is 0.11 and Fmsy is 0.14. When snowy lives longer and has actually lower natural mortality rates, a deep-water species; so productivity of the stock I would consider to be lower.

DR. SHERTZER: It is hard to predict that because it really depends on – selectivity plays into that and how that looks relative to maturity in growth. We have actually – I 'm not sure if you are considering looking at an SPR proxy, that doesn't really avoid this issue that you're talking about; it just reverses it. We have gone that route before with vermilion where we took a 40 percent SPR proxy.

Then once you have that, you can back-calculate what the implied steepness is. In that case the implied steepness was really low for what people thought it might be for vermilion; it was 0.5 or something like that. Then in the update we switched to this other method of using the higher steepness. I don't think it necessarily avoids anything; it just flips it.

DR. BARBIERI: It does. I'm just thinking as a fishery biologist. Basically I'm saying that this stock, given the life history biology and characteristics of the fishery, can withstand a higher level of fishing mortality that is sustainable; snowy can than gag.

MR. CARMICHAEL: I think phrased like that, I don't think you can because this Fmsy is 0.14 and gag was 0.28. Yes, 0.29, so I think this whole linkage between the SPR levels and reference

points and all those rules of thumbs we used to hear about are all out the window. It all comes down to an individual stock and how all its traits come together.

DR. BARBIERI: It may be; but if we go back to the Mango et al paper, it really represents how much spawning stock biomass we want to make. We don't know what subsequent recruitment is going to be given some kind of reproductive pattern; so we just bank as much spawning stock biomass and consider that to be sustainable because we have an Fmsy and we actually don't.

We don't have a straight estimate of MSY, because we don't know what the steepness value actually is. They were banking – in this case we are putting in the bank a much smaller percentage of the spawning stock relative to – Erik if you have something to add, by all means. I mean, since you made the travel here, it would be informative to the committee to hear your –

DR. WILLIAMS: I think you are confusing per recruit proxy, which is a per recruit calculation versus a stock recruit curve, which is really a direct estimate of MSY, which is what we're after. If you were to look at the ratio of SSBmsy to SSB zero, you would see that ratio is actually closer to 40 percent or in that range with an MSY; Beverton-Holt based MSY thing.

It has nothing to do with the per recruit. Like Kyle said, that per recruit varies because of different selectivities, different maturities and that sort of thing. In many ways because what we're after is MSY, it is inferior. You need to look at it that way;, because if what we're after is MSY, it is an inferior measure. That is why it was originally posed as a proxy for MSY.

DR. BARBIERI: Right; and I understand that, but I just don't want folks to get the impression that we know what MSY is because we did not estimate it. We basically acknowledge that the data wasn't informative for us to estimate it; so we don't know what MSY is. We basically put this as a fixed input parameter with no uncertainty around it, really, for that parameter H, as this point estimate is. There is no uncertainty; we actually fixed it.

That corresponds in terms of the proportion of the spawning stock biomass that we are banking; and, of course, we express on a per recruit basis, because we don't know what the productivity of the stock is, given a certain amount of reproduction to realize recruitment, because that would give us – confirm the spawning stock-recruitment function.

Since we don't know, we bank a certain amount of spawning stock and we say, okay, we do this because this should guarantee some level of recruitment in the future; and a proportion of the spawning stock biomass we are banking here is substantially lower.

DR. WILLIAMS: No, I think you are misunderstanding. What we're banking would be to look at that ratio of SSBmsy to SSB virgin. That is what you would be banking. What I'm saying is that it is going to be higher than 26 percent or whatever that per recruit value is. It will be closer to 40 almost 50 percent with a steepness of 0.84.

DR. BARBIERI: Okay, then just to clarify; what we are saying is that this level of fishing mortality would be corresponding to what would cause the spawning stock to be at 26 percent on the average a virgin.

DR. WILLIAMS: That is a per recruit calculation, which is not the same as a spawner stock recruit relationship and biomass derived from that relationship. That would be a pure per recruit relationship, which doesn't involve any feedback essentially of recruitment to the process.

DR. BARBIERI: What I fail to understand is how that can be different when I actually don't know H; so I don't have a spawner-recruitment relationship.

DR. SHERTZER: I think we do, we have a lot of them, and we are taking into account the uncertainty in steepness. It is fixed at any given run, but this plot here shows the uncertainty that we get when we allow that value to vary across a lot of runs.

DR. BARBIERI: Right; when we do this, we do; but for that point estimate that came out of the base run; that is fixed at 0.84. I'm saying that really if we look at what the significance – the actual significance of steepness is, we are saying that gag and snowy grouper have the same level of productivity or an expected recruitment given a certain amount of spawning stock biomass, because H is equal to 0.84. That is what I am questioning.

I understand; and I do see this as a move forward for us. I am just saying there are some issues, too, that we are going to have to get resolved about how that translates into something that generates reference points that we can compare something. Either it is relative to virgin stock; or, you know, MSY, usually we don't have to go there, because it is based on what comes out of the productivity of the stock estimate.

In this case since we fixed it; it can help a reverse into basically a per recruit sort of rationale, because we don't know what H is. We are assuming that the productivity of those two stocks, one a deep-water grouper that lives to be 44 and a shallow-water grouper that lives in to the mid-20s, is exactly the same. To me that is still problematic; and I don't know how to resolve it.

I don't want to revert to percent SPR reference points, because I do see them as just as arbitrary; but I'm just kind of bringing up this, because in a way those are things that we're going to have to take into account when we try to translate this into management metrics for the council; and give them an idea of what we can and cannot estimate, and where we are relative to what, you know, given the fact that we set the value of that productivity that translates into a reference point.

DR. WILLIAMS: I think what you are hitting on and what Kyle was trying to say is the difference here is selectivity; and what you should look at is selectivity relative to maturity. I think the difference in gag and snowy is pretty clear. In snowy you've got a minimum size limit and you're harvesting fish probably post-maturity.

Snowy I think it is probably the opposite; you are harvesting them pre-maturity. Part of the reason they don't have a minimum size limit is there is no point in discarding them, because they are probably mostly all dead. That is something you can look at, but that has to do with minimum size limits and that sort of thing.

DR. BARBIERI: This is a good way – as we discuss this; this is a good way to explain when we integrate that component of selectivity, that, of course, plays a role here; you know, that has some rationale for us to understand why we are coming up with those values that are so different.

To me that helps me explain to folks who would be looking at those life history patterns and how the fishery is prosecuted, how we end up there. Not to overextend this; thank you, Erik. This helped me kind of look at this and see where we are regarding reference points for fixed steepness.

DR. SHERTZER: I wouldn't get hung up on the point estimates so much either, because they are not really playing that integral of a role anymore. It is really the full distribution that is what is critical; and that is what is being carried forward in the projections as well. I guess you might question whether the distribution is different between snowy and gag, but I think that is the more important question than whether 0.84 is different between them.

The sensitivity runs are all in the report; does anybody want me to run through them now? You can just look at them in the report tonight in your room. I'll go to the summary page which shows the results. Again, not all of these should be considered alternative states of nature; some of them are just probing the model.

In general the base run ended up somewhere around this clump and the majority of these sensitivity runs would agree with that. I will show the retrospective patterns, though. For the F there is very little pattern seen in the terminal in the retrospective error in F. For recruits there is a retrospective pattern in that the terminal year tends to be overestimated. The reason for that is because there is no information to estimate the terminal year; so it's fixed to the spawner-recruit curve. That tends to be too high of an estimate.

Then spawning biomass in the terminal year also tended to be overestimated, except for this very last year which was actually right along the line; so it is hard to know what to make of that. But as far as the recruitment one goes, this may be worth considering in terms of projections at that terminal year of recruitment that is going into the projections may be an overestimate of what the actual terminal year recruitment is.

Speaking of projections; these are similar as before carrying forward the MCB runs. These are run out to 2039, which was the terminal year of the rebuilding plan. The interim period here is 2013 and 2014; so these do match the landings rather than using F in these two terminal years. These were matched to the quota; and the quota was scaled up to include dead discards, which we thought were at about 97.7 percent of the total removals we would be landing, so the quota was scaled up to account for that.

Then new management started in 2015. There were five F-based projections that were done; F current Fmsy, 75 percent Fmsy and then two F rebuilds that had either a 50 percent or a 70 percent chance of recovery. This is an example showing projections for F current; and then as before, I just had the tables here for a reference if you need them. I think that is it.

DR. BARBIERI: Okay, folks, this basically completes the presentation on the assessment. Now we are at a point where we have a number of projection results given the standard projection scenarios that we've been looking at. Going back to our action items, consider whether the assessment represents the best scientific information available; identify and discuss assessment uncertainties; consider the council alternative to modify the rebuilding strategy to an approach based on fixed exploitation at 75 percent Fmsy; and then provide fishing level recommendations

and provide guidance on the next assessment type and timing. Back to the first bullet; consider whether the assessment represents best scientific information available.

DR. CADRIN: Yes; just looking at the difference between SEDAR 4 and 36; it seems that most of the methodological revisions were based on newly or more recently developed best practices in SEDAR. It seems like whether it is the BAM method being revised or the steepness going to 0.84; that is consistent with many SEDAR assessments. I guess that is the reassurance to me that even though maybe these specific decisions haven't been reviewed as much as a full SEDAR benchmark; that they are very consistent with those that have. I would say, yes, this is the best basis for catch advice.

DR. BARBIERI: I agree with that. Would anybody disagree with that statement? Seeing no comments, we proceed as considering this assessment as representing best scientific information available and being used for management advice. Identify and discuss assessment uncertainties; we have already started to discuss some of those, but any additional comments or questions? Kyle mentioned some of the retrospective pattern in the recruitment estimates.

DR. CADRIN: It might be worth the concern that the most recent recruitment deviations have been negative. The stock-recruit curve shows pretty well that the last two points are right on the expected curve. In the last ten years they've gone to negative deviations after the assessment was updated; so that might continue, it also might not.

DR. BARBIERI: Well, we are also being asked to consider the council alternative to modify the rebuilding strategy to an approach based on the fixed exploitation at 75 percent of Fmsy. John, do you want to expand on that?

MR. CARMICHAEL: Well, I'm trying to recall. Snowy has a rebuilding plan which goes back quite a ways; and the council has looked at some of these plans and thought about perhaps updating them. This is just one of the alternatives that they may wish to consider.

DR. CADRIN: Coincidentally, the 75 percent Fmsy is almost identical to the F rebuild with 50 percent probability. I think that might be appropriate feedback to the council that when the F rebuild is iterated, it comes out to be about 75 percent of Fmsy. Kyle that is correct, right? The council had excellent intuition on this.

DR. BARBIERI: In this case I guess we can explicitly express the fact that we don't see any concerns with their adoption of this modified rebuilding strategy, because it really approximates the value of F rebuild and doesn't increase the risk of not rebuilding the stock.

DR. CADRIN: I feel that considering how many years of the projection it is; that they are essentially the same; 75 percent Fmsy comes up just short of rebuilding in that timeframe; and I don't even think you can tell the difference between the two, but I will have Kyle answer.

DR. SHERTZER: These are projections out to 2039.

MR. CARMICHAEL: We have to remember this goes back pre P-star, so there is always the question of when you apply the control rule and you come up with different values, considering whether or not the council would then change the goalposts; and that is something they have not

done. If we have a rebuilding plan that is put in place before some of these things existed, we try to maintain the progress on that and not shift the goalposts halfway through the game, as it were.

DR. ERRIGO: Also, it is very likely that the council will put in ACLs that will change for a certain period of time and then hold constant, which means where they will hold constant will probably be lower than the landings way out there; and hopefully with the intent of getting another update or something. But that will increase the probability of rebuilding by the 2039 deadline if they hold constant at a certain landings lower than what the landings are later on in this projection time series.

DR. BARBIERI: Okay, so we are at the point of providing fishing level recommendations. We have a number of projections there that Kyle has already prepared. We have to go through our control rule application process.

DR. CADRIN: Or do we; is it based on F rebuild or P-star?

MR. CARMICHAEL: This stock is in a rebuilding plan; so it is based on F rebuild.

DR. BARBIERI: In this case we have a prescribed –

MR. CARMICHAEL: Like I said, unless you wanted to change the basis of F rebuild and the precision of the rebuilding plan; you aren't obligated to go through the ABC Control Rule. It doesn't seem like there is interest in doing that. Particularly given the very long timeframe and the fact that this stock is in rebuilding and making progress; we would leave well enough alone.

DR. BARBIERI: Kyle's Slide 64 had the projections at F equal F rebuild, giving a probability of rebuilding of 70 percent. No – there are two; you have different probabilities of rebuilding. Probably the 50 percent represents the pre-MSRA probability of rebuilding, which used to be 50 percent.

Then if we were to apply the P-star and then use a P-star based probability of rebuilding like we have done for some stocks; in this case it would approximate that 70 percent and give the council more confidence in meeting those rebuilding deadlines. In this case I guess it is a policy decision really for them to make a decision on what probability of rebuilding they want to use.

It is great that Kyle already generated the different projection scenarios. Again, I think it is just a matter of us offline populating that table with the deterministic and the probabilistic assessment results and parameter estimates and discussing that tomorrow when we review our overview document report. It looks like the next thing left; the last one is to provide guidance on the next assessment like we did for gag in terms of type and timing.

DR. CADRIN: The only feedback I would have is explore estimates of steepness. It is not clear to me from the document if a steepness was tried to be estimated or went right to the 0.84 and a distribution. I think that might help clarify whether the data support a 0.84 or not. Was that tried, Kyle, on this one?

DR. SHERTZER: Steepness could not be estimated; that was the first attempt.

DR. BARBIERI: In terms of type of assessment; this was a standard. Carolyn mentioned update, perhaps.

DR. BELCHER: I guess it comes back to what we've said; is there anything that would contribute, that hasn't been considered, that should be considered, that would require it to be done as a standard? Otherwise, it is an update.

DR. BARBIERI: Update in 2020. We can also express that this was a standard and we don't have any suggestions as far as timing. I think that this timing topic here was included basically when we want to have something that we feel uncomfortable with providing long-term projections, and that we would like to have done an updated or benchmark ahead of schedule or sooner than later.

MR. CARMICHAEL: How far out are you comfortable providing annual ABCs from these projection tables would be I think a critical consideration; if you are comfortable out five years, are you comfortable out ten years?

DR. BARBIERI: Good question. Traditionally I don't remember us going ever beyond five; usually five or less given the uncertainty increases with the timeline, the duration of the projection period. Personally I would say five; and then it is a matter based on your evaluation of the uncertainties and perhaps additional time series of data coming; the possibility of updating this before five years; but I would not be uncomfortable with five years.

Does anybody disagree with five years, then? Okay, that concludes the snowy grouper assessment review. Thank you, Kyle, Erik, and Kevin for the blueline tilefish, the gag, and the snowy grouper presentations. It was great to have you guys here. I know that this is not always possible; but just like the discussion that we had this afternoon, it becomes more interactive. We have the ability to pull you guys in and say, hey, give me your thoughts about this or that and let's discuss this or that point. It is really a help in that way because of the interactive nature and the ability to draw from your knowledge and experience.

DR. WILLIAMS: Put it on the record if you want us here.

MR. CARMICHAEL: We want you here.

DR. BARBIERI: We definitely want you here. We see this as a major benefit. Invariably we get more out of it with you guys in the room.

DR. WILLIAMS: I agree.

DR. BARBIERI: We appreciate it. We know you have a full schedule, but we appreciate the opportunity to have you here. I think that this would be worth us putting a statement in our report.

MR. CARMICHAEL: Yes; if they would come more often, we might not keep them so long.

DR. BARBIERI: Yes; we will make a statement and put it on the record and make this official. All of us, as a learning process as a discussion, and the interactive nature; you can't beat it. I

think we are more than done for the day. This was a long day. I appreciate everybody putting up with this long day. I think we're going to have to recess for the day. We are going to start fresh tomorrow morning.

MR. CARMICHAEL: We can start at 8:30.

DR. BARBIERI: We can start at 8:30; an update on MRIP program changes at 8:30, and let's make sure that we start at 8:30 sharp. This shouldn't take long. There will be some more discussion, but hopefully we will get you out of here in time to catch a flight. Unless there are any other additional comments or questions, we will recess for the day.

(Whereupon, the meeting was recessed on April 30, 2014.)

The Scientific and Statistical Committee of the South Atlantic Fishery Management Council reconvened in the Crowne Plaza Hotel, North Charleston, South Carolina, Thursday morning, May 1, 2014, and was called to order at 8:30 o'clock a.m. by Chairman Luiz Barbieri.

DR. BARBIERI: Good morning, everybody, and welcome back to the third and last day of the April 2014 SSC meeting. We are going to start this morning with an update on MRIP Program changes. No committee action required, this is an informational piece. We are happy to have John Foster from the MRIP Program here to give the presentation and help us with questions and comments and discussion on this topic.

MR. FOSTER: Luiz, thanks very much for inviting us to give an update. I am going to have to move through this material fairly quickly; but please if you have any questions about technical details that I don't cover, feel free to interrupt me. I will cover today just sort of a high-level overview of the changes that we put in place going from what had been the old MRFSS intercept design, which ran through 2012, transitioning to the new Access Point Angler Intercept Survey Design in 2013.

There were some additional revisions to that design that we implemented along the way in 2013. I don't really have time to cover those today, but I'm certainly glad or would be happy to answer questions about them. They were not, of course, on the scale of the changes we made from 2012 to 2013. Then I'll go through what we're doing to look at the potential effects of the design change we made. Then I will go through the future changes; at least the major ones we have planned for the next couple of years.

Just a quick review; we had to make changes to address the issues that were identified by the National Research Council Review; that report came out in 2006. Basically the changes we made focused on addressing coverage gaps, primarily temporal coverage gaps, parts of the day that traditionally hadn't been covered under the old design, as well as the lack of formal probability sampling.

The old MRFSS protocols allowed for things like interviewers to switch sites, depending on what they saw in the field. They could go at different times. Those things were all put in there originally to improve the productivity of the intercept survey to generate more intercepts with anglers; but the difficulty with those things is that it is very hard to account for those kinds of on-the-fly changes to the sampling protocols for the sampling assignments.

