SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL

SCIENTIFIC AND STATISTICAL COMMITTEE

Hampton Inn West Ashley
Charleston, SC

November 8-10, 2011

SUMMARY MINUTES

SSC Committee

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Dr. John Boreman
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Observers/Participants:

Dr. Erik Williams
Dr. Kyle Shertzer
Dr. Andy Strelchek

Other Participants Attached

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The Science and Statistical Committee of the South Atlantic Fishery Management Council convened in the Hampton Inn West Ashley, Charleston, South Carolina, Tuesday morning, November 8, 2011, and was called to order at 9:00 o'clock a.m. by Chairman Carolyn Belcher.

DR. BELCHER: Okay, let's go ahead and get started. Good morning, I hope everybody is bright eyed and bushy-tailed for the agenda that we have got over the next three days. Obviously, it is busy work on a lot of it. Our big items are pretty much loaded to the front. We will just get ticking along and get into the SEDAR 25 assessment. Let's start out with going around the table and getting everybody for voice recognition.

DR. JIAO: My name is Yan Jiao; I am from Virginia Tech.

DR. WHITEHEAD: John Whitehead, Appalachian State University.

DR. LARKIN: Sherry Larkin, University of Florida.

DR. BOREMAN: John Boreman, NC State University.

DR. BUCKEL: Jeff Buckel, NC State University.

DR. GRIMES: Churchill Grimes.

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

DR. ERRIGO: Mike Errigo, council staff.

DR. SHERTZER: Kyle Shertzer, Southeast Fisheries Science Center.

MR. CARMICHAEL: John Carmichael, council staff.

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

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

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

DR. CADRIN: Steve Cadrin, University of Massachusetts.

DR. BERKSON: Jim Berkson, Southeast Fisheries Science Center.

DR. YANDLE: Tracy Yandle, Emory University.

MR. COLLIER: Chip Collier, North Carolina Marine Fisheries.

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

DR. BELCHER: Okay, thanks everybody. Starting out with Item 1 is approval of the agenda. There is only one item change. Item number seven, which is Snapper Grouper Amendment 20A, is going to move to Slot 8, which is a wreckfish analysis. We are just going to flip-flop it because the wreckfish analysis helps with some of the information towards Amendment 20A.

It is not a key pivotal part of it, but at least it is additional information relative to that amendment. Does anybody else have anything that they would like to see added or order changed? Moving on to the approval of the minutes, does anybody have any concerns or changes that need to be made to the minutes from the last meeting?

Seeing none, we will go ahead and pass those. John is going to give us a little bit of background on the new changes to the road map. I don't know, those of you that have looked at the detail of it, there are a lot more comment sections for the SSC through there and John is going to brief us on that.

MR. CARMICHAEL: As Carolyn said, there are more details in there. One of the things I have done here in this round is try to set it up in the way that you guys have attached your report. That is why within the action items there is a bold header there for your SSC comments and how we are going to handle this is similar to the last meeting.

Your comments are going to be typed up. Mike here is going to take notes on your comments on this second screen, the smaller screen, right into the Word document of your overview, so we will put your recommendations right there since that is how you guys have been structuring your reports lately.

The other thing is that you will notice for many of these things, the amendments in particular; there is considerably more information under the action section. Several amendments, for example, we have listed all the actions that are in the amendment. One of the reasons is that the council – the documents now on these amendments have an SSC recommendation.

They have a section after each action that the council is considering for the SSC recommendation, the AP recommendation, the council's recommendation. We want to make it clear to you guys what the actions are and where you have an opportunity to comment. Now I understand that some of these may be administrative in nature or they may affect things related to the management uncertainty and the things that the council has to take action on and you may decide that it is not appropriate for you to comment on them.

We dealt with that yesterday at the SEP and that was fine. I just want to make sure that if people understand that just everything that is listed in there, it may not all require a comment from the SSC, but we want to make sure that you guys have the opportunity to say that we decline to comment on it.

This is really in response to us trying to give you a bit more guidance about dealing with these FMPs, because the general comment that we have used in the past, the review and advise as necessary has not really led to a lot of comment. In some instances we felt that there may be actions in the amendment that maybe not all SSC members are even realizing was in there.

We think by this way you will see all the actions, you will be able to go through them, page through them in some cases. and you have an opportunity to make a comment where you think that is appropriate. We are not trying to blur the lines between science and management-type things. We just want to make sure that you are clear all the actions that are in there.

As we move ahead in the future and we work on these amendments over time with this new process, you will have opportunity as actions develop early to make your comments and then hopefully not have to revisit that in the end. We are on a number of amendments here that are coming down to their last review so a lot of stuff is kind of stacked up on those amendments. A couple of them in particular have an awful lot of actions. I think we will get through it as best we can and make the scientific comments where that is appropriate for you to make them.

DR. BELCHER: Do you have any questions for John? Is everybody okay with it? I have decided to take a little bit of a different approach to writing assignments. I am willing to negotiate provided everybody has an opportunity to write something. I have decided to go ahead and put four people down for each of the items.

If there is something that you really feel that you are going to be heavy in the discussion on, particular to that item, offer up another place for me to put your name down. For today's items, relative to SEDAR 25 I have put down Anne, Churchill, Tracy and Steve Cadrin for comments on that review.

The National SSC Workshop Report, there is not going to be anything major on actions so I am not going to assign anybody to writing on that one. The ABC Control Rule I put down for Luiz, John Boreman, Chip Collier, and Jeff Buckel. Again, if there is something that you really want to get involved in the discussion and it is going to be difficult to capture what is going on with the discussions, like I said, I am open to a rotate out, but give me another item in the future that you are willing to write the report for the report section. With that, we will segue into the SEDAR 25 Assessment Review. We are going to start with black sea bass and follow up with Golden tile, so, Kyle.

DR. SHERTZER: Okay, SEDAR 25 was the assessments of tilefish and black sea bass. The first one that we will look at is black sea bass. I thought it would be appropriate just to follow the outline of SEDAR, so first present the data and then the assessment workshop proceedings and then the review workshop, and then there has been a little bit of work since the review workshop on projections that this body will be the review body for. Starting with the data, the stock definition for SEDAR 25 was the same stock definition that was used in SEDAR 2 and the update, the previous SEDAR assessment of black sea bass which extends from the Florida Keys up to Cape Hatteras, North Carolina. There has been some new information since SEDAR 2, a genetic study that really supports this stock division.

If you are interested in looking at that study, it is referenced here. That is reference documents 42 from SEDAR 25. One of the primary changes from SEDAR 2 was in how natural mortality was handled. In the previous assessment it was considered to be constant at a value of 0.3, constant across ages.

In SEDAR 25 it was considered to be age dependent following the Lorenzen Natural Mortality Shape. In addition to that, the age-independent value corresponding to this was raised, so it was a bit higher to a value of 0.38 from 0.3. There was a range that was suggested by the data workshop of 0.27 to 0.53, so that is the values that were used in sensitivity analysis and in trying to characterize uncertainty around the base run.

Some of the other characteristics from the life history group were that growth was estimated using a von Bertalanffy Growth Curve. The proportion males, because they change sex from female to male, was modeled as a logistic model. Female maturity was also modeled as a logistic curve.

This assessment had new information on fecundity, which was built into the assessment, so there was a relationship estimated on batch fecundity as a function of body weight. That was used in the assessment, which was not available in the previous assessment. The previous assessment used body weight or spawning biomass to predict recruitment.

Then the number of batches per year was assumed fixed at 31 batches per year per mature female. In terms of the fishery data and fishery-independent sampling, there were commercial fleets that were divided up into three different areas, the trawl, commercial trawl, there were commercial pots, and then there was commercial vertical lines.

The recreational sector was divided up into two different fleets, the general recreational, which was what is sampled by MRFSS; sometimes we have been calling it MRIP as we are slipping into the new naming convention, but the sampling was from MRFSS; and then the headboat sampling that is run out of the Beaufort Lab.

There were two fishery-independent surveys, both from MARMAP. One was a combined black fish snapper trap from the 1980s and then the other was the Chevron trap sampling that is from 1990 through the terminal year of the assessment, which was 2010. Just a quick recap on the size limit regulation, it was actually in the late fall of 1983, but it was modeled as 1984, an 8-inch size limit was put into place for both the recreational and the commercial fleets.

In 1999 that was changed to 10 inches, and then in 2007 they switched to a fishing year from the calendar year and then at that time we modeled the recreational size limit as going to 12 inches and then the commercial going to 10 inches. I think the recreational also had six months or so at 11 inches in there, but we didn't model the 6-month increment in the 11-inch size limit.

This plot is to give you an idea of the scale of the landings among the different fleets. The units here are all in thousands of pounds, and you can see that the general recreational landings have generally been the highest throughout the time series closely followed by the commercial pot trap fleets. The commercial trawl, as you know, was outlawed in the late '80s. We modeled it through 1990 because there was some residual trawl landings actually extending throughout the whole time series; but after 1990 the small amount of trawl landings were lumped in with the pot fishery.

Looking at this pot, we probably could have done that throughout the whole time series just because the scale of the trawl landings was so small relative to the others in the early part. Discard mortality, this was something that there was new information on as well for SEDAR 25. In the previous assessment the discard mortality rate was assumed to be 0.15.

There has been a newer study since then by Paul Rudershausen that suggested that the discard mortality rate was a bit lower than that so the values used in this assessment were lower than 0.15. They depended on the gear, so the hook and line had a discard mortality rate of 0.07 and there was a range that was suggested by the data workshop.

The traps had two different discard mortality rates depending on the panel size, so for the 1.5 inch panel, 0.05; for the 2-inch panel it was 0.01. I think the reason for the change here with the panel was because of crowding in the traps. With the smaller panel size it was much more crowded traps which led to the higher discard mortality rate.

But both of them were lower than the hook and line. Then this bottom right plot shows the scale of the discard mortalities as estimated by the assessment. This is just to show you the scale from the recreational fleets was a bit higher, quite a bit higher than the discard mortalities from the headboat over the commercial fleets. But these are still quite a bit smaller than the scale of landings themselves, mostly because of the small discard mortality rates.

Not to belabor any of the little numbers on this slide, this is just to give you a sense of the sample sizes from the length-and-age comps, and these are from the two commercial fleets for pots and traps on the left; and then handline on the right. In the assessment we used the number of trips and end trip is the affective sample size when fitting rather than the number of fish.

We would take the strategy of giving preference to age comps when they are available if the sample size on the number of trips was large enough. In cases where we had both age-and-length comps, so, for example, in 2007 on for the pot and trap fishery, where we thought we had large enough sample sizes for the numbers of trips then we would take the age comps.

But otherwise if we didn't have them available or if the sample size was too small, then we would take the length comp, so in this case for the 1980s we used the length comps. This was one example of as sort of an exception that in this case these were all pooled; these four years for the commercial pots were pooled and then fitted as a single but weighted length comp in the assessment.

Then for the handline the same thing, so we had mostly length comps in the early part but in one year, in 1994 we thought we had sufficient sample sizes on the age comps in terms of numbers of trips but also numbers of fish, that we used the age comps in preference over the length comps. Since 2002 for the commercial handline we have had sufficient sample sizes for the age comps to prefer those over the length comps. Then this shows the same thing for the recreational. Again, just to give you a sense of the sample sizes, this is for the MRFSS on the left.