The new design addresses those issues; it provides full temporal coverage. I will go through the details of how that is incorporated. It addresses all of the deviations from formal probability sampling that were associated with the old MRFSS design. We have fixed time intervals so that the period of time that samplers are on sites are fixed; the sites that they go to are fixed. There is no allowance for samplers to make decisions on the fly in the field based on the conditions they see.

Because of that, then we are able to appropriately account for all of the data that are collected and give them the correct sample weights. One other point to make; the last bullet there, under specific conditions under the old design, the samplers could change from the fishing mode of the assignment. The private boat, charterboat, or shore anglers that they were supposed to be sampling; they could switch to one of the other modes opportunistically to pick up additional interviews.

That was very problematic to try to calculate sample weights. Those data were actually eliminated during the re-estimation process for years 2004 to 2012; and that has been continued into the new design. There are no alternate mode interviews. An assignment has a specific fishing mode and the samplers stay within that mode.

In terms of what we did for temporal coverage, we now have fixed six-hour assignments. Those are allocated among four time block strata; so a given 24-hour period of time is divided into four even six-hour periods and assignments are drawn within those strata. Again this replaced the sort of variable length assignments that were done under the old design.

That allows us then to in a very straightforward design-based way expand the data temporally, the sample data up to the full day; whereas, before we had to rely on model approaches to expand the MRFSS data. A couple of other technical points; there used to be a cap of 30 interviews per site visit under the old MRFSS design.

That has been eliminated. That was in place initially to sort of minimize or mitigate the influence of one particular site that had a lot of activity on the data when things were not weighted; but now that things are appropriately weighted, there is no need to have that cap. Interviewers or samplers can collect as many interviews as they can get when they are on site.

Because of the changes we've made, we now have again direct design-based weighting of the data. There are no modeling components anymore; everything comes directly from the data collected by the samplers. That was a very quick overview of the changes we made. Again, the changes were primarily we expanded temporal coverage and we eliminated field protocols that had allowed samplers to sort of make decisions on the fly about what sites they visited, the mode of intercepts that they collected, and how long and when they were on site.

Those were all replaced with fixed parameters that they follow. That allowed us again to calculate fully designed-based weights instead of having to model some of the components. Moving now to evaluating those effects, the first thing we've had to do is try to determine which changes are relevant; because some changes could lead to systematic differences; other changes, if they had any effect, they would be variable. Those are not really the ones that we need to try to account for. It is the ones that could lead to systematic differences in the data and thus in the estimates.

There are a number of ways to try and evaluate those changes. They all have sort of pros and cons. I will go through a number of them. Then I'll cover what we've been able to do or what we are doing in the short term to look at this, and then what we'll be doing sort of longer term that will provide us sort of better results but will take considerably longer to get there.

So again the design changes that could lead to systematic differences are the ones that are important that we need to consider. One example of that would be – and the primary example is the change in temporal coverage. This doesn't directly indicate that there are systematic differences. It just indicates that there could be differences because of the change and the fact that we're covering the full day now; whereas, before we were only covering sort of the peak activity period of the day.

Again, random differences were not focused on at this point, because they generally don't lead to a bias, a systematic difference. They only lead to sort of changes in the variance around the point estimates. Now, there are a couple of issues we're dealing with primarily. We only have one year of data under the new design; and unfortunately we could not afford really to run the new survey alongside the old survey in all of the states.

It is just cost prohibitive and it would require additional staff on hand to conduct both field surveys side by side. We're sort of limited in what we can do, because again we only have the one year of data under the new design. We also in the prior time series under the MRFSS design, because samplers were able to make decisions on the fly in the field, we've got sort of a moving target in a sense that sort of patterns of sampler behavior are different within and among states over different periods of time.

That kind of complicates making a comparison for the new year with a fixed design to sort of a variable design in a sense for the MRFSS years. I want to go through some examples of temporal coverage, because that is sort of what we're looking at now. I am going to run through a few of them.

This is Alabama; but it sort of is one of the most extreme examples of differences in temporal coverage. These plots are for each year and they are trip return or end hours; so the hour of day that the trips return; and these are just weighted proportions of in this case the entire year for private boat mode; and then from 2010 through 2013.

So '10, '11, and '12; these data were all collected, these estimates are all coming from the old MRFSS design. You see they are very consistent in terms of when the trips were returning or the trips that were intercepted; so from basically nine o'clock until I guess about really 2:00 p.m., sort of the core of the distribution.

Then we noticed 2013 is noticeably different. There are considerably more trips being intercepted earlier, in the morning, as well as a very large bulk of trips being interviewed in the evening; so from 4:00 o'clock on. They really were almost entirely missed in the earlier years. Again, this doesn't directly indicate systematic difference, because we used the information from the intercept survey not to calculate totals directly, but to calculate rates.

If we were calculating catch totals or effort totals directly from the intercept survey, this would definitely indicate there is a systematic difference. But, again, because we just calculate relative

measures and then we expand them by the effort that comes from a different survey; for there to be a systematic difference, these trips need to be very different or somewhat different from the trips that were covered in prior years. But, that is not to say there aren't systematic differences; just that it doesn't necessarily directly indicate that there will be.

A couple of examples now from the South Atlantic; this is North Carolina again, the entire year, private boat, same range of years. Again, we see that 2013 has a different distribution than the prior years, which were all fairly consistent. We don't see quite as big a difference as we saw with the Alabama example, but there is noticeable difference; and again fairly consistent with what we're seeing in other states.

We've got more trips sort of showing up in the morning and then a larger proportion of trips coming in or being intercepted in the afternoon/evening hours. Here are the same plots for east coast of Florida; again, very consistent patterns/distributions for the MRFSS years and a switch in 2013. Again, more in the morning, more in the evening; so a wider spread of trips being covered under the new design, which again is a good thing once we can get past this transition period; but it can certainly introduce some distances in the time series when we go from the old design to the new.

How are we looking at these? Basically, they fall out into two groups, sort of empirical methods, and these are things some of which we can do in the short term, and area doing, and then simulation methods. What we're doing now; we're sort of focused on again kind of a fairly comprehensive descriptive analysis of the estimation components that we generate from the APAIS. I'll say more about that in a minute.

Some of the other methods we have are post-stratification methods. This is sort of a survey methods term. Basically, what we can do is take the sample weights in 2013 or the prior years and adjust them so that the distributions in the data match each other. For example, we can adjust the sample weights in 2013 so that this time distribution could exactly match a prior year or could match an average of prior years.

By making those distributions match, then we can see the effects ultimately on the catch estimates. For example, what if 2013 had the same distribution as the prior years; what would that have done to the catch estimates? Would it make them different, would they stay about the same?

In other words, that would be sort of down-weighting the influence of these earlier trips or the later trips that we saw in 2013, because we're forcing the distribution to look more like what it had in prior years. We can do that by more than just time distribution; we could do it by site or some geographic distribution of trips. This is relatively quick to perform.

We've actually done some preliminary work on this in the Gulf for red snapper. But, if you find differences, of course, we don't have a clean way of attributing them either to the sample design change or just gear effects, because the two are confounded; because we were not able to run side-by side intercept surveys.

We also have data limitations. We only have the one year of data under the new design, so the distributions that we can make these adjustments for are kind of limited. We can't, for example,

go all the way down to the site level. We don't have data for all of the sites and all of the years, there would be holes, so some of these things would be at a coarser level that we can try. Again, as I said, the results of this are confounded between real year effects and the design change.

Of course, we can do a variety of modeling with the data as well; but again we're still limited to just the one year of data under the new design. For the simulation methods; all of this work is still sort of in the planning stage; so I don't have a lot of technical details to provide. But basically just walking through it, we would be creating populations of angler trips and then just sampling from them repeatedly using both the new design and the old design and then looking for systematic differences in the components we generate from the intercept data; catch rates, effort adjustments, things like that.

The downside of this is, of course, it is going to take a fair amount of time to get in place; but we are working on it so it is something we're going to do. But it will take a lot of time because we have to create a number of different populations where we are varying the distributions of important characteristics, the catch information, other trip characteristics, return time, access sites, return to areas fished and all that kind of information.

Then we also have to sort of identify a number of different sort of MRFSS sampling scenarios. When were samplers generally on site; that varies from state to state? Did they switch sites a lot; did they stay at one site; how much alternate mode data did they get all those kind of things? Did they hit that 30 trip counts cap a lot or did they not?

All of those different scenarios would have to be identified and then used in this simulation approach to see where we might expect or where we do find systematic differences. That is a lot to go through; but sort of the benefit of all of that work is that these results are not confounded by then year-to-year changes in angler behavior, so we can have as best we can approximate a true side by side between the two designs and see what, if any, systematic differences the design changes produce.

We can get this in place as soon as possible, because we're not limited to needing additional years of data under the new design. What have we been doing? As I mentioned, we're starting with a descriptive analysis of the estimation components. We're looking at four different things; catch rates, area fished proportions – those are used to allocate the private boat inshore mode – effort estimates into inland state waters and ocean waters, so they are very important.

They come from the intercept data directly. We're also looking at the effort adjustment factors. These are used for both the coastal household telephone survey effort estimates to expand them to cover both the non-coastal residents and the out-of-state anglers, as well as on the charter side, charter mode. We use it to expand effort that is not covered by our for-hire survey telephone survey, so charterboats that are fishing either in a different state or if they are a boat that hasn't been put on the for-hire survey frame.

There are adjustments to all the different fishing modes effort estimates that come from the intercept survey. The fourth series, trip proportions by region; this is not actually anything we use in estimation, but I did mention that we introduced in a number of states sort of sub-state stratification in 2013. Even though it didn't change coverage, we were still covering all the same

sites. It is possible there could be some influence there even though the sample weights should be accounting for any difference in where the sample is allocated within states.

Based on the work we've done looking at the temporal distributions; we decided to sort of make all these comparisons among four different domains; a morning domain when we think the old MRFSS design may not have been fully covering trips or may not have been covering them at all; a peak time domain where the old survey and the new survey should be providing as best as we can approximate comparable coverage, full coverage; and then again an evening time period where we think the old design may not have been fully covering trips relative to the 2013 design.

Then, of course, all of the data; sort of the standard comparison. We're focusing on more recent years, comparing 2013 to 2010 through 2012; looking both year by year as well as sort of 2013 compared to the average of those years. We're hoping to have preliminary results this month now I suppose for the Gulf of Mexico Region, and then we will be moving on to the remaining regions starting with the South Atlantic as soon as we can after we finish the results for the Gulf of Mexico.

Some other things that we've been doing; as I mentioned we've started on the post-stratification approach. I've developed a number of programs that we can use to do it; and as I've mentioned, we've used them for red snapper in the Gulf of Mexico. All the results are still very preliminary. There is nothing sort of final that we can share.

We have not, however, come up with sort of an optimal method for using this approach to estimate the bias or estimate any sort of calibration factor that could be used to either adjust 2013 numbers to look like prior years or vice versa. Again, that is because we have confounded effects between a year effect and the actual design change effects.

In terms of the simulation approach, we've got sort of a kickoff meeting for that project with several of our statistical consultants that are at Colorado State University. Between themselves and students and post docs, they will be handling sort of building the machinery for this and doing some of the initial work.

Once all that is in place, we'll sort of take over and do the kind of extensive testing of all the different scenarios and all the different fishery conditions. We still do not have a timeline for when we expect to have results in hand, though, for the simulation work. Then some organizational changes under MRIP; we're creating a couple of new teams; a transition team, which is sort of a leadership level team – and I'll have more to say about that at the end of this talk – and then a technical team which I am coordinating, which will be primarily communication related in nature, how we disseminate results as we get them; but will also potentially do some of the technical work.

Next steps on this; we need to extend, of course, the descriptive analysis to all the remaining Atlantic Coast regions and wrap up what we're doing in the Gulf. Develop a simulation model; that involves a fairly extensive data-mining task to try to both – basically how we're going to do the simulation, identifying what is important in the data that we can use to make sensitivity runs, if you will, in the simulation approach. Then also identify all those different MRFSS sampling scenarios that we will then run side by side against the new APAIS design.

Then as I mentioned earlier, try to identify a best approach for the post-stratification evaluations, because really I think it will be that approach and the simulation results that will allow us to come up with any calibration factors if we can and then provide the recommendations. If it is okay with everyone, I think if I can just keep moving through the slides; but if there are burning questions, I will be happy to stop. There are not too many slides left.

I divided the future changes into what we're going to do on the APAIS intercept survey and then some changes for the effort surveys. In 2014 we've got two changes we're making to the intercept survey. Basically they are sort of reworking stratification. There is no net change or even gross change to the coverage of the survey; so we do not anticipate that these changes are going to result in systematic differences.

We're introducing a new what we're calling peak six-hour time intervals, which will run from 11:00 a.m. to 5:00 p.m. That basically is getting overlaid on top of the existing six-hour time intervals. It doesn't result in, again, a net change in the coverage, the temporal coverage of the survey; but it should – and we are already seeing results of this – it is improving the productivity of the survey in terms of generating interviews. That was implemented starting in March and will continue on indefinitely.

We're also changing sort of how fishing mode is handled in the survey in terms of stratification. We are going to what we're calling site group stratification. The full list of the fishing access sites that we survey are divided up into exclusive groups that are either primarily charter or primarily private boat.

Without going into all the details, basically this change allows us to interview either boat mode on any given assignment. That is, of course, another improvement to productivity. It also addresses for a number of states a long-standing issue of missing guide boats, small sort of transient charterboat operators that don't have sort of fixed locations that they work out of.

They typically are fishing out of boat ramp sites that have predominantly private boat pressure. They weren't sampled very often under charter mode; and when they were, it was very unlikely to produce interviews. Now ideally we will be picking up those boats much more frequently than we have been in the past; so improving productivity there. This will be implemented starting this month and again continue indefinitely.

For 2015 we are going to try to extend this site group idea to create an offshore fishing site group in states where there is enough offshore activity to be able to identify a number of sites that can be sampled and reliably produce offshore interviews. This will probably be implemented first in the Gulf of Mexico sub-region; and then based on how well it does or does not work, extend it along the Atlantic Coast.

We'll also sort of fold the shore mode into this site group framework as well. Currently that shore mode is being sampled as it always has been. Shore assignments are drawn; only shore interviews are collected on those assignments. As I mentioned earlier, these are changes to how the stratification is done. They don't result in net coverage changes.

There could be variable changes introduced by these design changes, but we don't anticipate systematic differences. For the effort surveys, in 2015 we're implementing the fishing effort

survey. You may have had presentations by Rob Andrews from our office talking about a number of pilot projects that have been done to sort of provide a new way of generating effort estimates for private boat and shore mode, getting us away from the coastal household telephone survey, the random digit-dial survey that only covers the coastal counties.

The new survey will be a dual-frame mail survey. It will cover all counties within the coastal states. It uses both a full address list from the U.S. Postal Service residential address list, as well as the license information in the angler registry, which at this point are primarily state licenses. There are a number of benefits to that, but this could lead to a systematic change.

The new mail survey will be quite different from the CHTS; and the exact details of when this will be implemented are still sort of in the works, but it is much simpler to run side by side comparing the CHTS to the FES. That will be in place so we don't end up in the same situation where we're trying to figure out design effects after the fact.

We'll be able to in a more experimental framework come up with any calibration factors for this directly instead of having to do it indirectly on the back end. Dave Van Voorhees put some slides together to provide details on the new MRIP Transition Team. Basically this will be a group that is charged with coming up with – again I won't read all of these) – but a standardized process for how we transition when we make design changes, how we evaluate if the design changes have had a systematic effect, and then the best way for dealing with those effects and calibrating or benchmarking the time series; as well as coming up with processes to deal with those changes and all of the various uses of the recreational data.

Of course, the idea here is this team will be able to basically come up with best practices and make recommendations that will hopefully avoid the situation we're in now with the intercept survey design changes; so that all of the work can be done on the front end prior to implementing changes and have a much sort of smoother transition.

Some organizational information will be under the MRIP Executive Steering Committee, reporting to them; and then any recommendations they make will go through the ESC up to the NMFS Science and Regulatory Boards for approval.

This won't just be an internal NMFS team. It is chaired currently by Galen Trumble and Dave Van Voorhees out of our office; but it will have representatives from our regional offices and science centers as well as the councils and the commissions. This is a leadership level team above me.

I don't have more sort of specific details of who the representatives would be. I think a lot of that is still being worked out at a level above my pay grade. I would be happy to take any questions on that, but I would have to get back to you with the answers. This group would obviously not be doing the nuts and bolts technical evaluation work; but they would be compiling the information and then providing the recommendations. Okay, that is all I have so I would be happy to take any questions.

DR. CROSSON: Back on Slide 18 you talked about the dual-frame mail survey replacing the telephone survey. Have you been piloting that; and I am curious what your response rates have been.

DR. FOSTER: Yes; for the last, I would say, at least three years there have been a series of pilots building on each other. The response rates are typically double at least, the response rates we have from the coastal household telephone survey. They range, I want to say from anywhere in the 30 percent range up to 60 percent. It varies by state.

These have been done again testing treatments so different contract methods, different mail delivery methods. When we get to production, I would be hopeful that we don't see response rates, say, much below 40 percent. There will obviously be some; but again that is at least double the response rates from the existing coastal household telephone survey.

DR. BUCKEL: John; thanks a lot for the presentation. There is a lot going on there that I wasn't aware of. There are several of these different organizations and some academic folks that are playing around with – I think it started with like texting in your catch, mostly with recreational anglers that I'm aware of.

Now with web-based, go to a website and put in what you caught for the day. Obviously, that is biased towards folks that may catch more fish. I'm just curious if there is any way to integrate some of those data or use it as a test of some of your data, if there are any plans to do work like that?

MR. FOSTER: I guess the quick answer is at this point there are no plans to do that directly. MRIP did have a project that looked at how best to use volunteer data, much of which was electronically collected. I don't remember the exact results from that report but it is available through our website.

The difficulty; there are a lot of assumptions that have to go into trying to incorporate those data. It is not impossible; and as the pool of folks being covered by those kinds of volunteer programs grows, it makes it much easier to incorporate their data. If it is a small pool, that may be very different. As you mentioned, it has the potential to be folks that are very active or have high catch rates.