MRFSS does not sample for age comp so these age comps were used in addition to the length comps in these years because it is not sampling the same fish, so we are not double dipping. But

these are supplemental samplings from the states to supplement the MRFSS sampling but from a different program.

Then in other cases, for the headboat we would use the age comps in preference to length comps when available. This third category here is the headboat at-sea discard. These are in observer programs that again are done by the states, so they provided length comp information on discards only.

Then this is for the surveys; this is from the MARMAP sampling. On the left is the MARMAP Chevron trap. In that case we had sufficient age comps in all years so we didn't use the length comps at all. In the case of the combined black fish Florida trap we used mostly length comps because the aging was done in a way that was sub-sampled, not at random but for age/length keys, I believe.

We used the length comps in that case, but there was one year where the sampling for aging was almost 100 percent, so we used that one year for the age comps. This is a picture of the five different indices that we had to fit. You can see this little string here is the combined black fish quota trap from MARMAP. The headboat is the longest running one here in red, and then the others.

One thing that was nice to see and we don't see very commonly is that the correlation among the indices was quite strong positive in all cases, which we don't always see that, but not just positive but either significantly positive or close to being significantly positive, or at least different from zero.

The exception was the headboat at-sea discards which was still positively correlated with the others but not quite as strongly. This was true whether we looked at the index values themselves or whether we took first differences and looked at sort of the derivative of the indices. At the assessment workshop we looked at this and were comfortable that the indices were – or at least this indicates that the indices are tracking the same thing, which presumably would be abundance.

That is the end of the data part of the presentation, and then this starts the assessment part of the presentation. Maybe I should pause to see if there are questions on data before we move on. Okay, the parts I will highlight from the assessment workshop or the model configuration and the results, I thought in the interest of time I will leave out all of the fits to the data. They are available in the report; so if there are questions about those then feel free to ask that as well.

The configuration for the model, this is a statistical catch/age model. The years that were modeled were 1978 through 2010, so this was not a change from SEDAR 25. These are the same years but with additional years at the end of the time series. The modeled ages were 0-11, with 11 being a plus group. There were I don't believe any observed fish older than age 11.

Again, the fleets that were modeled in terms of landings were the commercial trawl, commercial lines, commercial pots, the general recreational and then the headboat. The discards were three different time series, the general recreational the headboat and then the commercial. The

commercial discards were a combined discard time series of the handlines and also the pots. The five abundance indices that were fitted were the commercial lines, which was fishery-dependent headboat landings, fishery-dependent headboat discards, and then two fishery-independent surveys, the MARMAP black fish snapper trap combined and then the MARMAP Chevron trap.

Selectivities were modeled as logistic for the landings in the survey, so flattop selectivities and then dome-shaped selectivities for the discards, focusing on the younger fish. Then these would have been constant selectivity functions within blocks of regulations but were allowed to change in most cases when there is data available to estimate them to change with changes in the regulations in the size limit.

Fishing mortality rates were estimated as free parameters for each fleet in each year. In some cases there is years with no data on landings or discard so there is no observation. In those cases the model still predicted what the landings might have been by applying an average F from a time block of years that was close in proximity to the unobserved data.

The spawner-recruit curve was a Beverton-Holt curve with lognormal recruitment deviations and the spawning potential was based on population fecundity. We did apply iterative reweighting at the assessment workshop so we were shooting for having the standard deviations of the normalized residuals approximately equal to one for the age-and-length comp data.

But then the indices were up-weighted at the assessment workshop because the fits to those were not adequate after going through the full iterative reweighting, so in the end we went through a series of increased weights on the indices. The next bunch of slides is results or predictions from the assessment model.

These are the full fishing mortality rate from each of the fleets, including the discard Fs that were estimated. From this plot you can see that the blue line is the MRIP or MRFSS or the general recreational Fs that those are contributing probably the most to the total F, followed closely by the commercial pots F here in yellow.

During the mid 1990s, this was the commercial lines was also a substantial contributor. The discard Fs you can see are rather small relative to the landings Fs. These are predictions of recruitment. The top panel shows the level of recruitment over time, predicted level of recruitment over time.

Then the bottom panel shows the recruitment residuals in log space. One thing that came up during the review workshop was the potential pattern in the recruitment deviations. The reviewers noted that there may have been some larger recruitment variability in the earlier part of the time block and perhaps a trend going from positive recruitment residuals in the early part to more negative recruitment residuals in the later years. That was something that we examined during the review workshop, which I will show later.

This plot shows the predicted spawning stock through time and overlaid are the SSBMSY estimate is this top dashed line and then the MSST is the purple dashed line. In this case this is

computed from one minus the natural mortality rate. The constant natural mortality rate over age, that was the 0.38, so 1 minus 0.38 times the SSBMSY.

We could see that the point estimates from the base run show that the stock in the terminal years above MSST but still below SSBMSY, so that suggests that if we were doing this assessment for the first time this would not indicate that the stock is overfished.

However, black sea bass is under a rebuilding plan and so the criterion for rebuilding is achieving SSBMSY, so it is suggested the stock is not yet fully rebuilt. This is the predicted spawner-recruit relationship with the overlaid time series starting in 1978, and you can see how it sort of bounces around with the larger recruitment residuals in the earlier years, as we discussed.

The Beverton-Holt curve is the solid one that was estimated. The dashed one is the expected curve that you would get in arithmetic space, which is what is used to compute the benchmarks and also used to compute the expected values from projections. This solid line is the replacement line at MSY.