When that pool is small, it is very difficult to know how best to kind of incorporate that or expand their information, say, up to a population level. It is likely something that we would get back to, I think, because there is a lot of interest in it; and I think there will be more and more of those kinds of programs that come online. If we can make use of that information, it certainly makes sense to do so; but again at the moment there is no specific plan for incorporating it.

DR. BARBIERI: Just to add to this; there are a couple of pilots now in the Gulf that are Gulf-specific that are sort of looking at the use of those apps. It would be sort of like a voluntary logbook of sorts, somewhat testing the concept of this in their mark/capture type of scenario. They have a group of statistical consultants that have broad knowledge in terms of implementation of different surveys that are stacked up, so to speak.

There is this idea of saying; okay, you sign up -- I mean, people who sign up for this thing would be your marked anglers, so to speak. Then at the intercept you kind of sort of recapture them, so to speak. That was my understanding. Maybe I misunderstood some of the discussions the consultants were providing for those Gulf pilots. It seemed to be – my interpretation was that it was increasing our ability to use this type of data at least in a pilot type of sense.

MR. FOSTER: That is right, Luiz, and the perspective I was speaking from was for our general surveys. Those pilots are very species-specific and targeted, I guess I would say. In those environments I guess I would say some of those are attempted census especially for the charter, as I understand it for the charter modes.

There was one that you are right, though, for a private boat that was going to try to use mark/recapture methods to expand; but again that is sort of still difficult to do; and if you want them to expand it up to sort of the fishing population and not just specific to a species, it gets a little trickier and sample sizes become more of an issue as well.

DR. BARBIERI: That is right; that was an issue that was red snapper specific; and I wasn't taking that into account.

DR. BOREMAN: You are talking about iSnapper, which was developed out of Texas A&M. The problem with this is the fishermen that participate in this type of program expect that their data are going to be used. That is where our statisticians are wrestling with this now is we don't want to embrace the idea of having these apps and cell phones and encouraging people to go out and collect individual data until we can figure out how best to use it in the MRIP estimates.

Now. the value may be to supplement MRIP with biological sampling; you know, take a picture of your fish and send it in so we can check for accuracy, we can look at size distribution of catch and items like that, which kind of are not going into the basic catch-and-effort estimates but are enhancing the whole program. It is a statistical nightmare at this point to take all these volunteers, because it is an avidity thing. Obviously, the people who like to fish the most, probably the better fishermen are going to be participating. It is an age-old issue with census of fishing.

MR. HARTIG: John, thank you very much. Are you anticipating doing any kind of advertising blitz with the new paper survey? We could do it through the council. It is really important information and some way to alert people the importance of submitting this data and that kind of thing.

We only reach a small proportion of the anglers, anyway. We're reaching new people all the time; and anytime you can get some kind of an educational part of how important these surveys are, I think it would be important. Also, when you send an envelope out, have a big fish on it, and in just a few words about how important this is we need you or whatever it is to participate in this survey.

Other advertising people do that all the time. Just to get an envelope in your mail without any descriptive thing on it; people may not take note of it; but if there is a big fish on there, that will catch at least an angler's eye; so somehow to do this where we can try and increase the participation over time.

MR. FOSTER: Yes; thanks very much for that. MRIP does have a Communication and Education Team that does work on that sort of outreach and improving cooperation with the surveys. One thing we have to be careful of, though, with this type of survey, the mail survey, is we are sending it to the general population. It is not covering just anglers; it is not just sampling from the license lists. We have to sort of walk a fine line.

We certainly want to improve cooperation with the survey among anglers, but we also need the cooperation among just the general public. We need to get not just anglers in the survey but also the folks that don't fish, so we don't end up sort of over-representing the anglers. If we get them to sort of respond at a higher rate than the non-anglers, in a sense we don't get enough zeros showing up in the data and that can lead to overestimates of fishing effort. Yes; your point is well taken. It is just how best to do that so we don't end up having the folks that don't fish just look at it and, say, fish, this doesn't apply to me and then throwing it away. We do need them to respond as well.

DR. BOREMAN: John gave a good answer. Also, we recently – the Executive Steering Committee – and I've been the Chair of that for the last six years or five years – we are totally revamping the charge of our Communications and Education Team, making it more of a regionally based organization, or at least part of MRIP where we can rely on the regional folks on the councils, in the fishing public and so on to give us better guidance on how best to do the outreach in a particular region, so customize our outreach and education region by region.

I learned that the hard way when I went out to Guam to talk about MRIP, and I used the term "recreational fishing" out there. I got lectured by almost everyone out there that they do not fish recreationally in the Western Pacific; they fish to live, they fish for food. It is quite a difference. We are very sensitive to the differences we have around the country regionally.

This whole idea of implementation, transition; the implementation phase of MRIP is we're going to be really engaging a lot more regional partners in this whole exercise, not only communications but all aspects of MRIP, to make sure that the estimation procedures, the way of surveying and so on is customized and the efficiency is maximized for each of our regions.

DR. BUCKEL: I had a question that is unrelated to your talk, but it is about what the interview questions are. Here in the southeast we've got an increasing number of discards of many of the reef fish; and the discard mortality of those fish increases with depth. Is there any way to try to get depth-related information for the B-2s that could help with the live releases and that could help with our estimating discard mortality at a population level?

MR. FOSTER: Many things are possible; I'll say it that way. There is a difficulty – it is more difficult to get information at the more detailed level; so fish-specific information, we don't get length and weight information on every fish. I don't think we would be able to get the depth information for the individual releases or for individual releases.

Right now we get counts by species. I think what we could likely get and we actually do – in addition to the APAIS, we run the Large Pelagic Intercept Survey in Mid-Atlantic and North Atlantic for primarily bluefin tuna, but other HMS as well. As part of that survey, we actually do collect fishing depth, but it is at the trip level.

I think that would be something that would be easier to add to the general intercept questionnaire; and then you would have to use some sort of modeling approach to extrapolate that one value to the B-2s. The B-2s; some folks have issues with the accuracy of that because it is all recall information. We would be sort of having to expand that to cover individual fish. I think depth at the trip level is something that could be done. I don't think we would be able to do it for individual fish.

DR. BARBIERI: Are there any other questions or comments for John? John, again, thanks a bunch for taking the time and it was great to have you here in person. I think that the overview presentation was excellent; and having you here to address the questions made it that much better. I appreciate you taking the time to join us.

All right, folks, we have addressed a number of items already on our agenda. We are jumping around a bit in terms of the sequence of topics for discussion. I was discussing this morning with John and Marcel; and I think we are going to go next to the Snapper Grouper Amendment 29 discussion.

MS. BROUWER: Okay, Amendment 29 is the one that would implement changes that have been recommended by you folks to the control rule and would adjust the ABCs for ORCS species accordingly. There are also a few actions pertaining to gray triggerfish that got put into this amendment when the council realized that the stock assessment was going to be delayed.

We had public hearings in January for this amendment, so it is pretty far along in the process. The council is going to look at it again in June and approve it at that point, if they are happy with it, for secretarial review. What I will do is just walk you through the actions. There was in particular one issue that we wanted the SSC to comment on; and it has to do with white grunt.

Action 1 basically just say here is the old control rule, here is the new control rule, and this is how we intend to change it. The only change that we have is to Level 4 of the control rule, where the ORCS methodology would be the one that gets adopted for those species. Then the decision tree would remain as Level 5. That is the council's preferred.

It is pretty straightforward. Action 2 then goes ahead and applies the ORCS methodology to the snapper grouper species that are relevant for this amendment. It is not all of them; recall that there were several ORCS species that didn't get addressed, I guess, because there were issues with the data or species identification and whatnot; so there were a handful of species that didn't get included.

The way we structured this was each alternative pertained to one of the overexploitation levels. Alternative 2 has to do with the risk tolerance that the council would choose to assign to bar jack, which it the only species that is under a low risk of overexploitation. We have these tables showing the scalars for the risk of overexploitation, which the council approved based on the SSC's recommendation; then the risk tolerance scalar that corresponds to that alternative; what the new ABC would be, what the current ABC is, and then what the difference between the two is. That is how the tables are structured.

For species under a low risk of overexploitation, the council has chosen a risk tolerance scalar of 90 percent, 0.9; so that is Preferred Subalternative 2B. You see that would increase the ABC, and for most of them – there is actually two species for which the ABC is in fact lowered. For all the other ones it goes up.

Here is Alternative 3; the council has chosen Subalternative 3B for these species, which are the moderate risk of overexploitation species. That is a scalar of 0.8. Then Alternative 4 deals with species under a moderately high risk of overexploitation. That is where white grunt comes in.

Recall that white grunt; the SSC assigned it to two different categories of overexploitation, because there were some differences in the northern versus the southern populations.

That presented us with a dilemma, because then the council would have had to pick two different risk tolerance scalars for two portions of the white grunt population, which is in fact managed under a single ACL. Then the question for the SSC is are you going to eventually propose to the council that the white grunt stock be split up and managed under two separate ACLs or are we okay where we are?

What we suggested as staff to deal with this issue so we can move this amendment through is to take the most conservative approach. We proposed to the council to leave white grunt under the moderately high risk of overexploitation category and then assign it the appropriate risk tolerance scalar, which is 0.7, which is what the council has chosen for that category.

Then bring it up to you all and see what you recommend or what you foresee happening down the line for this species. I know it is on the list somewhere for a stock assessment in the next decade or something. The rest of the actions; I don't know if you want to stop here and maybe have some discussion about this and then go on with triggerfish?

DR. BARBIERI: Right; we haven't covered the high risk yet; that is still coming?

MS. BROUWER: We didn't have any recommendations from you on that so that has not been included.

DR. BARBIERI: Most of those actually did not qualify I guess for the ORCS approach. Are there any questions or comments for Myra on this amendment? Specifically, we need to address this issue. We are being asked to provide some input, if any, regarding the white grunt, and what they did; and if this is reasonable or whether the SSC has any disagreement with that approach.

DR. VAUGHAN: I think what they did was very reasonable. I think go with that because I don't think can really say much intelligible until the assessment is done. I think what they suggested was the best way to go at this time.

DR. BARBIERI: Any other comments so far or questions for Myra? There will be a broad discussion, but maybe we'll go through the presentation and the overview of the amendment first.

MS. BROUWER: The rest of the actions, as I mentioned, are specific to – well, no, I take that back. Action 3 is the one that would then take those ABCs and establish the corresponding ACLs for the species. We have five alternatives. Alternative 2 is the one that would take that proposed ABC from the previous action and make that the OY and the ACL.

Then Alternatives 3 through 5 propose a step-down for the ACL of 95 percent, 90 percent or 80 percent. This action was actually introduced into the amendment and was added to the amendment at the March meeting. The council didn't have a chance to select preferred alternatives, but they have been consistent setting the ACL at the same level as the ABC for all their managed species. Because there are a lot of species that are in complexes, then we had to display how these changes would apply throughout for each of those alternatives.

We have a gazillion tables that follow with all that information, which I'm not going to go through. Then Action 4 would modify the minimum size limit for gray triggerfish; and this was an action that the Snapper Grouper AP had been requesting that the council consider a size limit change for gray triggerfish for a number of years.

This action was originally included in Regulatory Amendment 14 when the council started developing that one. At that time the assessment was still ongoing and we didn't know of the issues that eventually surfaced; and it got taken out and then it got put back in this one. Currently there are two preferred alternatives.

Preferred Alternative 3 would specify that minimum size limit of gray triggerfish of 12 inches fork length for the rest of the South Atlantic states. That is currently the minimum size limit, but only off of east Florida; so Preferred Alternative 3 would take that and expand it northwards. Then there is also an Alternative 5, which would change the minimum size limit off of Florida and increase that to 14 inches fork length.

It is interesting, because Alternative 5 would address the issue of the minimum size limit being different on the east coast versus the west coast, because it is 14 inches in the Gulf, but it is 12 inches in the South Atlantic. It would address that issue, but then Florida would still have a different size limit form the rest of the South Atlantic states.

Anyway, the council also wanted to have the option of making these alternatives applicable to either sector; so then they asked us to put subalternatives in there that would allow them to do that. We have the analyses that follow. Basically there is some biological benefits, of course, of putting the size limit in place for Georgia through North Carolina.

Then we have an action that would look at a commercial split season for gray triggerfish. As you know, gray triggerfish are caught together with vermilion snapper. We have a commercial split season for B-liners. The idea is to reduce discard mortality by lining up those two commercial seasons. It was also something that was requested from the industry.

The preferred alternative is to make it the same thing as the B-liners, so that would be just a six-month equal split where the ACL is split equally between the two seasons. Then the concerns there, of course, are is this going to lead to like derby fishing early on? Is it really going to address the discard issue in a significant way?

The council's preferred is to go ahead and put that in place. Then they are looking at putting in a trip limit. Currently their preferred is for that trip limit to be 1,000 pounds. There is also an alternative that looks at putting in a step-down to minimize discard mortality, similar to what is going in place for gag when 75 percent of that ACL is met, then the trip limit drops down. Currently they don't have a preferred for if they are even going to do that. Right now they are looking at just setting a 1,000 pound trip limit without a step-down. I believe that is the last action.

DR. BARBIERI: Any questions, comments or recommendations for Myra?

MR. COLLIER: With the benchmark for a triggerfish coming up pretty soon, changing the size limit is going to impact selectivity; and that might not get accounted for in the stock assessments

and potential reductions from that. The trip probably would be – that can be incorporated in the stock assessments and projections, but it would be difficult to adjust for the new size limits.

DR. BARBIERI: Myra, just to clarify that, he is just raising a point that for the council to be aware that this could create some methodological technical confusion or issues in terms of the assessment, which already struggles with that estimation of that selectivity.

MR. CARMICHAEL: Yes; that is the key word; and it might be what Mike was probably going to say. If you change it for the future, they may have to make some selectivity changes for the future; so in the projections it might mean some more projections to say if the council has this selectivity in the future they will take some attempt to estimate how the selectivity may shift.

We often know that those things don't always pan out exactly like we predict when we try to change selectivities. It will probably lead to an uncertainty in some sensitivity runs. But I think it is definitely something that we should make sure gets into the projection scenarios for the assessment or else it will I think inhibit the SSC from making recommendations if you know there is a different size limit regime in place than what the projections are based on. We definitely want to make a note of it that it doesn't fall through the cracks.

DR. BARBIERI: Mike is taking notes right now, because this is something, as we look at terms of reference for that gray triggerfish, maybe we can explicitly request this type of analysis to be added.

MR. CARMICHAEL: Just thinking out loud; we've already done terms of reference, but we should probably make a request here that we modify the terms of reference as needed to make sure that this is addressed in the projections.

MR. HARTIG: I think the council has been sensitive in the past to trying to change size limits in the face of a new assessment. In this case the AP has been adamant and they have been after this for quite some time. We had an assessment on board; all of a sudden the assessment, because of the aging spine issue, got pushed back.

They are wanting to press ahead. When they are telling us be proactive on this species and let's get some of this done; so in the face of the uncertainty of the spine issue, we went ahead and approved this to go forward. That is the reason it is going forward now in the face of a new assessment.

DR. ERRIGO: I was just going to say what John was saying. I was just first going to say that it probably won't affect the actual assessment itself, because the terminal year of data is probably going to end before this goes in place; but it will affect the projections, which they may try to compensate for in the projections.

Oftentimes what happens is you get an assessment, it goes to the council, the council makes regulatory changes and pretty much invalidates your projections, anyways; but you deal with that and you move on. Then you get an update or something within the next several years and you see how you did.

DR. BOREMAN: This may be a question for Ben. This seems pretty prescriptive for an amendment to a fishery management plan. It really ties the hands of the council in a way. Every time you come up with a new assessment or new projections, you've got to go back and amend the fishery management plan.

How come this isn't being handled like through a framework action or something; things can be done quicker or a more formulaic approach that once the recommendation on the ABC comes in from the SSC, it is just plugged into the recipe and comes out the other end with the new ACLs and so on.

MS. BROUWER: We do have an expedited framework procedure that was approved recently through Amendment 27. That was approved earlier this year. We haven't yet had a chance to use it. I think the intent is when we have to go and make changes to gag based on the new assessment, go ahead and use that procedure for that.

The reason that this was put in here is because this amendment had already been started, was already in the works, and the council wanted to not delay any further the gray triggerfish actions; but the idea is to have this expedited framework procedure that would allow the council to make those changes rather quickly.

DR. BARBIERI: Any other questions or comments?

DR. BERKSON: Well, I'm not sure if this is the right time to bring this up, but I've got some comments on the ORCS approach and how we're implementing it. Should I discuss those now?

DR. BARBIERI: I think this would be the best time, because it is within Amendment 29.

DR. BERKSON: Well, I think we need to reconsider aspects of the way we are implementing the ORCS Control Rule. I have had time to think about it; I've discussed it with a lot of folks; and I think it is inappropriate how we are applying scalars in our summary statistic, because I don't believe that we are creating any kind of buffer for uncertainty.

The way we are applying ORCS is we're taking the maximum value over a time series and then we're multiplying that times a scalar greater than one. Now, first off, let me say I realize I am one of the people who promoted that originally. I am contradicting myself and I'm contradicting myself after thinking through this quite a bit and discussing this quite a bit.

If the idea is as you drop down tiers you are more and more uncertain about the status of the stock; and as you increase that uncertainty you want to have more precaution and have more buffer built in; by going with the maximum value over a time series and multiplying that by a scalar greater than one, you actually are giving that less of a buffer than you are giving the stocks that have been assessed.

It almost seems like a negative buffer, if you think about it. That just doesn't make sense to me, having had a chance to think about it. There are some other things that I've also been considering. First of all, if you look at the stocks in the snapper grouper complex that have been assessed, for the most part most have been at one time or another overfished and subject to overfishing.

If you look at the graphs that Marcel presented to us on the 14 stocks, I think 11 of the 14 weren't looking that good approximately. I am concerned that even using our ORCS methodology regardless of what came out of that, which we know is subject to a lot of subjective decisions, but it is catch-only method; I would think that the status of those stocks would likely be a little bit worse based on what we know about other snapper grouper stocks than how they have ended up being evaluated through ORCS.

If you are thinking about the prior for those stocks, a prior has to be that a lot of those stocks probably aren't in as good a shape as ORCS had them come out. If you look at the kinds of summary statistics and scalars that are being used across the country for catch-only stocks; to my knowledge the South Atlantic is the only region using a maximum over a time series and then multiplying it by a positive or by a scalar greater than one.

The vast majority of regions are using a mean or median and multiplying it by a scalar that doesn't bring it near the maximum with a scalar greater than one. I think one of the premises that people are thinking about when they're doing these is that by creating greater buffers for uncertainty in those lower tiers, you are giving incentive for getting additional information and for doing more advanced assessments; because in theory you would be able to reduce that uncertainty and hopefully increase catches along the way.

If what we end up having is a system where we're using maximum catch, a scalar greater than one, and what almost can be thought of a negative buffer; there is really no incentive at all when you think about it to collect additional data or to do any more advanced assessment, because chances are you are going to have a bigger buffer and more uncertainty.

I really think we need to think about the logic behind the method that we proposed on the fly that last time and consider some alternatives. I know that the horse is out of the barn. I'm horrible with my analogies, so whatever the heck the analogy is. It is out of the barn and we got the amendment on the way; but it is not finalized.

I think it is our prerogative, if we've had a chance to think through these a little bit more, to be able to still offer best scientific information available. I really question whether the Science Center would approve what we have right now and certify it as best science information available; the approach we're advocating. I would love to hear what other committee members think about this.

DR. BARBIERI: Jim, I'm going to present to you just my initial thoughts and not to prevent anybody else, but a few thoughts on this. The ORCS approach was really intended to apply the rationale that was described in the Methot Table that we discussed at the National SSC Workshop a few years back; perhaps more than a few.

The idea was how can we put a cap on those stocks that are unassessed; and if you look at the proportion of landings, the numbers of stocks that come are responsible for the vast majority of landings; and I'm talking about over 75 percent of those landings are already coming from assessed stocks.

The other ones have not been assessed, because they haven't risen to the top either because they don't have enough data, really; you, know, they are those that we called Monday the assessment-

resistant, data-limited stocks for which we're going to have to generate some catch level recommendation without an assessment even after our triage. We started application of the ORCS with 40 stocks; and we had to whittle that down to about 20, because there are 20 of them that even ORCS wouldn't cut it; so to that we have defaulted to third largest.

The idea was how can we actually for those stocks that already have a likelihood of having a lower level of exploitation and we assessed this using a number of criteria in that table – I mean, we had two full workshops with just not this committee as a whole but council members and industry members, and we formed subgroups and we discussed all the issues.

We were on the verge of perhaps not getting that process completed; and then at the end it kind of came together and we were able to complete it. The idea was after we assessed those exploitation levels, for the moderately fished stocks, we actually wanted to cap them. The issue with the OFL being based – and this is explicit in our ORCS report – of having an OFL that is based on average catch is that we create that ratchet effect.

We are going to end up half of the time just by chance in declaring a stock as being overfished or undergoing overfishing just because you go over the average; and the average by definition is going to most likely represent about half of your time series. The idea was to put an OFL at a level that would prevent this, because we already know that there was a band of variability.

This is fully documented as you look at the time series of landings. Do we want to encourage the council to be close, bring AMs, reopened; closed, bring AMs, closed; you know, because we are going to by chance be hitting those targets more often than not. If we put a cap and you look at the exploitation history of these stocks; they have not been actually had any type of hard quota before this last ACL implementation.

It is something that by putting that cap, we make a step in the right direction to prevent the fisheries from expanding beyond the level. The council came in and in this amendment explicitly is looking at a number of scalars. In terms of the risk policy of the council, which is really the body managing the fisheries, this is envisioned here that they do have the discretion and authority to assign the scalars that they feel are most appropriate to create that buffer between OFL and ABC.

We presented them with a table of options and we provided some recommendations. To me; I understand your point. I don't know what we would accomplish. We would go against the philosophical principles that I think we discussed in terms of trying to avoid the choke species effect. The incentive – and we have discussed this in the past – you know, incentive for species to move up; I don't think it is up to the SSC to punish the industry. That is my interpretation.

DR. BERKSON: It is not meant to be punitive at all. If you look around the country at all of the tier systems that are in place and the fact that those buffers are getting smaller as you go up the tiers; the other parts of the country don't do that to be punitive to the industry. They do that based on the theory of the precautionary principle in Magnuson-Stevens and NS-1. It is all there. This isn't motivated at all towards that.

DR. BARBIERI: I understand that.

DR. BERKSON: Well, you said the exact opposite; you said it was punitive. I wanted to make sure to state that so you do understand that.

DR. BARBIERI: I am saying that because the agency – a lot of the data collection issues and the reason why these stocks are not assessed – I mean, how will we provide an incentive by creating a choke species effect?

DR. BERKSON: Well, I don't want it to get into a debate between you and I, because we've got a lot of really good people obviously on this SSC; but you can use a value other than the mean. There are lots of values between the mean and a scalar greater than one times the maximum that will avoid the possibility or reduce the likelihood significantly of having your catch be greater than your ACL more than one out of four years. It is not either/or. That is what other parts of the country are doing. What I'm saying is our values are extreme.

DR. BOREMAN: I missed the meeting where these scalars and so on were developed. I'll give you my interpretation of the logic. First of all, OFL is out of the picture. You keep mentioning OFL; it is not even an issue here. We're talking just solely ABCs. We can't estimate OFL; there is no assessment.

I was looking at it by taking – first of all ABC is not a target; it is a cap by definition. You cannot exceed the ABC, the council can't. We're looking at a time series of catch past ten years for a fishery that doesn't appear to be in trouble. It is just tooting along at whatever rate. By selecting an ABC that is related to the maximum catch in that time series, we're saying that the maximum catch is the upper part of the range that is acceptable, because we had the maximum catch; it didn't appear to screw the stocks.

The stock is still out there doing well; so the ABC should be at least as high as that maximum catch. Remember the ABC is a cap, it is not a target. Maybe we should put a little more addition to that maximum catch, because the fishery may go above that in the future; but it still may not be too harmful. That is where these scalars come in, these multipliers of it. That in my brain was my understanding of the logic that happened at the workshop that I wasn't at.

I agree totally with Jim that we really need to think about that as a measure now. Take a step back and rethink it to make sure that our logic still makes sense. I thought we're having this workshop at our next meeting in October. I thought that is where we were going to take a look at this and work on it.

Between now and then, maybe we can do some work outside of the SSC, some simulations or some thought exercises on what we're really doing here; because what it appears as though we're doing is allowing all these fisheries to expand now beyond the current history of their catch; allowing them to expand at 1.25 and 1.5 times their current levels. Is that what we really want to do in terms of setting a cap on what we feel is a reasonable catch to avoid overfishing, whatever overfishing is for these stocks. That is my two cents.

DR. BARBIERI: To that point; I think that measuring the performance after we set the ACL – I tell you this because we've had this discussion in the Gulf, and we are looking for the last two or three years; what proportion of the stocks have actually met it or exceeded that ACL; so how effective is the cap?

We were discussing about our ABC Control Rule at the October meeting to look at performance of application of our ABC Control Rule measures. This is one that how many times for the stocks that cap is placed; how many of those have been met? There is an implementation issue there.

This is one of my points of criticism, reading the Caruthers paper, is that simulation, that MSE actually assumes that for every single stock, every single year, the ABC is actually met or the ACL is actually met in full. The actual fluctuation of up and down of the landings is not actually taken into account.

If we look at the history of landings when there was no cap and we see a fluctuation like this, to then go in and ratchet that up and say, well, from this point forward the entire quota is going to be met every year; I don't think that is a realistic expectation based on the history of the fishery and the history of landings that we have actual data for.

DR. BOREMAN: I would like to hear from other people. This has been a frustration; and I don't mean you to take this personally; but every time somebody makes a comment you feel obligated to address the comment. I would like to have a comment made by a member and have other people; give them a chance to respond as well. I don't think that you need to be defensive on what the SSC has done. This is an open discussion; we're all scientists here. We know debate is how we move things forward. I would like to encourage debate on this issue.

DR. BARBIERI: I agree, John; I didn't mean to take it personally by any means. I enjoy the discussions here. This is one of the beauties of this process is that we are comfortable with one another and we discuss things and engage in things and it doesn't get personal.

DR. BOREMAN: It is just that you have a tendency to feel you need to respond to every comment that is brought up before giving other people a chance to respond to that comment. I think you should wait to see what other people have to say before you.

DR. BARBIERI: Point well taken and I'll work on this.

DR. BOREMAN: Thanks.

MS. LANGE: I agree with John that we should continually reevaluate what we came up with. Again, that is something we're going to be talking about in the October meeting. I don't have heartburn at this point with our decisions so far relative to these stocks. These are bycatch stocks. The industry itself hasn't picked them yet to be directed toward most of these stocks in this complex.

To look at them and say there is a problem, we need to ratchet down, we need to decrease or not allow a little bit of an increase; I don't' think we need to do that. I think there is no reason not to allow the industry to decide whether or not they want to fish for those stocks in a more directed way. I don't have a problem with us recommending ones that are a little bit higher than the highs of the past for those that we don't have information on in order to get the information.

DR. JOHNSON: I think part of it is philosophical. We're multiplying by a bigger number than we're ratcheting it down by a tolerance factor; so we're sort of separating these two things apart

as opposed to in some of these cases; you know, multiplying by 1.5 and then multiplying by .75 gets you sort of in the same place. I would tend to agree on that adding to the greatest catch and multiplying by a scalar for a given stock that we don't have information from seems sort of counter intuitive from the perspective of what do we know about this stock and how much uncertainty there is.

But on the second hand, most of these stocks don't seem to be having problems at least overtly. Some of the MARMAP data suggests that some might be in not that great of stock status like white grunt and things are showing some declines. I don't have too much heartburn about the approach. Perhaps the fact that we've got those two numbers separated might be the part that has a little bit of issue.

DR. REICHERT: I don't necessarily disagree. I just want to caution, as I said in my presentation, that what I presented is not a stock status update. I also think that one of the things we have looked at and we should look at is, for instance, species that are targeted or somewhat targeted I think they should be treated differently than species that are not targeted at all in terms of our approach.

I think we discussed that in some of our ORCS approaches, because a lot of the species that we are discussing here simply do not appear in our catches at very high numbers. I want to caution against looking at species and then say, well, there is a general trend. Maybe there should be other species that we should be concerned or cautious about; just as a general remark.

DR. ERRIGO: Just as a reminder; targeting was one of the factors that ORCS looked at when we were making the risk of overexploitation. Also according to the ORCS method, stocks that are categorized as low or when you guys redid the categorizations, moderately low, are supposed to have room for growth according to the ORCS method.

It is those stocks that are moderate that are supposed to be capped with some wiggle room; and those that are approaching the higher risk of overexploitation that you want no growth at all, maybe even a little suppression of the catch. There is only just a part of the number of the species that you don't want any growth in or anything like that.

DR. CADRIN: I guess on the general topic of applying the ORCS methodology, especially the scalars, it is very difficult to have objective views of what scalar. They become almost entirely subjective; and when you actually look at the ORCS recommendation is that we should whenever possible climb out of the scalar approach into a more dynamic approach.

I think the Caruthers Evaluation says that. Jim was telling me that his student had just done some simulation work that showed that something beyond catch-only really helps a lot. At the World Conference on Stock Assessment Methods, Helena Geromont had also provided simulations that showed that even things like mean size or CPUE trends can add greatly to just the scalar approach.

I think what we've seen from the chevron traps and other things is that for some of these extremely data limited, that there is other information available. We can move away from this largely subjective call; should it be a scalar of .07 or 0.8, I don't know the answer to that. That is why I've been kind of silent here.

It is hard to hang your hat on anything; but I think what we were shown earlier is that we have some fishery-independent data that could be considered. Do we need another data-limited workshop where we really start to try to pull these things out of the scalar approach? We could argue for the rest of the day on what the scalars should be.

DR. BARBIERI: Right, but, Steve, my recollection is that fisheries independent – I mean, if you look at the table of attributes in the ORCS process; fisheries-independent data was supposed to be taken into account. We had a fisheries-independent working group – and I think Marcel was chairing that – we need to say, okay, what kinds of fisheries-independent trends do we have for those stocks that would be representative?

DR. BELCHER: As we've had the discussion about the mean and the median; I think even in our decision tree we all decided that wasn't the best approach, because we recognized that capping and ratcheting effect. I am not going to belabor the point either with the discussion; but I just do think if we're going to revisit this, those are all things that we need to think about is that we've already beat that horse on that discussion, because we started at the median and the mean and then realized that, well, we went to the third highest because we were looking at ten. I can beat a dead horse or I can beat a live one.

DR. BERKSON: I'm not advocating mean or median just for those reasons. Yes, thank you for acknowledging that. What I would go back to is the ORCS approach is obviously a method to deal with catch-only stocks. Bigger than that is the general concept of buffers and precautionary management that goes across all tiers and all methods with the concept being the less certain you are about the status of a stock, the more conservative you must be with management and the more precautious you must be.

That is built into international agreements; that is built into Magnuson-Stevens. That is a tenet of proper resource management and sustainability. Like I said, that is bigger than ORCS, far bigger than ORCS. I don't know how we're doing that when we're adopting the approach we're adopting here, which is maximum with a scalar greater than one, which is a negative buffer virtually. No one has really addressed that; and I would like to hear someone say either why precautionary management isn't required or how that is being accomplished.

DR. CROSSON: I just wanted to point out something that has kind of been on my mind since yesterday. I think sometimes there is this assumption that maximum economic yield is identical to Fmsy. I don't think that is the case at all. I think there are a large number of reasons that fishermen may or may not harvest a particular species.

Those are going to be related to the portion of it that is allocated between the recreational and commercial sector, whether or not the commercial sector is a closed fishery or not in terms of licensed participation, whether it is under an ITQ, as we discussed yesterday with wreckfish. Without commenting again on any particular scalar that we're using here; I think that is something that seems to be built in and sort of looking – and we are limited.

I mean we are limited because we're using some very descriptive statistics and we are trying to infer quite a bit out of there; but I think it is important to keep in mind that there are reasons why a fishery may or may not be heavily harvested.

DR. BARBIERI: We're going to go through the list; and then since we have some extra time, it may not be a bad idea – John Carmichael gave a presentation to the council at the March meeting that reviews this whole process and walks through the whole rationale. Given the content of this discussion here, we might have a more productive discussion after we're doing this presentation; because instead of drawing from memory, we're going to have things more clearly outlined.

DR. BELCHER: Yes; the other comment I wanted to make, which I know we've kind of gone round and round especially since we did the decision tree first; but when we did the decision tree, we all pretty much felt that OFL is unknown. We really don't even know, as we set levels for the ABC, any type of risk we're taking by setting the ABC at whatever level we pick.

With the ORCS approach, the ORCS is basically saying we have a proxy or some new way that we can derive an OFL; but I still don't see how we're any more certain on an OFL level. I don't understand how we can say anything about the risk that is associated with the ABC in the context of an unknown.

That is kind of – as we have those discussions on the bycatch; if it is really bycatch, do we think that – I mean, if we're acknowledging it as a bycatch, then it says that it is kind of almost an incidental take and it just happens to be a market, right? I guess my point is that as we say this and we're saying we're concerned because we're ratcheting up to be above, but then coming back down that there is a more proposed risk in that; I just don't see how we know what that risk is.

DR. BERKSON: To that point; bycatch has nothing to do with the amount of impact on the stock or not. You obviously can have a bycatch that is greater than MSY. It doesn't have to be targeted to have the catch have a significant impact on the stock. I'm not saying that is the case with these stocks all or any; but just to assume that because it is bycatch means it is not an issue is completely incorrect.

DR. BELCHER: Then let me clarify. My main concern is that we don't know what OFL is. We're trying to assert that there is a known OFL, but we don't have any high degree of certainty with how we're calculating that OFL because it is based on catch data, which we've acknowledged that catch data isn't always indicative of the population.

I think that is where I keep getting that same – I felt more comfortable with the decision tree, because we were asserting OFL was unknown; so we don't know what the risk is of that ABC. Based on all we can say is that on the trends this is kind of where we feel it could be; it can be ratcheted down; but with the ORCS approach and setting an OFL, we're almost giving a little bit more certainty of what that risk looks like because there is a number there.

DR. BERKSON: Yes; I don't know whether it is to that point or not so I'm sorry to jump in if I am. What we've discovered about the ORCS approach; I was the lead author on that paper, so I know a bit about it. I've been involved in applying it twice now, both in the Caribbean and here. I think those are really the only two places it has been applied so far; Mid-Atlantic, too, okay.

My opinion about what we have discovered about that approach is that theoretically it is more sound than the other catch scalar approaches. It takes into account more ecology, more fisheries, and more management aspects. It makes more sense; that is the positive. The negative side to it

is it has far more subjective decisions that go into it. The bottom line is we still know nothing about the dynamics of the stocks, because all we have is catch.

If all you have is catch, you are not going to know about the dynamics of the stock. We've got an approach that makes more theoretical sense, that still won't get at the dynamics, where we've compounded the number of subjective decisions. I don't have a warm, cuddly feeling about the approach. I'm far less optimistic about it than I was when it was constructed. I think a lot of us who were involved in its construction feel the same way; just to throw that out there.

DR. BARBIERI: We have some time. We bought some time through the agenda, because some issues just move faster. At your wish, we can go to the Carmichael presentation, which will walk us through, since we are in the middle of this discussion and we have the time, of the decisions, and that might help guide some reevaluation or whatever desire we want to have in going forward. I would say that maybe we take a ten-minute break.

DR. BOREMAN: I just am wondering what the outcome of that – if we do have the discussion today: what would be the outcome and how would that impact what Myra has up there on Amendment 29? It is not going to change I think how we're going to respond today. It would be useful I think in the fall when we have that workshop on rethinking ABCs and so on.

Maybe that is a more appropriate time for John to make his presentation as a way of kicking off that workshop and setting the tone there. I'm just wondering if we're going to sit around today for a few hours and talk about this, but then probably come to the same answer, well let's devote a whole workshop to this in the future.