This is just a table from the report. Not to go over all the numbers; it shows the benchmarks and some of the status indicators. The key ones that we looked at in a previous slide were the recent F relative to FMSY. The point estimate is at 1.07 suggesting that overfishing is occurring but not by much.

Then the SSP in the terminal year relative to SSBMSY, which is below 1, suggesting that the stock is not yet rebuilt. There were several sensitivity runs that were identified at the assessment workshop. Just to let you know, again these are described more fully in the report, but just to indicate what these are we had the base run and then the two different values for natural mortality rate at the lower and upper bound.

We had two runs where steepness was fixed at 0.4 or 0.6. There was a run where there was no weighting done so we did not go through the iterative reweighting procedure, so no external weights put on the data components. Then there was a run where we took all of the weights from the iterative reweighting including the indices.

This would have been the run that we would have looked at and said that we thought that the indices needed to be up-weighted. The only difference between this SD and R weights and the base run is that in this case the indices were not up-weighted as they were in the base run. Then there is a run where the catchability was 0.02 was assumed to increase for the fishery-dependent indices at a rate of 2 percent over time and increased linearly until the year 2003 when it was assumed to saturate and then catchability was constant after 2003.

There was one we labeled as the continuity run, which isn't exactly a true continuity because it still has the current data which wasn't exactly the same as it was in SEDAR 2; but the model was configured to be as close as possible to the SEDAR 2 model in the sense that natural mortality was fixed at a constant value of 0.3; the spawning potential was computed from body weight of males and females both rather than using population fecundity.

Discard mortality rates were higher. Any decision we could make that would make it closer to the SEDAR 2 assessment was included in the continuity run. Then there were two sensitivity runs that were done focusing on the headboat index, one where the headboat index started in 1984 rather than in 1979, and then one where the headboat index was left out of the assessment entirely.

You can see the phase plot of the results from these different runs relative to the base run, which is the circle here in the middle. In most cases they are in the same quadrant as the base run, but there was some cases in the sensitivity runs where overfishing was not estimated to be occurring. In all of these runs the SSB in the terminal year was less than SSBMSY.

You can see also that the model results were most sensitive to the estimate of natural mortality rate, so that is where we see the widest swing and the extremes are from the values of natural mortality rate. We did a retrospective analysis where we dropped the terminal year of data going back, not as far as we would like but as far as we thought we could reasonably go because data sources start to drop off and eventually it is not so meaningful to look at a retrospective analysis if the data sources are all different.

We went back several years and at least far enough to feel comfortable enough to say that there is not a large retrospective error in the terminal years of the assessment. This top panel is the estimates of F, the middle panel is the estimates of recruitment, and then the bottom panel is the estimates of the spawning stock.

To characterize uncertainty around the base run we took a Monte Carlo boot strap approach where we generated a little over 3,000 fits to the data. In each case we would have several components or several parameters that were drawn from random distributions. The boot strap part to this was on the data we had lognormal likelihoods, which was what was used for the fitting for landings and indices.

We generate new time series based on the CVs that were used for fitting the base model; and then the multinomial likelihood components, which were the composition data, the length-and-age comps where we would resample the number of fish and reassign them to bins with the same probabilities as equal to the original data set.

That is how we generated new data sets to fit and then there was a Monte Carlo part to this which is drawing new values of natural mortality, because that was one of the major sensitivities shown in the sensitivity analysis. That was drawn from a normal distribution with bounds that were provided by the data workshop.

We took a similar approach to discard mortality rate. In this case we had three different discard mortality rates. We drew a random number for one of them, for the commercial handline or for the handline discard mortality rate. Then the traps discard mortality rates were computed from the random draw of the handline discard mortality rate in such a way that preserved the same ratio of discard mortality rates from the original data.

The reason for doing it this way was just to preserve the structure that the handline discard mortality rates would always be higher than the trap discard mortality rates, and also that the two-inch mesh panel would always have a lower discard mortality rate than the 1.5 inch. Then the other part that was drawn at random was the weights that we put on the indices. I had mentioned earlier that we up-weighted the index weights after doing the iterative reweighting. The value that was used there was 2.5.

What is important here is that we chose that value for refitting; we chose a new value from a uniform distribution that was centered on 2.5 but had bounds at plus or minus 25 percent of that value. These are the results from the uncertainty analysis. The top left panel shows the distribution computed of FMSY. The vertical line is the point estimate from the base run. The top right panel is the same thing but for SSBMSY.

Then the bottom left panel is MSY itself and the bottom right panel is the discard mortalities that would correspond to fishing at FMSY. These are estimated time series from the uncertainty analysis. It is difficult to read but the top panel is SSB relative to MSST. The gray area shows a 95 percent confidence – well, 5^{th} to 95^{th} percentiles actually from the MCB runs.

Then the solid circles show the estimates from the base run. You can see that relative to MSST there is some uncertainty. The model predicts that the base run predicts that we're above MSST in the terminal years, but there is some uncertainty around that. The middle panel here shows SSB relative to SSBMSY through time, and most of the runs here agree that the stock is below SSBMSY in the terminal year.

The bottom panel shows F relative to FMSY and you can see that there is a large amount of uncertainty around that. In the terminal year the base run does predict that overfishing is occurring, although slightly, but you can see that estimate is very uncertain and that we could be anywhere from a ratio of slightly under 0.5 up to something greater than 1.5.

The overfishing status is quite uncertain in the terminal year. This plot pretty much shows the same thing that we just said. These are where all of the MCB runs fall out from the analysis. Each of the dots is an individual run and the X axis is the overfishing indicator. The Y axis is the stock size indicator.