DR. BARBIERI: That is an excellent point. The workshop for October had been planned to be more focused on the P-star thing. But this is relevant, it has to do with the ABC Control Rule, and I agree maybe we prepare this discussion to have – we're going to be reevaluating that whole topic, anyway.

DR. BERKSON: I don't know what the endpoint today would be either, and I don't know what the endpoint of an eight-hour session in October would be given how much we have to talk about on all this. We continue to talk about all this and try to figure this out. I guess my main endpoint here for the Amendment 29 at this point it is to make the point that the approach that is presented there is no longer a consensus approach of the SSC; because I, for instance, no longer support the approach that is up there. If it is being presented as a consensus-supported approach as of the last meeting, that is fine, but it is not a consensus approach as of now.

DR. BARBIERI: Relative to Amendment 29, the question is here is Amendment 29 in front of us for us to provide comments from a technical perspective. To me that matters, because now we are having this discussion and for all the right reasons; but we are having the discussion that this may not represent really do we want to withdraw the ABC recommendations that we've made before?

MS. BROUWER: Just to bring us back to the actual amendment and the numbers here, like I said, there are only two species for which the ABCs would go down. For everybody else the ABCs go up; but there are three species for which the ABC goes up quite substantially. I would like to just hear from the SSC and just have it on the record whether there are any concerns for

those three species. That is the Atlantic Spadefish; the ABC under the preferred subalternative would go up by 623,000 pounds.

Gray snapper; the ABC would go up by 451,000 pounds; and then, of course, there is gray triggerfish whose ABC would go up by about 90,000 pounds, and we all know what the concerns are with that. All the other ones, they do increase but not quite as substantially, so if there are any concerns with any particular species – and I just mentioned those three because those are the bigger ones.

DR. ERRIGO: I think for all those species, the reason why they go up so much is because of the max landing within that time period; there is a spike in the recreational landings. I haven't personally looked into the spike, like into the intercept data and this and that and the other thing; but the spike in landings is from the recreational sector; it is not a commercial spike.

DR. BERKSON: Obviously, my concern is not based on the results of implementing the method; it is based on the method and the approach.

DR. GRIMES: Well, I don't know if I want to say anything or not, but I'm reminded of Mark Twain or Will Rogers or somebody who once said that sometimes it is better to keep your mouth shut and have everybody think you're a fool than to open it and erase any doubt; but I am inclined to agree with Jim's logic. At least in the application of the methodology or the development of it, it is more risk prone.

That is sort of the approach that we're taking to it. I don't think we're going to resolve this today. Mostly what it really says to me is that I don't think anybody is really happy with these catch-only approaches to things; and we should really be encouraging the center or our council to encourage the center to develop a serious program to evaluate and utilize these data-limited methods and try to get away from having to use something that everybody knows is pretty unsatisfactory.

DR. BARBIERI: Let's take a ten-minute break and then we'll come back and see where we're going to go from here. Okay, folks, back to the grind, literally.

DR. BERKSON: I just want to make a clarification of something I said earlier. I was talking about how there is a need to collect better data and improve stock assessments; and in the process we would be able to provide improved management advice. I think that is a very standard thing that we all know and say.

I used the word "incentive", which is not the word I meant to say. I think that came across incorrectly. I did not mean to imply in any way that the industry is responsible or should be responsible or should take the brunt of this to get to that point. If that is how it was interpreted, I want to correct that and say that was not what I meant to say.

DR. BARBIERI: Are there any additional comments or questions? I think we need to provide Myra some generalized guidance here on where we're going to go. I mean, Amendment 29 at this stage is put before this committee and we are having some excellent discussion; but where do we want to go with this?

MS. BROUWER: That would be very useful. As I said, the council is scheduled to approve this to be submitted to the secretary in June; but they could always take no action on some of these actions in the amendment and proceed and submit it to get the other actions implemented. If the SSC feels strongly that perhaps the council needs to take a step back on the ORCS, then they could certainly – it is not going to delay the development of the amendment, but they would appreciate you guys being direct about that.

DR. BARBIERI: Comments on this point, please, from the committee. Let me phrase this as a question to try and facilitate discussion here. Are there any concerns from the committee that this amendment proceed with the catch-level recommendations as presented in this draft amendment that you have reviewed?

DR. CROSSON: I am not saying I'm going to hold the committee's feet to the fire, but I think I do have some concerns about gray triggerfish, increasing the catch level of gray triggerfish knowing that the assessment for it is going to be coming up here in the next few years; and this is a rather substantial increase from what we've currently recommended.

I do have some concerns about gray triggerfish. The rest of them I am not as concerned about, but that might be something other people in the committee can bring up. I just know that I've also seen that as a lot of other fisheries in the snapper grouper fishery have been restricted, I think the pressure has been increasing on gray triggerfish. It is a good-tasting fish and the market for it also has been increasing, so that is another factor.

DR. BERKSON: I don't know how the SSC or council staff wants to deal with this; but as I mentioned earlier, there is no longer an SSC consensus on the methodology for applying ORCS. That discussion needs to take place so we can return to a consensus. Like I said, I don't know what happens with this in the meantime.

DR. CADRIN: I guess maybe that is the best way to put it; because going back through the Amendment 29 document, it appears as though the council has implemented the SSC's previous recommendations. I know that there is a lot of sticker shock for the change in ABC that it allows, the increase, but that is really result-driven.

If we have concerns that the ABCs are increasing so much, we should return to the basis of them and not just the result. Maybe Jim's point is the best thing to make now is that there has been a lot done with data-limited and catch-only ABCs since that was done. There is new data available, as Marcel showed earlier.

Perhaps this needs a more programmatic revision rather than picking out ones that we're concerned about. I don't have the background information to know whether these increases are reasonable or not. I think it does need to be considered in a very programmatic, multispecies way. Other than that, it seems like the council is doing what we had recommended.

DR. CROSSON: I guess for clarification; the council is doing what we recommended before when we had a consensus; but it appears we no longer have a consensus. I'm not necessarily answering this question, and I'm sorry to bring it up, where do we move from there? If we're telling the council to move forward but we don't agree with the methodology that we used to recommend, where does that place us for the council?

DR. CADRIN: I think what I heard Jim saying is we need to develop a process to develop a consensus recommendation from the SSC on the methodology, on the approach, not necessarily the numbers. There are differing opinions on the SSC. I don't think we have agreement that the SSC doesn't approve this either. Those are two different things. There are some concerns in the SSC about the previous methodology that we recommended and that we may need to go back to see what has been done since that has been formed to come up with the revised recommendations.

DR. CROSSON: I agree with you, Steve. I guess my next thought is under those circumstances, we probably should recommend that the council consider creating larger buffers between the ABC and the ACL to account for our concerns.

DR. BARBIERI: Just to make sure that we understand where we are here; to some extent we don't' want our recommendation to the council to be equivocal. They are going to look at this in June and either vote it up or down. I think for this near future the question is do we want to move forward; do we want to continue supporting to move forward this amendment? We know that we are going to be discussing this in more detail in October; but by then this amendment will have gone for secretarial approval.

DR. BELCHER: I think the only thing that kind of would help me is again trying to make sure that I'm clear as to why all of a sudden this ORCS approach that we developed at the last meeting is now no longer meeting our needs; what is the criteria on which we base this? Again, I know obviously there are certain numbers like gray triggerfish that has people concerned.

I think the main concern is why are we now almost appearing – and I hate using the phrase "schizophrenic", but I almost feel like we've just done a complete 180 from where we were less than six months ago. I think it needs to be clear why now all of a sudden we're pulling that off the table.

DR. BERKSON: Well, I had hoped that I had made that case. I tried to do it several times today. It is related to precautionary management and buffers and summary statistics we're using.

DR. BELCHER: But I guess that's my point is what has changed? That is what we went into it with. It was fine when we went into it with that; but why is it now a problem?

DR. BERKSON: It is a problem now because we've had more time to think about it. We've had other regions of the country adopting scalar approaches, and we've seen what they've done. We've had evaluations of various approaches like the Carruthers Evaluation. There has been the data-poor workshop in Miami where these kinds of topics were discussed.

As Steve points out, there has just been a big evolution of these approaches and the application of these approaches as well as the evaluation of these approaches in the past six months. I think that has caused a lot of us to think more about how best to implement these.

DR. BELCHER: Not being disrespectful, but not everybody at this table has had exposure to everything you've had. Saying that there are a lot of us – I can speak for myself; I don't have all that evidence in front of me. I know what we went through for debates back when we set the ORCS up.

I'm kind of in that vein of I need to be more sold than just – again, I am not disrespecting what you have for experience; but I need more than just what is your summary of what is out there for information. Show me more so that I can feel comfortable with us back-burning this, because right now, like I said, that whole idea of doing a 180 from where we were six months ago really bothers me.

DR. BERKSON: I don't think we have the time to do that now; and I didn't anticipate us having the time to do that now. I haven't made presentations or collected the kind of data that would be required. My goal was to bring this up as a concern and to ask the committee if it was shared; and if so, how we were going to move forward with it. It wasn't to suggest an alternative approach on the spot that I expected everyone to jump on board with or vote on or anything like that. It is to express the concern to get everyone thinking about it.

DR. LARKIN: Right; so I would say as sort of an outsider listening in on this discussion and maybe providing a different perspective; I think when we set up these approaches and even when we went to the wreckfish example last time; in my mind it was always at some point we made the leap to accept them.

But at the same point we said you know what, we're going to have to go through this a couple of times to just sort of figure out if it works or not. After the wreckfish discussion, I was left thinking; oh, now, it is earlier than I thought, but now might be the time to go back and think about it, because things to me like even the comment if we get more information on the stock, we'll be able to make better management decisions; not unless it includes all factors of input for stock.

I don't think having all information on stock allows you to make better management decisions if what is happening with landings is economically based. It is still not clear to me if the way we incorporate that information is capturing what we want it to do. That is the example with the wreckfish. I guess I can't weigh in on this particular issue; but I am sort of fine with thinking that we might need to reconsider how these things work after we do a couple of them.

DR. YANDLE: Again, just piling on from another semi-outsider perspective; I think there is a need to start thinking about this more as an evolutionary approach. We spend some time working with what we have right now; and if we want to put a time limit on it before we start looking at it again, that's fine.

But we need to be aware that what we are working with right now is very much a first effort; and it is okay; it is not written in stone. We are going to need to go back and revisit it as we learn more about how it works and refine it. As a policy analyst, that is the way that good policy is built is when you allow it to build and change as you stress it and see what works and doesn't work.

MR. HARTIG: What I was going to say is I've looked at this process; I saw the increases. I heard some comments from the environmental community. To me I just thought it was one more step in this data-poor process. This was our next way to deal with data poor, our next best way that the SSC saw us to move forward. Knowing that there are other data-poor methodologies that are coming forward all the time evolving through this process, as Jim has mentioned; you

also have to take into consideration the time it takes for us to develop these amendments. It takes us a couple of years to do these things.

Once we start on this process, it takes us a period of time to get there; and once we get there and then all of a sudden; well, there are other data-poor methodologies that are better. Yes, there are, but right now are they being used and are they being implemented and are they being functional in the process? From what I saw, no, they were not.

Yes, we're having all these discussions of the Southeast Fisheries Science Center, and those are ongoing. We're having these different methodologies being discussed at the scientific level and making progress there; but they are not ready for primetime yet. For me this was just one more step, one more way to get a better informed catch level for these data-poor stocks.

To me, I didn't have a lot of heartburn. Well, you could see what the council did based on some heartburn from the NGOs. We went in and put in a reduction scalar type thing at the end that we could implement. We don't have a preferred on that yet. We did do that based on their heartburn; so that is something that you could consider at this time.

You could say we think you ought to use the maximum scalar that the council has considered or something even more than that. But to me right now we're in an evolving process that has been discussed; and that is where I think we are. The heartburn over the science – of the results is one thing, but this is a process that you all have approved.

I just don't want to get into the situation where the next time we do this there is more data-poor information that are better coming forward and then we have to do this all over again. I don't want to get into a revolving wheel situation where based on the results of one data-poor methodology that the next time it comes up we're not going to go forward with it again, because there are more things being considered. That is where I am.

DR. BARBIERI: Jim just to clarify; I think basically you are not saying that perhaps we should be modifying our control rule to kind of withdraw ORCS as one of the data-poor approaches. It is basically a discussion of how we applied, right, in terms of the catch statistic that was used and how the scalars were applied.

DR. BERKSON: That is correct.

MS. LANGE: I agree with what Carolyn said; for us to just suddenly change, we've been talking about and it is already on the schedule for the fall to reevaluate and look at this. It is already on our schedule; and I don't think there is anyone that disagrees with this is an evolving process.

I guess the concern is, not knowing – I think I do now, but initially what Jim was suggesting; it sounded at first like he meant just throw it all out with the bathwater and start over. But, we're all on the same page I think that this is an evolving process and we planned on starting to so some of that come fall.

The issue is what do we provide for recommendations to the council at this moment? Is there a reason to say, well, forget Amendment 29 even though you've done two years worth of work on

it; we need to wait until we can give you some other advice. I am not sure exactly how we resolve that.

DR. BERKSON: To be specific, there are two critical decisions within the ORCS process that I am questioning our decisions on. One is the choice of the summary statistic for the catch time series. We can use anything as long as we can justify it. We chose to use the maximum value instead of the third highest, two standard deviations above the mean, whatever.

Obviously, that is an extreme value. That is a high end of the range potentially. You could I guess do twice the maximum. But, anyway, that is the first decision point I am questioning. The second one has to do with the scalar then that we multiply that summary statistic by. We chose to use a scalar greater than one.

We have gone with an extremely high summary statistic, and we have gone with a scalar greater than one. My argument is that is not precautionary; and that implies less of an uncertainty buffer and less precaution that our other tiers; and these are the stocks we know the least about. I'm not saying throw out the ORCS approach.

I'm not saying throw out all of the work that went into putting together Table 4; that critical table within the ORCS that really was what our workshops were about, saying all of that still holds. What we need to discuss at some point are those two critical decisions and whether that is precautionary enough and whether we really want an uncertainty buffer to be significantly less for stocks we know the least about.

MS. LANGE: Well, I guess to that point, I still am comfortable with the options that we chose. I think we documented it very well – and Carolyn talked about and so did Marcel and so did Luiz – about the concern about hitting an arbitrary cap on a stock that doesn't have a directed fishery and then winding up with the accountability measures closing fisheries off.

DR. BELCHER: Yes, and again I don't want to keep saying it over and over, but OFL is still a measure that is coming from the catch. In the sense of what we're doing through the ORCS approach as again falling back to our decision tree method, which is still a method that is on the books where we have OFL as unknown; we don't know what the risk is.

I think that is kind of that misleading thing of we don't have any idea of what the uncertainty is, because we don't even know what we're comparing that level of ABC compared to. We don't have an actual what is OFL. We don't know that number that we set as OFL is actually OFL, and we are basing that on a buffer that says it might be too close; but do we know that that is an OFL value? Again I still fall back to OFL as an unknown status at that point.

MR. CARMICHAEL: Your memory is good, Carolyn. You pretty much summed up exactly what was listed in the report from the ORCS Workshop. And just a refresher on folks' minds, there is not "a" scalar; there are actually three levels of risk of overexploitation scalars. That is not the only scalar that is in the ORCS process. There is also a risk tolerance scalar. That is why even for some of these stocks that are moderate, most of them; while this scalar was 1.5, in some cases the actual ABCs are only slightly above the max catch or slightly below it. AT 1.5 and the 75 percent risk scalar, most of them come out at 1.125 times the catch. Some of them where the council had a higher risk tolerance, they are actually slightly below.

DR. BARBIERI: John earlier made a good suggestion to include this topic for discussion. We're going to discuss all of this in more detail. This can go on for a while, because we're going to have multiple opinions here and we don't have the time to review everything today. At this point, I think to give Myra something to walk out of here in terms of how the committee feels – and Chairman Hartig voiced his concern as well on do we consider this still the best scientific information available and reliable for management advice to the council as it relates to Amendment 29.

DR. BOREMAN: I would say, yes, because we are using the term "available". Now, we have a lot of suggestions for improvements, but nothing has been put on the table or discussed at this point. I would make that recommendation but also give the council a heads-up that we are going to be revisiting this whole methodology in October at our meeting. The rules from then on, or whatever you want to call it, may change in the future. The basis for our recommendations may change in the future; but as of now what we have on the table is BSIA.

DR. BERKSON: As is stated, I don't agree with that; I don't think it is best scientific information available. I am not sure how we deal with that since we operate by consensus. I recognize we're going to be dealing with this in detail in October, and I am perfectly willing to wait until October to take that up. But in the meantime, I can't go along with saying with what we have is best scientific information available until we have that discussion.

DR. BOREMAN: My understanding of Roberts Rules and consensus is you can have a consensus with a minority point of view. From the discussion around the table, I believe Jim has a minority point of view at this point. We can put that in the record as a minority opinion, but still this is the consensus of the group. Is that satisfactory to you, Jim?

DR. BERKSON: That is absolutely satisfactory. Thank you for the suggestion or clarification.

DR. BARBIERI: That is an excellent point, John. John Carmichael was kind of providing some guidance procedurally, because we operate by consensus. If we get into an impasse, it is still okay for us to call a vote on some of these decisions; but in this case it is unnecessary if Jim is satisfied with that and we're going to have our recommendation, but point out that we had a minority opinion that expresses an alternative to what is presented there.

MR. COLLIER: Jim brings up a good point; is there a desire to push this through or can we just wait a few more months and have much better information at that point? But then again we have these ABCs that are in place right now.

MR. CARMICHAEL: I guess one question would be what is much better information? I don't think we have any new information that we didn't have when we started doing the ORCS workshops a year and a half ago. We do have some, as mentioned, you know, the data-poor workshop and there are methods that are under development; but as far as specifics for our stock, as far as information, any new data, we don't have that

We may have a different approach as to how we deal with the scalars that are suggested or we may be able to pull from other places and come up with a justification for a different statistic, but that will be it. That would really be a different – I guess we should say, what is it, best judgment of the committee.

MS. BROUWER: I just wanted to remind everybody, in case you've forgotten, that the current ABCs for these species were set using the decision tree approach that you all put together. Most of them are based on the third highest; the ABC is the third highest landings between '99 and '08 I believe was the time series.

DR. BERKSON: The new information we would have is not radical. What we would have is a list of how this has been applied in other regions and the justification for how it has been applied in other regions; scalar approaches in general and the scalars that have been used. We would have things such as the Carruthers Evaluation that wasn't available when we originally reviewed this stuff; nothing earth shattering. There to my knowledge will not be new methods that can be applied. The bottom line is the choice of the summary statistic, and the scalar is still going to be a subjective decision that is going to have to be justified with our best guidance and expert judgment.

DR. BARBIERI: At the risk of sounding again like the overbearing Latino; looking at that statement there that Mike put on the board and John asked Jim specifically, and I think we have a general feeling from the committee that we go forward, we consider this the best scientific information available; and Jim obviously disagrees, and this is perfectly fine. We need to provide some kind of unequivocal direction here for the council about how the committee as a whole feels, because this is something that is being requested as one of our action items in reviewing this amendment.

MR. HARTIG: I would just say when you all revisit this and you give us some different scalars and catch statistics or whatever you are going to use to change this information, we could do it under the expedited framework and have this in place quickly. There is a vehicle to get your new recommendation in a relatively short period of time compared to the past.

DR. BARBIERI: Yes; and this is an excellent point. From the management side, this recommendation is not going to be written in stone forever. Unless we have anything, I think we are at a point where we can move forward with Amendment 29.

DR. BOREMAN: I don't see the minority opinion up there at all. Yes; but you see you have SSC recommendation, but the recommendation also includes a minority opinion so that should be there.

DR. BERKSON: I don't know whether it needs to go right here, but obviously at some point I would like to see what the minority opinion is documented rather than just that there is a minority opinion. I think that is what you're getting at, John, which would be somewhat comforting.

DR. BARBIERI: I don't disagree; but usually we take sort of telegraphic notes. We are going to draft a report that is circulated; and there will be opportunities for you to add text to that. Unless you feel that this should be done over here and you have a specific statement; there will be opportunities for you to outline what your concerns are.

DR. BERKSON: Given that Mike does an excellent job writing up 10 to 15 pages of notes in a meeting; I would think he could draft a sentence summarizing my point of view at the current time.

DR. REICHERT: Jim, perhaps you can provide a couple of sentences to Mike. Then we can all see the report after it is written and I think that is probably a lot easier and quicker than us trying to wordsmith something.

MR.CARMICHAEL: But staff's plea on that point; the goal here is just summary notes and bullets. It was never intended for this to become your report and the last word on what you say about these topics. We very much would appreciate folks looking at things, maybe points that they made or things that they felt particularly well versed in, and flesh out these notes as necessary in the report. That has always been appreciated and it will help the report immensely.

MS. LANGE: Well, I guess Jim is going to talk about this with Mike, but I don't think inappropriate is the – I think it is more that he has concerns relative to the catch statistics and scalar used and not that the approach itself was inappropriate.

MR. CARMICHAEL: I will raise an objection to saying OFL in there; because in your report you said there is no OFL for these stocks; and I thought John Boreman did a particular good job of summing that up that there is not an OFL. That should be off the table. If I think of what we do for the October workshop, how might we calculate "buffer" to help you make a decision on what is sufficient? Buffer between what if we don't have OFL?

DR. BARBIERI: Okay, folks, we will have time to wordsmith this during our full report preparation. I think we are ready to move on to the next item.

DR. BELCHER: One quick question. Worse case scenario, if I remember what we went through for the procedural outline of how the control rule and everything works; worse case scenario, doesn't the decision tree approach still stand in lieu of the ORCS not applying? In that essence, I mean technically the council does have some – if we did take the ORCS and kind of table it, they do still have the ability to work off of the decision tree numbers. I just wanted to make sure I was understanding that correctly, because I wasn't sure at one point if we were substituting ORCS in lieu of the decision tree; but after we went through our exercise the other day, I thought that was till our lowest level.

DR. BARBIERI: And it is.

DR. REICHERT: Well, I've got a question. Way on the top is there is some concern about certain species; and I can imagine that if we want to make a recommendation to the council, what does that mean "we have concern"?

DR. BARBIERI: I don't disagree, Marcel, in terms of us resolving this here, because this is going to be circulated –

DR. REICHERT: All I'm saying is the council is asking us for recommendations; and so if that is a recommendation that this is part of the following discussion, then that is okay; but raising concern is not a recommendation especially since gray triggerfish that is specifically mentioned there. The question is, is the recommendation to the council to, for instance, change the ABC recommendation for that specific species? Do you know what I am trying to say here? I mean just raising a concern, as a council member I think it would be difficult – okay what do you want us to do with that?

MS. LANGE: Well, addressing those, I guess there were three stocks that you mentioned, Myra, that was unusually high. Mike indicated that he thought that was driven by the recreational issues. We talk about the highest catch statistic. Is there a means to adjust that if there is concern?

We used in the assessment earlier yesterday a three year-average, because there was concern about the recreational number being like four or five times what it was expected. Can that be done in this case? Whatever that catch statistic; is that statistic set in stone or is it an estimated catch that has high variability or variance that could be used as an average or something?

DR. BARBIERI: Because we are not going to be able to do this now or we are not going to have the ability – even if that calculation is made to be reviewed and presented and vetted before June; we're going to have our long discussion in October. As Chairman Hartig pointed out, if we want to change some of those catch-level recommendations after our October discussion; they can do this through a framework procedure.

MS. LANGE: I guess this was an application of the ORCS process as we recommended. I guess the question is, is there a caveat related to the catch statistics that could be considered? This is also to Marcel's question.

MR. COLLIER: To that point; Mike said it is driven by recreational landings; and if there are questions with that recreational landings, then ORCS might not be the best approach and we go back to our decision tree. We do have this ability to do it right here just by looking at some of the landings' information and having a discussion about it.

MR. CARMICHAEL: I would say most people observing this process would say isn't that what you did in the ORCS Workshop and spent two days on looking at those different catch statistics and looking at those trends which led you to the statements there where you didn't think – there you said the median was inadequate to represent the high fluctuation.

So, yes, we know they do have high fluctuations and you picked that statistic. We would be second guessing that; and I would think that second guessing it on a species basis because you don't like the outcome of a particular one does smack of being kind of arbitrary on that stock. I think we kind of all know when you apply a general rule, you discuss that rule logically and then you look back and say, well, how did that work out for these 25 stocks?

There are always a couple you may say, hmm, that is interesting, but we all know that sometimes unless you have a real reason to say that particular value for that stock is doubtful; it kind of undermines your whole logic if you pull that one species out. I think a lot of these, as Mike mentioned, they are recreational; so they are highly uncertain.

These have very high PSEs, mostly. They are rare species in the occurrences. Remember the actual landings could be significantly higher than the maximum that is actually what is reported. True landings that happen could also be higher, which as I recall was one of the discussions back when we were at the ORCS Workshop; that it is just an estimate.

DR. ERRIGO: If these are only reliable catch and you are going to say, well, if there is a lot of recreational catch in the total catch and the recreational catch is not reliable, then we'll take out

those stocks; I don't think you'll be left with anything, because most of these stocks have pretty high PSEs; they are rarely encountered; they have these aberrant spikes in recreational landings and whatnot. If you don't trust the recreational landings, I don't know as if you will have much left for ORCS.

MS. LANGE: Maybe I misinterpreted your initial comment, Mike, when you mentioned that there was the recreational. My impression was it was like a single year where suddenly it spiked and the PSE may have been really high on that particular year and not that it was high.

DR. ERRIGO: I don't know what the PSEs are like across all years. I know that there is a lot of fluctuation in the catches in most of the species; and that, yes, there will be a particular year where there is like a recreational catch and it was really high. I think spadefish, that was definitely the case.

Spadefish, gray snapper and gray triggerfish; I can't remember what gray triggerfish looked like. I think gray snapper had like a big spike, and that is what caused that. Gray triggerfish; I can't remember what the trend looks like; I have to go back. But Atlantic spadefish kind of goes along and has just one huge spike in one year and then comes back down and goes along again. That spike happened to be within the time period that ORCS used.

MR. HARTIG: If we take final action on this in June, it won't be implemented until January. By January you will already have had your October meeting. You will already have the new catch statistics and scalars to be implemented. By framework, essentially these new recommendations would be in place for a very short time before the new recommendations came forward and we could implement them. Some of this discussion about trying to deal with some of these things today; we can probably almost head it off at the pass by the time we implement the new framework procedures from your next review.

DR. BARBIERI: This should help attenuate at least some of the concerns that we are going to have something set in stone and that it is going to be incredibly risk prone and there is no opportunity for us to review, revise, and provide recommendations after we have a more detailed discussion in October. With that, I think we will move to the next topic.

We don't have a whole lot left, but one that we have to discuss is our review of the council's peer review process. I will refer you to our overview document. This was the first implementation of the peer review process. It will be helpful for the committee to provide some feedback on how that application worked out and the outcome of that whole exercise. If there are issues to be addressed regarding our existing policy, we have the opportunity to do it.

MR. CARMICHAEL: Just a bit of refresher; we had the wreckfish assessment come forward and we talked about how to handle it. We had an ad hoc process, and it was recognized along the way that we really needed a more robust process. At the same time we had the National Standard 2 Guidelines; remember, a group getting together and spearheaded by Steve.

One of the comments made initially in putting this piece together was maintaining compatibility with the national standard expectations. The committee worked on this, the council approved it throughout every step of the way. It has been reviewed by the lawyers with the regional office, and that led to the council ultimately approving this process.

Then our first application of it has been with the wreckfish stock assessment. If we think back, we did the wreckfish stock assessment. It started with submitting a proposal. You guys reviewed that over a webinar back in September. We had a kind of sidebar activity, which isn't documented in this, it is neither allowed nor prohibited, but everybody was on board with it, which was to hold that assessment style workshop. That was the November workshop.

Then really we ended up at that point and after the December council meeting with a little bit of a timing issue, because we wanted that assessment to the SSC at this meeting so the council could act on it in June; but we didn't have an SSC meeting scheduled between October and now where we could discuss the peer review process essentially.

We went through the review; we had the proposal; we had the review of the proposal. Then we have this submission of the analysis and we're in this stage of the peer review process. There are some steps here about how it will be done and the SSC providing the Chair and who may participate and it could be done through a panel review or webinar or desk-style review, all those alternatives laid out there.

The intent of the process is that the SSC makes recommendations and then the council supports how it is going to be done. We approved terms of reference and reviewers. We ended up with that kind of time crunch in putting all of those steps together, making the deadline for this meeting; and that led to us holding that webinar meeting or conference call meeting in January.

I believe it was in late January where we went over the peer review process, took recommendations to the council for reviewers, terms of reference, and the approach that the council reviewed in March. Then we had the review workshop the week after. Timing was condensed; but throughout it the council was kept briefed at every council meeting.

The lawyers, both with the regional office who oversee things like are we complying with federal laws as well as the lawyers involved with what is an ongoing lawsuit for wreckfish, were involved in every step of the way to make sure that everything we were doing was compatible with our process as well as with the national standards.

I think we came out of the end of it with thinking we have a process that worked pretty well and seemed to address folks' concerns and addressed the legal concerns as far as we've been able to tell. The one thing that as I mentioned and I highlighted to sort of timing which led to our special meeting, because I think at some part we may wish to consider – if we get on something with an expedited schedule and maybe that is proposed and we see that in a proposal that it is going to create a meeting problem; perhaps we consider the review process, reviewers, and terms of reference for the review earlier.

Maybe when we're reviewing the initial proposal, if that seems to be the best way, so we make sure we get that done through a regular SSC meeting and don't have to kind of condense the schedule to meet things like publication in the Federal Register and that sort of thing and end up having to kind of go ahead on publicizing things before we've gotten the final council approval. Having gone through it and applied it; that was one area that to me really stuck out that we might want to reconsider.

DR. BERKSON: I'm not going to belabor this; and this isn't a point that others have to agree on or not agree on; I'm not going for consensus on this. But my opinion is this wasn't our process. Our process is very clearly defined and it involves the proposal, the assessment and then the review by the SSC.

There were additional steps put in here; so in fact our process has never been used and never been tested. This was some sort of hybrid between our process and a SEDAR without going through SEDAR Steering Committee; or I don't know what stages it went through; but we had additional steps.

I don't think we can really comment on how well our process works at this point or what modifications we need to make to our process, because we didn't follow it. That is not necessarily good or bad. That is not the point I'm trying to make; I'm just saying this is different than what we set up.

DR. BARBIERI: Any other comments, questions or suggestions with regarding this topic? In terms of action items from our overview document; it is basically recommend modifications and clarifications to the process. I think Jim just pointed out a few issues that could be better clarified or outlined more clearly.

DR. GRIMES: Well, the addition of that assessment workshop seems like a good thing to me. I think we got a better product in the end. Perhaps that is something you would like to recommend that be added to the process.

DR. VAUGHAN: I thought we covered the main points of what a SEDAR does; though maybe not completely paralleling it. We did have a combined data/assessment workshop in November that I participated in. Certainly, we've had I'll say updates in the past that have been of this sort, and I've been involved in other assessments like this elsewhere.

What would normally have been a separate data workshop or webinar and an assessment workshop I think worked to some degree covered in that one workshop that we had in November, with again a separate, I'll say, peer review that Steve and you guys participated in, what was that, January or February; a couple months ago, anyway; and followed by a review here by the full SSC. I think it covered the main points. I think partly maybe because wreckfish is a pretty straightforward single industry. It is like it used to be doing menhaden assessments; there was "the industry" and that was it; so it was pretty straightforward.

MS. LANGE: I think we did follow our procedure. I don't consider adding an extra step to be outside of our procedure – of our recommendation. I think we followed the process that we established; and through that process realized that having a couple of additional steps was helpful. I don't see that we can't be flexible. I mean eliminating steps is one thing, but adding something that we deemed important to accurate or complete doing it right; I don't see that being stepping outside our process.

DR. REICHERT: To that point, I agree. In this case that worked quite well. I think we may want to be careful to consider requiring that step; because I believe that if there is an outside assessment, we can propose that it may be good for the entity that does the stock assessment to include a data, either webinar or workshop, because it would result in a better assessment.

However, I personally would think that is actually up to the entity, the people who are doing the stock assessment rather than us requiring that. That is one of the things, and we discussed that during that workshop. As I said, it worked quite well with the wreckfish assessment.

DR. SEDBERRY: Well, this is sort of in the dead horse department now, but I agree with Anne and with what Doug said. I think that what we did worked. If it didn't follow the process, and I'm not convinced that it didn't follow the process, then we need to just relook at the process. I think the important thing here is that it worked. We learned some things about the process by doing this. In this dynamic kind of management that we want to do and constantly updating the way we do things based on what we learn; I think it was a great exercise. I think it worked to serve our purposes and the council's purposes.

DR. CROSSON: I'm not trying to beat a dead horse; just trying to clarify the way the BSSE should put this. I guess my thought is it increased the transparency in the system, which increased the trust in the process by all parties involved, just like a proper SEDAR does. The more open it is the more everybody can trust and see what is going on. To that degree we can recommend it to the sponsoring party, not necessarily require it, but just point out it increases transparency, which is a positive thing for the scientific process.

DR. CADRIN: I'll repeat some things I said on the first day of our meeting. I thought that the process added value and it met the spirit of our process and additional meetings I don't think violate the process. In fact, I think it was even more in depth than we had proposed. If anything, if there is a violation is that it may have been more expensive to the council than we initially proposed because there was another step.

If we erred on the side, it was doing more work than we had proposed doing. But again to me the proof is in the pudding of what came out. When we think back at just our last agenda item and seeing the fishery-independent data that is available, I think there is information to improve the scientific basis for many of our catch recommendations.

We should be open to these types of third party assessments from conservation groups and from industry groups or industry consultants as well. Really, what we're doing is coming up with a more formal way of considering that information; because considering that we used the MRAG P-star approach, that we've considered the Carruthers Document, which was funded by Moore Foundation; we already used information from third parties. It is a better, more transparent, inclusive process.

DR. BERKSON: Just going back to the beginning; I never used the word "violate". I never said that it wasn't in the spirit of our process. I even said that the additional meetings, I'm not making the point because it is necessarily a good or a bad thing. The point I was trying to make was our process calls for a proposal, the work to be done and then a review.

We haven't done that yet so I don't think we can comment on the effectiveness of that process as we defined it. We can comment on the process that was implemented in this case. Everyone commenting on it seems to think it worked quite well; but we haven't done it without those in-between steps.

COMMITTEE MEMBER: What did we miss?

DR. BERKSON: What did we miss? We added; we didn't miss anything? Once again I'm not saying that is bad. I think it would be different if someone gave us a proposal; they disappeared for six months, followed the proposal fine, and came back with a finished product and just handed it out to us.

I think whether that worked or not, we wouldn't be able to tell whether that was a good process or not from what we just went through is the point I'm trying to make, because we went through a different kind of process. I'll be interested when we do that two or three times to have this discussion to see if we think that is a functioning model and how we can improve it. The point I'm making is we can't comment right now on how functional that model is because we haven't done it. That's all.

DR. BOREMAN: Jim, what if part of the proposal was we want to come back in a few months and meet with a group of you to talk about data and methodologies, just what Doug and Company did, and that is part of the proposal? Would that be more in line with the model? That's what I mean; so when you say the process is proposal and then you wait and then you get the answer; well, what if the proposal included this interim meeting that was held?

DR. BERKSON: Maybe what I should be saying is this didn't follow the bare minimum of what would be acceptable in the process? I'm not going to beat a dead horse; I just wanted to get that on the record. I'm fine with where we are.

DR. VAUGHAN: Well, I would propose that in a proposal, before we approve of the proposal, that it have that at least some intermediary steps. I would be very disinclined to support a proposal that didn't have any of those steps; at least one or two steps in the middle.

DR. BARBIERI: John wanted to clarify an issue first.

MR. CARMICHAEL: A couple points on the record; one I think, Mike, I don't know that I would clarify that there were a lot of extra meetings. There was potentially an extra webinar because of the timing of our process and your meeting; so there was an SSC meeting, the January webinar. There was the workshop, which was part of the proposal as stated, that Butterworth said.