The crosshairs here, they cross at the value that the base run was estimating and the width of the crosshairs is based on the 5^{th} to 95^{th} percentiles. Again, you can see that there is wide uncertainty in the overfishing indicator. The indicator of whether or not the stock is rebuilt in the terminal year seems more certain.

There are a few slides here on projections from the assessment. The projection years were 2011 to 2016, which is the end of the rebuilding plan. The projection model has the same structure as the assessment model in terms of being an age-based model and basically just runs off of the end of the assessment model.

The initial, initial in this case meaning 2011, abundance at age was based on the 2010 estimates from the assessment that were discounted by total mortality, and then the initial recruitment

came from the spawner-recruit curve. The level of landings in 2011 at this point is still unknown.

There have been quotas in place but it is possible that the recreational sector has gone over so we attempted to capture this by putting in place in 2011 in the projections a quota that was either met exactly at 100 percent of the quota for the landings or where the landings went over so they were at 150 percent of the quota or at double the quota at 200 percent.

Then new management was assumed to start in 2012. The expected values from the assessment were based on deterministic projections that accounted for the bias correction in the spawner-recruit curve. Then this allowed consistency between the projections and the benchmarks. Of course, there is a lot of uncertainty in the projections. This was captured or we attempted to capture this uncertainty by generating a lot of projections, 20,000 of them. Each of them we would carry forward a single Monte Carlo bootstrap run, so it would start from the end of one of the Monte Carlo bootstrap fits of the assessment.

This allowed us to carry forward the uncertainty in the parameter estimates and also initial abundance at age. Then each projection also included stochasticity in the recruitment using the lognormal residuals in a parametric bootstrap. Then rebuilding was defined by the spawning biomass achieving SSBMSY; that being the point estimate of SSBMSY in at least 50 percent of the projected time series.

The 50 percent right now is the council's criterion that they have been using. And then as I said, the SSBMSY is a point estimate from the base model. There were in the assessment report nine different scenarios that were looked at. It is really a 3-by-3 factorial here. There were three levels of landings in 2011 that I have already mentioned, and then for each of those there were also three different types of projections.

One was F rebuild projection, which was the maximum fishing mortality rate that would still allow rebuilding. One was projecting at the current quota, so 847,000 pounds whole weight. Then another was the maximum landings; this I have called L rebuild, but the maximum level of landings that would still allow rebuilding within the time period.

I have chosen a couple of scenarios to show for examples. This is the case with 2011 landings at 100 percent of the quota and then this is a constant F scenario so the maximum F that allows rebuilding. I won't go through all these, but the top left panel is the spawning biomass or spawning stock size and you can see it increasing through time.

This left-hand panel is the fishing mortality rate which has uncertainty around it in the first year because we are matching landings, but after that the F rate is fixed at F rebuild, and then that is the F that would allow a 50 percent chance of rebuilding by 2016, so that is what the bottom panel shows is that probability or the proportion of the replicate projections that achieve rebuilding in each year, and you can see in 2016 is when it achieves the 50 percent level.

This was another example showing maximum landings that allows rebuilding. Again the 2011 landings were at the current quota, so again in the top left you can see spawning stock increasing.

The F value in this left-hand panel, in this case we do have uncertainty around F for all of the years; but then if you look at the right-hand panel, this is landings, there is no uncertainty around the landings because that was assumed to be fixed at the maximum landings that allow rebuilding.

Then again the bottom panel shows the probability through time of rebuilding. I have a couple of slides on the production model; more just to show you that it was done. The production model does not have age structure in it so it was applied to use a model that was very different in structure from the age-structured model. We used ASPIC software to fit the model, which was conditioned on yield. We did estimate uncertainty and again from a bootstrap, and I am just going to show this one slide that shows on the left-hand panel what was configured to be a base run, so in this case as similar as possible to 2 BAM in the sense that the years modeled were 1978 through 2010.

As confidence bands; these are 80 percent confidence bands around the base estimate. You can see how it changes through time, and then in the terminal year we have got the estimate that agrees with the estimates from the catch/age model where it is estimating that overfishing is still occurring but with some uncertainty in the last year; and then B over BMSY at the end is below 1.

Your right-hand panel shows the same run from the base run but then compare that to some sensitivity runs that were conducted. In this case the sensitivity runs were configured to have a different level of landings going backward in time. The sensitivity runs went back to 1950 rather than starting in 1978; and in each case the ratio, we had estimates of commercial landings but not recreational landings going back in time.

In each of these cases it applied a different ratio of recreational to commercial landings in order to calculate the total removals, so the values would have been a ratio of 0.5, so the recreational landings would have been less than the commercial landings; in this case a value of one to one, a value of two to one, and then a value of three to one is the highest level of landings. The solid ones here are the base run again.

The top panel is F over FMSY and the bottom panel is B over BMSY. The take-home message from these panels is the wide uncertainty in landings in the early part of the time series translates into wide uncertainty in relative status of F and biomass in the early part of the time series, but that as time goes on the values converge.

The uncertainty in the historic landings has little effect on the relative status at the end of the time series. That is the end of the assessment workshop. I am going to guess that most questions will be about that. I don't have that many more slides so maybe I should just finish and hold questions for the end, but however you want to do it, Carolyn.

DR. BELCHER: Does anybody have a burning question they want answered right now or can it wait until Kyle finishes? You're good, Kyle.

DR. SHERTZER: Okay, so the Review Workshop was held a few weeks ago right in this beautiful city of Charleston. The Review Workshop had several different issues that they focused on. One was the benchmark values that we were getting and how much consistency there was in the benchmarks and the projections and what we would see in terms of long-term projections if we fished it at FMSY.