It was actually suggested by this committee when he first came the prior October; and when you set up this process, you discussed a lot about the need to deal with particular data. Within your peer review process here in this highlighted section, you indicate that it could include convening a SEDAR style data workshop. By all of these different things, I believe that we followed our process to a T.

Maybe there is a little gray area; was that workshop a data style workshop? I would consider that workshop to have been almost a perfect example of what we expect for a standard type assessment workshop.

Most of the discussion was data and with guidance as to how to deal with the data issues. Looking back into what guidance you provided to folks for proposals, it seems the door is wide open for someone to do just s they did; and that doing that workshop is perfectly in line with our process.

MS. LANGE: To Jim's point; I think the only point you're making, and maybe I'm wrong, is that if this was done to the bare minimum of our requirements, we may not be quite so happy with it and we might not have been able to go forward. On that premise, maybe we can't evaluate the letter of our process. For the next person or the next group that comes with an outside assessment, we may not be as satisfied if they only did this.

DR. BERKSON: Anne, I'm going to just let you speak for me from now on, because that summed it up really well. Thank you very much.

DR. BARBIERI: I hate to have to bring this up, because it will extend the discussion a bit; but the other day – and because there are folks listening and this is the official record of a council meeting – and it may have been the day before yesterday. Yes, I think it was the day before yesterday, there were issues.

Jim made a comment about the potential violation of NS-2 Guidelines in this process. I'm just trying to bring that back if we need to clarify that; because I know that later on we might be approached by General Counsel asking for clarification on the record and I think this is a good opportunity to clarify it.

MR. BERKSON: I am obviously not an attorney; I don't want to be an attorney; I don't want to give legal advice or get involved in these discussions. Having just read NS-2 again and NOAA's requirements for peer review and conflict of interest for peer review; my concern was that individuals who were part of the assessment workshop should not have been part of the peer review panel, because technically they were involved in the work product coming out of the assessment workshop – let me finish – and so they were basically reviewing that work.

I know that there were no improper intentions with that. I may be totally wrong with how I'm interpreting this. I have not checked with any counsel whatsoever; I'm just mentioning this. I guess what I am trying to do is I would like to see us have a process – if we're going to have a process, I would like to have a process where there aren't any questions at all about credibility.

I think if this ends up being a concern to anybody or a legitimate concern; we may want to correct this in the future so that individuals on the assessment workshop aren't part of the peer review workshop. Take that as you would coming from an ecologist on the SSC trying to interpret something like NS-2 and the conflict of interest guidelines. Thank you for your tolerance.

DR. BELCHER: But I think by having that mix; you kind of got away from the conflict of interest. It is the difference between the industry carrying it forward trying to -- and again, you know, on the side of how you are trying to look at your claim and how you are supporting your claim; you've got a balance of both sides of that.

There is always going to be a conflict of interest to a degree, right, because you have a vested interest in why you are doing the approach. I mean we do it – an agency is doing the numbers to help support itself to help drive its management. Industry is doing it because they are trying to either, A, in the case of what has gone on with wreckfish, there is information out there. The agency doesn't either have the time or the resources to address it in a more comprehensive manner. Industry has somebody who is willing to take it up, and you've got a balance of the

management people being involved in it in the industry. I guess that offset to me just seemed like it was a good thing not a bad thing.

MR. CARMICHAEL: I'm just trying to clarify where the potential conflict of interest is being identified; because the review panel members did not take part in the assessment workshop or the assessment. The chairs, and we had co-chairs, were at that workshop; but we treat chairs here as we do with SEDAR as facilitators and specifically and explicitly not as reviewers.

We have quite often had a chair who was at a data workshop or at an assessment workshop as we work through the process. One of the reasons we haven't said that the chair cannot have had any knowledge of the assessment is that having some knowledge of what is going on in the past helps them immensely in their facilitation role.

The other part is when we ask for people around this table to be chairs, I don't get a whole lot of hands raised up. We would have loved to have another SSC member have chaired that workshop, but no one else came forward to do it. That is why we've been a little bit relaxed in the chair. From the earliest days of SEDAR said the chair is a facilitator. When we got chairs from the CIE, the chair was described as a facilitator and not a reviewer.

We've at times had to tell chairs you are not a reviewer here; you need to be a facilitator. For various reasons, arguably the chair is in a little bit different position; but otherwise the people are different. The reviewers were Steve Cadrin, Luiz Barbieri, and Lou Coggins. They were the reviewers on that panel. I don't think they were in conflict at all; and I believe they were independent.

DR. BERKSON: Thank you for the clarification, John. Once again, the purpose of my concern was not to attack the process that we had but to try to strengthen the process in the future. That clarification helped tremendously. Thank you.

DR. BARBIERI: Just to clarify a little further; George stepped in as co-chair, because as we were scheduling the whole thing we realized that Marcel would have a scheduling conflict. Part of the time Marcel would be available to chair, and part not; so we decided to go with the co-Chairing. Okay, Mike took some good notes there.

All of us will have the opportunity to go back and review, revise, and hopefully expand on the text that is there. John, help me here if I missed something, but I think that we addressed pretty much all the main items. We are up to Council Work Plan Update.

DR. BELCHER: I know it is on the record, and I don't know where you put the request to. I know we are all dealing with this; we have been dealing with it with the SSC; but the issue of the confidential data to make this process a little bit more – again, I understand everybody was happy with how they handled the confidentiality aspect; but we know that when our group is doing it, they have access to confidential data.

I don't know what the reconciling solution is to that; but we all deal with it. The SSC can't even look at the numbers. I know it is because it is a public forum situation as to why we can't. But somehow, somewhere I think the conversation needs to be had, because that is the only way that we are really going to feel more confident about what is going on with the assessment.

DR. REICHERT: To that point; I want to remind the SSC of a remark on the wreckfish report on Page 6 that Steve made relative to the confidentiality. Steve, maybe you want to address this briefly.

DR. CADRIN: Yes; I just think that there is clarification in Magnuson on this; is that confidentiality should not be used to avoid doing conservation and management measures, including stock assessments. Confidentiality should not be used as an excuse to not use data in a stock assessment. It is excerpted exactly in the document.

DR. CROSSON: I have a process question for the chair if he knows. The council occasionally looks at confidential data and they go into closed session to do it, correct? Are we not allowed to do the same? Are we not allowed to go into a closed session because of the process to look at something on confidential landings; do you know?

DR. BARBIERI: I do not know. John does.

MR. CARMICHAEL: The council does that because they are allowed to view it. They have been given the clearance as council members to view the confidential data. Those of you who have been at this table far too long will remember about eight years ago we had everyone submit a confidential data request form and submitted it through.

The reply we got back was they wouldn't give blanket approval to the SSC members like they do council members. They didn't look at all of your applications. They just sent them back to me. We have gone back and forth for years and years just saying please we just want you to review the applications.

We have basically been told that having you submit applications through us to the Science Center to be reviewed for confidential data access was not going to get any farther, essentially. We have kind of been given a roadblock; and you cannot go into closed session and view confidential data is what we've been told, because the only reason they can do it is because they have been given clearance.

The purpose of going into closed session is just to make sure nobody else looks at it and not because going to closed session gives them that clearance. This is just our region and I think some other regions maybe have more satisfactory experiences; but we've had a real struggle for many years now dealing with this.

DR. BOREMAN: Are there enough members on this SSC who do have access to confidential information to form a Confidential Information Review Subcommittee that could look at it and report back to the committee as a whole? That is just a question. That might be a work around.

MR. CARMICHAEL: I would love that and I do want to clarify closed session was mentioned; but the council doesn't go into closed session for that kind of stuff. If they are closed, it is to talk about personnel and financial type issues. What they do is we know that at times they've handed out documents that are numbered, and they make sure they get every numbered document back. It is not shown on the screen; it is just a hard copy the council members can look at.

DR. BARBIERI: John, that is a good suggestion. I have access to – you know, most of the state folks have access to confidential information for their states. That does not translate into the federal. We are right now actually trying to work with the council in developing a whole bunch of memoranda of understanding to allow the council to have access to our confidential data, because the council staff doesn't have access at this point. That suggestion was noted, and I think that it may not work every time, but I think that would be a step forward in addressing some of this confidential data information.

DR. BELCHER: Except it still doesn't help the third party people who are doing the assessment, because they have to have access to that confidential data as well. That is my question; how do you get the third party people? I mean, yes, we've had our own hurdles but third parties are going to run that differently.

DR. BOREMAN: Well, I can give you the perspective of the northeast when I was the director up there. We had third parties could sign a confidential agreement. I think the objections that the regional counsel has is giving blanket approval to everybody on the SSC. This is like a university or an individual. They would have to sign away; and that agreement includes, as you know, how data should be handled and what computer it has to be on and so on and so forth, backup requirements.

DR. BARBIERI: Which is good, help us better understand the process and maybe help those third party. With that, I think we are ready to move on to the council work plan update.

MR. CARMICHAEL: We provide this to you as information. You get two of our main planning documents, our work plan and then what has proved to be really useful is a big overview of the various amendments that are underway, where they stand and what they're addressing. Here is an opportunity just to bring this to your attention and let you see these documents. If you have any specific questions, the staff folks are provided there to know who to go to. I'll see if Gregg has anything particular to highlight here today.

MR. WAUGH: Thank you, no. It is just that is a document that you can look at and see where each amendment is, who the staff person is to contact if you have any questions. What we've started doing is fleshing out draft agendas for council meetings two to three meetings ahead of time. We'll routinely distribute these to you as we do to council members once they go through the review after each council meeting. Feel free to directly contact any staff member for a particular amendment, question, or contact me if you can't get a hold of them.

DR. BARBIERI: Folks, in terms of timing, we are approaching noon, but we only have a few not-too-long items to go through. It is other business. We're going to have some other opportunity for public comment and then we go through our elections process. Any other business at this point?

DR. BOREMAN: I know we discussed this I guess not in camera but out of camera yesterday with Erik Williams, but I did promise Luiz that I would raise this as an issue under other business; and that is we should make a formal request to the Center to have a representative from the Beaufort Stock Assessment Group present at our SSC meetings; not only a representative, but a representative who has authority to actually commit on behalf of the Center, if need be, so a

person at Erik's level; in other words, Erik. I can make that into a motion if you want, if you want to vote on it or if there is general agreement.

DR. VAUGHAN: I'll second it.

DR. BARBIERI: I don't think you need to be. I'm looking around the table and seeing everybody nodding in agreement. I think there is universal consensus here that this is a good idea and that we're going to have this in the report. It will be presented to the council at the June council meeting as an official request from the SSC.

I think it is an excellent suggestion. I told John when we discussed this offline that this is basically the way it is done with the Gulf Council; that we have somebody there from the Science Center at that level of authority; in New England and Mid-Atlantic, so all of us have that experience.

DR. BERKSON: I don't know whether we need to include this in write-up or not, but obviously that is not the role that I have or Scott has. Even though we're Southeast Center employees on the SSC; we're here for our expertise as independent scientists; but the need for a liaison from the Beaufort Lab is entirely different and extremely important.

DR. BARBIERI: Is there any other business anybody might have? With that, I think we are ready to go to our second round of public comment.

MR. HUDSON: I'm Rusty Hudson; representing East Coast Fishery Section today. Let me just say I feel like we're kind of going through a Groundhog Day situation for the fishermen. I'm not certain how all four of these stock assessments have ultimately worked out until we get to see the final numbers. That is what fishermen can appreciate.

I also thought going into today from yesterday that there were some requests for Dr. Butterworth with regards to wreckfish; some other tweaks or something. I'm not sure of all the details; the same there a little bit with snowy. With that said, we still look forward to seeing what we might be looking at; because starting out with wreckfish and being a person that has witnessed this fishery for a long time and trying to help them; Scott had some excellent points about the CPUE and the size being steady, which is something that the assessment was able to show.

But this confidentiality data issue, and I, of course, believe that as a public resource we have a responsibility to the public to provide that data publicly. When I'm looking at people that are dead, people that are out of the business, if that is an issue; I know that the main players have stepped up and provided their data and tried to provide their insights; when Paul Reese was here, with regards to King Seafood and those people that has brought this forward.

The only thing I have to disagree about the socio-economic impact is pretty simple. You don't go through an 89 percent reduction of your paycheck potential and still be making money. It just doesn't work that way. Were there potential coupons for one of the participants who were 400,000 pounds and is down to 40,000 pounds; it is not hard to do the math at 7,000 pounds a trip, which is easily being caught; and then you've got the trip already consumed in six trips. Then they sit the rest of the year or do other things, which is getting a lot harder under the precautionary approaches that we've had to deal with.

This Comprehensive ACL Amendment that led to all this was built around the inability to understand the fishery. Some people understand it, particularly the ones that have access to the confidential data. Going further, I tried to explain as my first oral comment of this meeting and I've explained it before, blueline tile in all regions except north of Hatteras is a bycatch to a targeted species known as snowy grouper.

Since 2006 we've been ratcheted down from a 2,500 pound trip limit down to 100 pounds that it is stepped down to from '06, '07, and '08. With that said, having lived and breathed that particular fishery and having supplied a lot of fishing locations to all of the entities involved, federal, state, and even council, there is a lot of research that needs to be done.

ABC, formally known as allowable biological catch and now acceptable biological catch; catch is easy. The problem is the biological. This is back to whoever the data collectors and providers are. We need more fieldwork; we need that data, because a stock assessment is only as good as that.

I understand all the precautionary principles built in behind the assessments, the P-star analysis and things like that. It is sometimes burdensome to the fishermen because of the fact that what they see at the side of the boat and what they see in the final science is a problem, because sometimes it doesn't match up.

I'll leave that alone and we'll deal with it at the council level in the meeting coming up in June; but I do think that the SSC needs more flexibility in the face of anecdotal evidence that comes from the fishermen. That is something that we've been told time and again that needs to be brought into this process.

Regulatory Amendment 21 might be useful; but again let me reemphasize for the third time, the early eighties, both recreational – MRFSS is a problem for almost every stock assessment we have. Second, the advent of the bottom longline that occurred in the early eighties, you had identification scenarios of just generic tilefish.

It was golden tilefish; it was not blueline tilefish. That giant spike is driving stuff and needs to be eliminated in the sensitivity and revisit that. Since you are going to come back to that after you go to the 75 percent minimum stock size threshold after Regulatory Amendment 21 is done, then that might be an opportunity to take that look.

I am not certain, after seeing the situation of the recent blueline tile landing in the MRIP data – and I've seen time and again already since MRIP came aboard some issues there. When I look at the ORCS discussion that just took place; and, believe me, we were very supportive of this body and the consensus that did exist; but I also understand that targeting and incidental catch is two different things.

I also went back and reflected on the 2012/2013 data that has already been gathered; so you have some stuff to work with, and we've already approached the council about like the jacks complex, pulling the banded rudderfish, pulling the almaco jack out. Both are targeted animals and have decent catches. When I looked at the recreational stuff – and I always figure we're pretty strong with commercial as far as being able to monitor it; but the recreational is always the 800-pound gorilla in the room.

Some of the stuff that I saw, like with the blueline tile way up there and then suddenly ratcheted down versus what is in the public records that we can see versus what winds up in a stock assessment; that was a red flag. The Snapper Grouper AP met just recently. This gray triggerfish, Snapper Grouper Amendment 29, it was a consensus just about – if not, Myra can probably answer to that – 12-inch fork length from North Carolina to the Florida Keys. That is a simple, clean way to make it so it is easy on all of our fishermen.

We off the east coast of Florida have been dealing with a 12-inch total length on the federal waters and a 12-inch fork length in the state waters, but no one else from Georgia, South Carolina, and North Carolina have had that minimum size to deal with. They can just catch whatever they want.

I just thought that you all would need to know that because that is kind of an important situation. Gag grouper, I think there needs to be a better sampling protocol. Some of the work that the FWC and NMFS just recently engaged in with us as a CRP type approach is very useful. We need to go forward with being able to have timing on spatial temporal situations, to be able to gather these biological and these other types of ways to understand what is going on with these particular species; because whenever we developed our fisheries, bandit and then longline until the longline got eliminated for the shallow water grouper in '92 was that in our region of Florida – and we worked it all the way to North Carolina and back – was a grouper fishery that then had some also incidental and/or targeted catch of red snapper.

Right now we have an explosion of red snappers, as many of you know. We also have an explosion of black sea bass. We have an explosion of sandbar sharks and sharpnose sharks and a variety of other predatory animals. I believe you've already heard a little bit of discussion at this meeting about the effect of predator/prey relationship in our ecosystem. That is something that I would like to see the scientists be able to get a better grip around. Thank you for allowing us to submit the written comments.

I hope that they made a little bit of a difference; and I also appreciate the ability to come here and anybody else that is in the room to be able to come here and speak to their concerns and to their likes and dislikes to the entire situation, because it has been and this is a very important situation. As a final comment, at the HMS meeting when we're dealing with coastal sharks; we would like this body – since the secretarial plan for shark was five councils involved, New England, Mid-Atlantic, South Atlantic, Gulf Council and Caribbean; we don't have an SSC review for a secretarial plan on stuff like coastal sharks; and to us that is a pretty important feature, so we are going to be pushing forward to be able to have this body perhaps examine stuff like that.

It is part of our problem and it is part of our business plan. As time goes by socio-economic impacts are just as important as National Standard 2 impacts with regards to the best scientific information available. My biggest complaint was National Standard 1; how do you define overfishing? It goes back to National Standard 2. Now that we've gone through this four-year exercise with that, let's hope that somehow we can be able to better define overfishing and eliminate overfishing, and be able to rebuild our stocks. Thank you very much.

DR. BOREMAN: Just a response to one of Rusty's comments, which I think – well, they all were well taken, but this one kind of struck home with the Mid-Atlantic. As I mentioned in the past, we have started having our advisory panels prepare fishery performance reports specifically

for the SSC. Their performance reports basically give the SSC some information on what happened down on the water this past year; what happened with the markets; what factors could impact the fishing effort numbers that we see that we get every year, as well as any other observations they want to make, if they are willing to make anything and say anything about the environment itself, what they see going on with climate change or whatever.

We started with one fishery; we've not expanded it to all our fisheries. We get good participation and the reports are very useful. They form a strong basis for discussion at the SSC meetings. Our social scientists specifically work with the Industry Advisory Panel to put these reports together. I can send an example out to you so you know what we're talking about and what the content is of these reports.

DR. BARBIERI: That would be great, John, and I see Chairman Hartig giving the two thumbs up.

DR. VAUGHAN: I'll give it three thumbs up if I had a third thumb; but John is exactly right. I also serve on the Mid-Atlantic SSC and I find that extremely useful. I'll second and third it.

DR. BARBIERI: Is there any additional public comment? Ms. Dunmire.

MS. DUNMIRE: My name is Leda Dunmire; I am with the Pew Charitable Trust. As some people know, we're following the council's development of Regulatory Amendment 17 to protect speckled hind and Warsaw grouper using MPAs. I know it is not on the SSC's agenda for this week, but I'm hoping we can just get a little bit of clarification on the record.

We've seen in the media and heard conflicting interpretations of the SSC's April, 2012 report during public testimony. I'm wondering if you all can clarify the meaning of the summary statements that were made. The Snapper Grouper AP recently recommended a new approach that would prioritize spawning protections over bycatch reduction, which is currently the purpose and need of that Regulatory Amendment 17; but I think it would still be important – and I don't know who would sort of speak to this – to clarify your thoughts on using spatial management in the South Atlantic fisheries.

DR. SEDBERRY: I think what you're saying, Leda, is that you want the SSC to clarify the spatial closures for protection of those two grouper species versus protection of spawning reef fish in general?

MS. DUNMIRE: Just a clarification of where this group is on spatial management. If you want to speak just to speckled hind and Warsaw grouper, because those are the species contained in that amendment, that is fine. My understanding of what the Snapper Grouper AP did recently is they are now broadening what they would be suggesting to the council to more snapper grouper species and not just those two. That is up to you. If you can't do this; I don't even know if this is procedurally okay, but I think we could all use some clarification.

DR. SEDBERRY: I'm not sure I can do that. I'm Chairman of the Marine Protected Areas Expert Working Group; and the council was interested and the Snapper Grouper AP was interested in some suggestions for specific areas that could provide additional protection and reduce bycatch of those two grouper species.

In that process we looked at where they spawned and where species that co-occur with them spawn and areas that are likely spawning places for a lot of fish and suggested some of those to the AP and to the Snapper Grouper Committee and to the council as areas for consideration in Amendment 17.

But I'm not sure that the SSC – and I will let someone else talk to this – the SSC is concerned with stock assessments and ending overfishing on individual species. Although closed areas can be part of that, I'm not sure how those closed areas fit into the models that are used or into the process. It is a good discussion point and I would like to hear more about it.

DR. BOREMAN: I don't think, first of all, that we can give you an answer. What I suggest to you –

MS. DUNMIRE: It was worth a try.

DR. BOREMAN: No, no, today we can't give you an answer; but what I suggest you do is raise this at the council meeting; and if the council feels it is important, the council can write a question to the SSC. It would have to be a lot more specific than what do you guys think about spatial management; but if there is a more directed question that we can answer like a specific case of specific species; spatial management versus whatever; but we need some more direction, and we get our direction from the council. I would suggest raising it at the council meeting.

DR. BELCHER: Again, unfortunately or fortunately, I have just enough vague recollection, because that was the last meeting I chaired at; so we were in Savannah. But if I remember correctly, we were asked to provide input on some of the changes to the protected areas, correct? The idea was what would we gain by doing that? We basically said we couldn't evaluate that based on the information – quantitatively we couldn't do that.

I guess without specific points from you as to what the comments are; I mean the SSC report pretty much is basically what the group discussed and any recommendation we would have put forward would have been in there. Again, you would almost have to revisit that conversation, I think, to give you more of a handle of what the SSC was talking about.

I just know at that point I remember the wrestling being as we couldn't say what was already gained based on the presence of the science that is out there; so to say what would be gained additionally for those changes, we wouldn't be able to quantify, and there was still a lot of that debate over the closure types and what you gain by doing them. That is my vague recollection of that conversation.

DR. CROSSON: That is exactly my recollection. I am fairly certain that the SSC has never made a blanket statement about the utility of MPAs for protecting spawning stock biomass. I know we were asked about specific areas in regard to speckled hind and Warsaw grouper; and we felt that the data was not clear enough for us to make a policy recommendation; and that is where it ended. That is the best answer I can give. That sounds like we had the same recollection.

DR. SEDBERRY: I think you're right; that is my recollection, too. I think there was some discussion about the existing MPAs and no data coming out of them to show what the existing

MPAs could do. In terms of expanding or reorienting those MPAs, I think the SSC felt it would be very difficult to evaluate that having no data available from the current configuration of the existing MPAs.

DR. BUCKEL: You did it very well; I was 50 percent ready to say something. Before the MPA discussion – and, Carolyn, this is back to your time as Chair, too – just in general to your question about are we willing to use spatial management; I think when we realized the ABC for speckled hind and Warsaw grouper was zero; we said we've got to get all of the hooks out of the deep water, and that is where the deep water closure came from. I think that was an SSC recommendation, if I recall correctly. That is a spatial management. It didn't stick.

DR. BARBIERI: Anybody else, any additional comments? Well, in that case I will step in for a second and make a statement or try to clarify simply because as you know I can sometimes go a little too far. During that discussion at that April 2012, my recollection is that what we were presented – the questions that the council brought to use for review were not answerable at the time.

The idea of how much area should be closed; and if we closed this area, what is the corresponding savings in terms of spawning stock biomass; and what location should we put this; and we didn't really have the information in front of us. We didn't have any of the analytical processes in place for us to come up with any intelligible answer to that question.

We discussed all of this; and at the time – and we have a consensus statement that as Carolyn pointed out is in our report that basically says that, no, we cannot be more specific in providing an answer. But that was more because of the quantitative in my recollection, the quantitative nature of the advice that was being requested.

It wasn't like whether we support the use of MPAs or any other kind of spatial management. My interpretation is that the SSC never made a statement regarding the use of MPAs or spatial management as a blanket statement at all as not valid as a management tool. We were dealing with those questions that the council put in front of us and at that point we couldn't respond to them directly, if that helps to clarify our position. That is my impression. Please correct me if I'm wrong; or if anybody has a different recollection of how the committee reacted to that.

Again, it is to the best extent possible, as John pointed out. Now we are going to have to deal with our elections. This is the end of my term of SSC Chair and I have been discussing with Marcel a game plan forward. Officially the process is to open up for nominations; and then from those nominations we are going to proceed.

I think the procedure is to have Marcel – in that case if we have anybody interested in stepping up to be Vice-Chair; that Marcel would be promoted to Chair and it would go from there. Now Marcel and I have been discussing, also; I'm willing to go for another term with him basically because by the time that I step down, I don't' want to come back.

I think that this should be a rotational kind of position; but by the time in a two-year limit that you are learning the ropes, it is time to step down. In that sense I told Marcel I think we could learn more and do a better job; but I don't want to hog the seat. I have plenty to do; and if there are other folks who are interested, I think a refresher in the chairmanship is always a good thing.

DR. SEDBERRY: I'm not interested in Chairman but I did have some questions about term limits. Are there term limits on membership or chairs?

MR. CARMICHAEL: There are no term limits at all. We do appoint you, as you know, for three-year terms normally; but there are no limits on the number of terms that someone can serve. There is no limit on the number of times an individual could be chair or how long they are chair.

One thing in talking with these guys about what to do is I think we should probably – and I believe the council does this also, each year goes through election or do they do it every other year? They do it every two years; okay, we were just wondering if, you know, you could do it each year if you wanted to vote someone else as opposed to maybe someone ends up getting three years in that case as opposed to maybe you feel like you're stuck with him for four. That would be your choice. The only ruling is that the chair is elected by you and from you. Otherwise, it is very open.

DR. BOREMAN: Well, just to show you my heart is in the right place; I nominate Luiz for chair again.

DR. BARBIERI: I knew that I was going to pay for that. To that point, to tell the truth, John, made a statement early that I wanted to discuss with him offline. I told him that I feel that the collegiality of this group makes working with all of you a pleasure. At times we get a little emotional because we are passionate about what we do and we can kind of get at each other a little bit.

But I feel that there is a level of understanding amongst us that creates that atmosphere of comfort that we have. John made a comment that offline I told him this helps me because I'm learning in this process. His comments helped guide how I work as chair. You become a better person, a better professional, a better chair.

MR. CARMICHAEL: We all know you think out loud.

DR. BARBIERI: This is part of the problem. Marcel, I really want to leave this free for you. I don't want this to be a situation where you feel constrained.

DR. REICHERT: Well, in our discussions I told you that I'm equally comfortable taking on as chair and as just serving another two years as vice-chair. I think we work well together with John. I have no preference one way or the other; so I leave that up to the SSC as a whole. I'm good.

DR. BARBIERI: If we have any concerns, Marcel will continue as vice-chair. That would be my preference.

MR. CARMICHAEL: We haven't seen if there are any further nominations.

DR. BARBIERI: Any further nominations for chair and vice-chair.

MR. CARMICHAEL: Normally someone will suggest the nominations be closed or move it.

DR. GRIMES: Mr. Chairman, I recommend the nominations be closed.

DR. BARBIERI: Do we have a second for that motion? The motion to close the process was provided by Churchill Grimes and seconded by Jeff Buckel; or seconded by Doug Vaughan and Jeff Buckel. With the nomination process closed, thank you, it is great to do this with Marcel and John and Mike and the rest of staff. I enjoy it; and as I mentioned to John offline, I'm learning. This is fun and a great process for all of us, so I appreciate the support. The next item on the agenda then –

MR. CARMICHAEL: We need nominations for vice-chair. Did they do that?

DR. BARBIERI: I thought we did.

MR. CARMICHAEL: They did them both; okay, I'm sorry, I missed it.

DR. BARBIERI: Before adjourning, we have our next meeting schedule, which looking at our document is really the October 28 through 30; but there will be a meeting of the ABC Control Rule; and I think this will follow the same format that we started. We started the day before at 1:00 and then staying through noon the next day to discuss the Control Rule Workshop.

That subcommittee chairman is Steve Cadrin. We had met and discussed offline with Marcel as well in putting together some terms of reference and some objectives; and we have a draft of that which I will distribute to the group together with our report so all of you can pile on and kind of help build that documentation.

DR. BERKSON: I think we're going to have a lot to do in that workshop especially now that we're adding the ORCS and the data-poor stuff back on. I don't think we have as many assessments or as crowded an agenda I am guessing in October as we had this time; so we may want to expand that pre-workshop beyond eight hours or whatever it is to a day and a half or two days, do something like that with the SSC meeting being less; but that is up to staff and you guys to figure out. But I think that is going to be a very important meeting.

DR. BARBIERI: Yes, I agree; that's a good point. That brings us to the end of our meeting. Thanks again, everybody, for great participation and discussion on items. As always, we couldn't be more thankful to staff; to John, Mike and all the other staff that help us with the meeting in preparation, Julie, because we never start until we get her thumbs up in the morning. With that, I think we are ready to adjourn and safe travels back and see you all in October.

(Whereupon, the meeting was adjourned on May 1, 2014.)

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julie.odell@safmc.net

PLEASE SIGN IN

So that we will have a record of your attendance at each meeting and so that your name may be included in the minutes, we ask that you sign this sheet for the meeting shown below.

South Atlantic Fishery Management Council
Scientific & Statistical Committee Meeting:
TUESDAY April 29, 2014

NAME & SECTOR/ORGANIZATION:	AREA CODE & PHONE NUMBER:	EMAIL ADDRESS:	MAILING ADDRESS:
Rusty Hudson OSF SFA ECFS	386-239-0948	2572009@aol.com	PO Bx 9351 32120-9351
Emily Olson University of Florida	201-403-8675	emolson@ufl.edu	
Kim Stump TOF/PCT	202-390-9520	Kstump@oceanfdn.org	Wt D.C.
Leda Dunmire Pew	305-393-0934	LDunmire@pewtrusts.org	
Peter Barile SFA ECFS		abaco711@hotmail.com	

South Atlantic Fishery Management Council
4055 Faber Place Drive, Suite 201
North Charleston, SC 29405
843-571-4366 or Toll Free 866/SAFMC-10

PLEASE SIGN IN

So that we will have a record of your attendance at each meeting and so that your name may be included in the minutes, we ask that you sign this sheet for the meeting shown below.

South Atlantic Fishery Management Council
Scientific & Statistical Committee Meeting:
Wednesday, April 30, 2014

NAME & SECTOR/ORGANIZATION:	AREA CODE & PHONE NUMBER:	EMAIL ADDRESS:	MAILING ADDRESS:
Rusty Hudson DSF SFA ECFS	386-239-0948	DSF2009@aol.com	POBX 9351 32120-9351
Erik Williams SEFSC	252-728-8603	erik.williams@noaa.gov	
Leda Dunmire Pew	305-393-0934	LDunmire@pewtrusts.org	
Ken Stump TOF-PCT	202-390-9520	kstump@oceanfdn.org	WA D.C.
Emily Olson University of Florida	201-403-8675	emolson@ufl.edu	
Kevin Craig SEFSC	252-728-8776	kevin.craig@noaa.gov	
Amanda Kelly ISCDNR	937-621-4223	kellyam89@gmail.com	

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4055 Faber Place Drive, Suite 201
North Charleston, SC 29405
843-571-4366 or Toll Free 866/SAFMC-10

PLEASE SIGN IN

So that we will have a record of your attendance at each meeting and so that your name may be included in the minutes, we ask that you sign this sheet for the meeting shown below.

South Atlantic Fishery Management Council
Scientific & Statistical Committee Meeting:
Thursday, May 1, 2014

NAME & SECTOR/ORGANIZATION:	AREA CODE & PHONE NUMBER:	EMAIL ADDRESS:	MAILING ADDRESS:
Emily Olson University of Florida	207-483-8675	emolson@ufl.edu	
Rusty Hudson DSF SFA ECFS	386-239-0948	DSF2009@aol.com	32120-9357
Lesa Dunmire Pew	305-393-0934	LDunmire@pewtrusts.org	
Kelly Robinson Cornell University	843-906-0513	kelly.f.robinson@gmail.com	
Ken Stump FOF-PCT	202-390-9520	kstump@oceanfdn.org	
Pete Barile SFA			

SSC Day 1 April 29, 2014

72	jolley, john	jolleyjw@yahoo.com	93 min
45	Mehta, Nikhil	nikhil.mehta@noaa.gov	363 min
45	Barile, Peter	abaco711@hotmail.com	223 min
34	Michie, Kate	kate.michie@noaa.gov	120 min
33	McGovern, Jack	john.mcgovern@noaa.gov	206 min
33	Hudson, Rusty	dsf2009@aol.com	244 min
32	Takade-Heumacher, …	htakade@edf.org	222 min
30	DeVictor, Rick	rick.devictor@noaa.gov	205 min
29	smart, tracey	smartt@dnr.sc.gov	97 min
28	Mahood, Robert	robert.mahood@safmc.net	196 min
28	Fitzpatrick, Eric	eric.fitzpatrick@noaa.gov…	55 min
25	Ballenger, Joey	ballengerj@dnr.sc.gov	179 min
24	Siegfried, Katie	kate.siegfried@noaa.gov	73 min

SSC Day 2 April 30, 2014

76	jolley, john	jolleyjw@yahoo.com	335 min
69	Butterworth, Doug	doug.butterworth@uct.ac.z…	95 min
67	boreman, john	john.boreman@ncsu.edu	26 min
61	crabtree, roy	roy.crabtree@noaa.gov	448 min
55	Barile, Peter	abaco711@hotmail.com	438 min
55	Mehta, Nikhil	nikhil.mehta@noaa.gov	451 min
53	Williams, Erik	erik.williams@noaa.gov	143 min
51	Rademeyer, Rebecca…	rebecca.rademeyer@gmail.c…	95 min
49	duval, michelle	michelle.duval@ncdenr.gov…	463 min
46	Hudson, Rusty	dsf2009@aol.com	530 min
41	steele, phil	phil.steele@noaa.gov	392 min
38	DeVictor, Rick	rick.devictor@noaa.gov	524 min

36	Jiao, Yan	yjiao@vt.edu	532 min
35	Siegfried, Katie	kate.siegfried@noaa.gov	547 min
34	Cheshire, Rob	rob.cheshire@noaa.gov	441 min
34	Takade-Heumacher, …	htakade@edf.org	396 min
34	Larkin, Michael	michael.larkin@noaa.gov	430 min
33	Ballenger, Joseph	ballengerj@dnr.sc.gov	461 min
32	Fitzpatrick, Eric	eric.fitzpatrick@noaa.gov…	472 min
32	Michie, Kate	kate.michie@noaa.gov	447 min
31	wyanski, david	wyanskid@dnr.sc.gov	171 min
30	Mahood, Bob	robert.mahood@safmc.net	497 min
29	smart, tracey	smartt@dnr.sc.gov	476 min
26	Edwards, Kari	edwardskari@yahoo.com	136 min
25	stephen, jessica	jessica.stephen@noaa.gov	128 min
24	McGovern, Jack	john.mcgovern@noaa.gov	139 min
23	Whitehead, John	whiteheadjc@appstate.edu	209 min

SSC Day 3 May 1, 2014

76	jolley, john	jolleyjw@yahoo.com	163 min
61	Mehta, Nikhil	nikhil.mehta@noaa.gov	222 min
49	POLSTON, JOHN	kingseafood@bellsouth.net…	194 min
47	Hudson, Rusty	dsf2009@aol.com	208 min
45	duval, michelle	michelle.duval@ncdenr.gov…	247 min
42	Barile, Peter	abaco711@hotmail.com	221 min
42	Neer, Julie	julie.neer@safmc.net	80 min
34	Newman, David	dnewman@nrdc.org	26 min
30	DeVictor, Rick	rick.devictor@noaa.gov	217 min
28	Jiao, Yan	yjiao@vt.edu	220 min
28	Mahood, Bob	robert.mahood@safmc.net	208 min
28	wyanski, david	wyanskid@dnr.sc.gov	189 min

23	Takade-Heumacher, …	htakade@edf.org	73 min