Another topic was this idea that the recruitment residuals may have changed through time, which was hypothesized to be potentially indicative of regime shift, and so we looked at that mostly and again framing it as sort of a what if or hypothesis scenario, but if the standard deviations were smaller in the projections, as they were in the end of the time series, so excluding those earliest residuals where they were larger.

Then there is a comparison of the biomass from the previous projections to the estimates from the current assessment. These are results from the long-term projections that were done at F equals FMSY. Again, the assessment used the – or the expected values, which is based on the deterministic projection, and so that is the values that you see in this left-hand column for spawning biomass, for landings, and then also for recruits.

Then we also looked at the projected mean value over time and the projected median value over time. I think the take home here was that there was not a large difference in the projected means, medians and expected values. I think the review panel was comfortable with the projections as they were.

If you do see a large difference, it means that the skew from the lognormal recruitment residuals is having a big effect on the results and what you end up seeing in reality might depend on – how it matches up with the projections might depend on which of these metrics you are using to gauge the stock status in the projections.

We also did these projections where we took the recruitment residuals from the end of the – or near the end of the time series or more just excluded the earliest ones that were the large recruitment residuals. In this case the par sigma, the recruitment residuals and log space was calculated from the years 1990 through 2010.

Then we ran the same projections that we had before. This is a case where there was a fixed F value, so this was the F rebuild. It is plotted alongside the previous results that we looked at but in addition to having the full sigma we have the reduced R sigma so you can see how it dampens the uncertainty in the projections or the predicted uncertainty in the projections, and also what affect that would translate to in terms of rebuilding probability. It also reduces the expected probability of rebuilding.

But I should note that if we went with a different set of recruitment residuals, the benchmarks themselves would be different and so that would change what we are looking at in this bottom hand panel. Then this last topic was the comparison of the previous projections to the current assessment results.

This is from I said a previous projection, it was really difficult to line up or to choose a particular projection because we couldn't line up any of our previous projections with what the current management is. I think maybe the management is based on a set of projections in total rather than any single projection.

In this case we chose one and there is also a lot of things that are different in the assessment, so you can see sort of a d—in this case the biomass in the current assessment, that is the circles here, you can see the scale is a bit different from where we started the previous projections. We have a higher scale and that is because of a lot of the differences that we have in this assessment relative to the last assessment such as higher natural mortality, lower discard mortality.

We have a lot more age comps now, so there is a lot of differences between this assessment and the last assessment that are going to make the scale different. What was noted at the review was that in this case the earlier projection has this increase starting in 2007 when the management started, and you don't necessarily see that same increase in the predicted biomass.

I think aside from the scale, which really wasn't a concern; the bigger concern was that these two lines are not parallel, so the projection we would hope would be running at least parallel to the estimated current – the biomass from the current assessment. The bottom panel just shows the total fishing mortality rate that was estimated in the current assessment.

In the previous projections there was a drop in the fishing mortality rate that was what was allowing the projected biomass to increase, and we don't necessarily see that same level of drop in the total fishing mortality rate. I think these runs were asked for by the Review Panel more as something that might be useful for managers to gauge whether or not we are sort of on track with the rebuilding plan.

Then I mentioned there have been some projections that were done since the Review Workshop. These were requested by SERO, so I think their intent – I don't know if you have all received a report that was written on these projections, but there is a short report that should have been circulated. This shows those results, but the intent I think was that the SSC would review these projections so if they were going to be used for management they would go through some review since they were not available at the Review Workshop.

The three scenarios that were looked at here were again the same thing with the 2011 landings, so three different cases where the 2011 landings were either at the quota, were 150 percent of the quota, or 200 percent of the quota. Then the two years 2012 and 2013 landings were set exactly equal to the quota of 847,000 pounds.

In the out years, 2014 through 2016, the fishing mortality rate was set at the maximum level that would allow rebuilding. There were three cases and I am just going to show results from this one as an example. This is the case where landings were at 150 percent of the quota. The top panel shows the spawning biomass increasing until the terminal year.

I guess what is really more interesting about these projections is how they are defined. If you look in the bottom right-hand panel, you can see out of the first year is fixed at 150 percent of the

current quota, and then in 2012 and 2013 the landings are fixed at exactly the quota, no overages at all. Then in those years you can see how there is uncertainty in the estimate of F that corresponds to those fixed landings.

But then immediately the projection switches over to a fixed F strategy, so in the last three years we are at the maximum F that allows rebuilding, so there is no uncertainty around F in those years but then that translates into uncertainty in the amount of landings that you can achieve, because that is going to depend on the stock size and structure. That was the last slide I had, so a good time for questions.

DR. BELCHER: Thanks, Kyle; questions for Kyle?

DR. BOREMAN: Yes, Kyle, could you roll back about 50 slides to the stock-recruitment plot that you had. I just want to examine that a little more in depth. I had a couple questions on it. You mentioned the fact that the panel picked up on this idea of having a regime shift, the residuals kind of lessened in recent years, but it looks like it is more than that. It is like a total change in the state of nature is going on out there. For the most recent years, which is the left side of that plot, did you refit the stock-recruitment model just using those years?

DR. SHERTZER: No, we didn't go that far with it. Maybe you can see it better on this panel actually. These are the recruitment residuals themselves, so you can see the larger ones in the early part. This was the plot they are actually looking at. If we went with that idea that is what is occurring, that there actually is a regime shift, then we would need to refit and recompute benchmarks so that they corresponded only to a certain time period.

I think as it was phrased at the review workshop, there was really more of an investigation and more of a hypothesis than using this as evidence that has actually happened. We didn't go that far with those projections but we just took the recruitment residuals from, let's see, 1990 on for those projections.

DR. CADRIN: Yes, just following up on that, the Review Workshop did discuss John's point exactly. When you go back to the stock-recruit plot, there clearly is a historic period of higher stock sizes and a more recent period of lower stock sizes. We are assuming that we could fit a single stock-recruit relationship to both of those periods.

That in itself is an assumption but what we did not see is a time period of just negative residuals or positive residuals from this. To me that would be more of a smoking gun that there is a change in productivity. If we had had a historic period of low stock sizes that had higher recruitment and then a current period of low stock sizes that had much lower recruitment, I would be much more concerned about a regime shift. What we have are two periods of high stock size and then low stock size. It is difficult to say whether it is a regime shift or just two different periods with different stock sizes.

DR. BOREMAN: To follow up on that, the more I look at it, yes, you are right and it could just be the fact that you are measuring both the spawning stock and the recruits with error. You

would expect your error bounds to grow as you move out; grow in both directions away from the fit.

DR. BARBIERI: Kyle, there has been a lot of discussion and a lot of comments about the value of steepness that was estimated by the assessment, and I know you guys actually did sensitivity or sensitivities looking at a wider, broad range. But I was curious, since black sea bass occurs farther north – and I know we are talking about a different stock, but just in terms of comparison, do you have any idea what the values that were estimated here, how they compare with the ones further north?

DR. SHERTZER: Not off the top; I do have the latest report and maybe Steve has read it.

DR. CADRIN: Yes, the last age-based assessments for New England sea bass or Mid-Atlantic sea bass was rejected, and so there isn't age-based structure there, but at the end of this month they are updating that assessment again so we might be able to find out. On the steepness, again the Review Workshop discussed this. It is a relatively low steepness, 0.49, something like this.

But I think the replacement line there suggests that the best stock-recruit data suggests a shallow slope. I know that there is some concern that this is much shallower than other species in this complex, but I think that might be justifiable because of the different life history with the protandry. In fact, John Boreman can speak more than I, but I think in the Mid-Atlantic they consider that an atypical life history and have a lower risk tolerance for that. Is that right, John? I guess where I am going is would the life history justify the shallower steepness for this than other stocks in the complex?

DR. REICHERT: I just want to mention it is protogynous and not protandry.

DR. BUCKEL: Yes, Kyle, I'm just curious, in the Data Workshop, when you were putting the indices together, because I was reading Ben Hartig's note at the bottom of his review that the assessment doesn't match up with what fishermen are seeing, so I was trying to think of the indices and the relationship between catch-per-unit effort and abundance.

In the traps they may saturate so you may get an asymptote, so was there any discussion in the Data Workshop or later on about maybe dropping traps and just looking at vertical hook and line where there may be a better relationship between catch-per-unit effort and abundance, or maybe because they moved the two-inch traps that is not an issue because you are not likely to get the saturation. I just wondered if there was any discussion.

DR. SHERTZER: I think there was discussion about that. We did consider a trap as a possible source for an index, but it wasn't used here, so this is all based on – the vertical line one is the commercial vertical line index. It didn't include the trap data, but maybe if are talking about the MARMAP survey, I think that is the only trap data that are used here, the Chevron trap.

DR. BUCKEL: Yes, I guess just looking at the slopes, they are all correlated, as you said, they are all showing a positive trend, but if you are not getting as steep an increase as you likely

would in a gear that doesn't saturate, I guess that is my concern, and maybe Marcel can speak to that for the MARMAP traps and if that is a potential issue or not.

DR. REICHERT: Jeff, that could be an issue, but I don't think we have any current data to look at that. We have considered putting cameras in the traps to get some data on saturation to address that issue in the future, but we don't have data.

MR. COLLIER: The decrease in the residuals for the stock-recruit, could some of it be related to the at-sea discard information that was provided that actually gives information to the model on juveniles or potential stock-recruit relationship?

DR. SHERTZER: Maybe at the very end of the time series. That doesn't start until 2005, so we can see the shift seems to happen earlier, if it actually is a shift, but there are smaller residuals starting earlier than that.

DR. BELCHER: Other questions for Kyle? Okay, thanks, Kyle, I appreciate it. The actions that we have been asked to take under this item; we are going to go ahead and do black sea bass and then we will follow up with golden tile so everything is still fresh on folk's minds. The fist action, consider whether the assessments represent best scientific information available. SSC recommendations are taken into consideration by the agency when determining the SIA. First off, what are our recommendations relative to the assessment for best scientific information?

DR. BARBIERI: Well, I am personally satisfied with the assessment and the data inputs, all the information used to develop the assessment. Like any stock assessment, there are a number of uncertainties that are associated with the assessment, but I think that the assessment team explored uncertainty appropriately. I think they considered a number of sensitivities and ranges of parameter inputs. I don't see any reason not to accept this assessment as representing best scientific information available. I am supportive of considering this assessment the best scientific information available for developing management advice for black sea bass.

DR. BELCHER: Does anybody have any reservations about that?

DR. BOREMAN: I think the question is does anybody know of any better scientific information, because I don't think we are in a position to judge. Very few of us are experts in this area and have been collecting in this area. The SEDAR process saw to what data went in, but I think the question might be is there any other data sets that we felt should have been included that were not included in the analysis or any other type of information.

DR. BARBIERI: John, I am trying to interpret here and maybe John Carmichael can jump in and help clarify for us, but I think that in this situation what the council staff are trying to get to is a combination of the data available and the analysis. I mean, basically they are trying to assess – and correct me if I am wrong here, John – whether the SSC disagrees with the Review Panel recommendations and the fact that the Review Panel accepted this assessment represent the dynamics of black sea bass and being useful for providing management advice.

MR. CARMICHAEL: Yes, I think that is consistent with what we are heading for. As it says, the agency determines what is best scientific information, and they've told us that they consider your recommendations when making that determination and the SEDAR as well. Now you come out and say you believe the SEDAR approach was followed and the assessment is robust and it meets the standards and agree with what the Review Workshop put out there. As you say there, that you recommend that this be considered the best scientific information, then you are doing what we have asked you to do.

DR. REICHERT: Yes, relative to this discussion, I think it may be important to say that it represents the best scientific information available under the terms of reference. This was a standard and that may be different or it will be different from a benchmark, as it will be different from an update. John, maybe you can address that.

MR. CARMICHAEL: Yes, you guys can certainly say that if you believe that is the case, yes. There are certain rules and policies to go by.

DR. SHERTZER: I will say that the definition of standard was pretty loose at the onset of SEDAR 25, and I would say that although it was a standard it was probably closer to a benchmark than they will be in the future.

DR. CADRIN: What would have been done if this was a benchmark – I agree this is somewhat intermediate. Are there any huge areas of research that were left unturned because this was a standard?

DR. SHERTZER: I am really not aware of any major issues. At least in the Data Workshop I was part of the indices workgroup and I think just about every index that could have been considered was. I don't think landings would have been different for the commercial or the recreational. They may have made some more effort to go back farther in time for possible use in terms of life history. I can't think of anything for life history that might have been different.

DR. BELCHER: Based on Marcel's kind of open statement about following the terms of reference, does the group at least agree that we can forward this on for management purposes and holding to the terms of reference as stated under this SEDAR?

DR. BERKSON: Yes, I always consider this to be a really tough stage in this process because this is the culmination of months and months of work of lots of people. The manhours that go into this is tremendous, and we are taking a look at the final product and we are suppose to be giving it sort of a thumbs up or thumbs down based on our reading of these huge documents and then the presentation.

I think that is a very tricky thing we are asked to do. The good news is that we have had SSC members every step along the way throughout the process, I believe at the Data Workshop, the Assessment Workshops and the Review Workshop. I think largely when we get to this point we have to rely on the SSC members that have tracked the process as well as the assessment scientists and the data people and others that have been a part of it.

I was one of the members of the Review Workshop. There were three of us SSC members at that Review Workshop and we are all here. I have been at a number of these Review Workshops and I can say that at this one, this was the most confident, I would say, I have ever seen a Review Panel be about the quality of the product that was turned into us. Based on that, I definitely endorse the product as useful for management and best available science.

DR. BELCHER: Does anyone not support that? Then the group consensus is we recommend pushing this forward for use in management. In recommending its use, now we are tasked with applying the ABC Control Rule and recommending an ABC and an OFL for this stock. So, running the table, which can we project that up there, the first level that we need to look at is the assessment information.

We have quantitative assessment provides estimates of exploitation and biomass includes MSY-derived benchmarks at the top; reliable measures of exploitation or biomass but no MSY benchmarked. We use proxy reference points as the next level; relative measures of exploitation or biomass, absolute measures of stock – sorry, status unavailable; next level, reliable catch history; or level 5, scarce, unreliable, catch records.

From the information we have in front of us, I would say that we are probably at the top of the level. Does anybody disagree with that as far as the quantitative assessment providing estimates of exploitation biomass including the MSY benchmark? Does everyone agree? Okay, so that has a zero weight. The next level is looking at the uncertainty characterization. John is getting ready to put that up there. Steve?

DR. CADRIN: Before we go too far down this road, where this is in a rebuilding plan, would F rebuild dictate the ABC more than the P-star approach?

MR. CARMICHAEL: Yes; and in fact as we talk about black sea bass, black sea bass, as Kyle showed the projections as working on a 50 percent probability of success, and what the control rule says in terms of rebuilding stocks is that your P-star specifies the probability of success. At this point the council is not considering changing that. You could just agree to go with the 50 percent level that is already in place and is already a part of the rules if you don't think there is a reason to change it.

But, it is up to you guys if you want to consider recommending that they change it, which the council could take up at some point in time, but the bottom line is we do have a rebuilding plan that was in place before we had this kind of approach. Your current ABC for black sea bass is based on just the language that it is consistent with the rebuilding plan selected by the council.

DR. CADRIN: Should we then entertain just a rebuilding at 50 percent probability basis for ABC? I didn't mean to short change the whole algorithm going through, but it seems like that probability has already been determined by the council, and perhaps the first option we should consider is a rebuilding at 50 percent probability.

MR. CARMICHAEL: I think that would be appropriate and then you could focus in on the various projections in your evaluation of the current uncertainties and how they should be

interpreted. I think in terms of a recommendation, you would just be endorsing the existing rebuilding strategy that is based on a 50 percent probability of success.

DR. CADRIN: The Review Workshop was focused on the assessment and the projections themselves, but in that discussion had determined that a rebuilding approach would be more relevant to the stock status than a FMSY and P-star approach, and so in that sense my perception of the Review Workshop was that a rebuilding basis for the ABC would be the more appropriate, so I individually would support that.

DR. BELCHER: Is anyone not in support of that; taking the recommendation of the Review Workshop? Okay, so that is our ABC. That at least gives us the discussion for the ABC.

MR. CARMICHAEL: I don't know that we have talked about OFL for black sea bass in the past, but I think our expectation is that in this type of scenario it would be the yield in a particular year at FMSY. If we could have some discussion and clarification on that, it would help fill in the various blanks.

DR. REICHERT: So what would that ABC be just as for information purposes?

DR. BELCHER: If I am reading it correctly, it is based on what is currently in place as the rebuild.

DR. ERRIGO: The ABC will be based on whatever is chosen for the rebuilding strategy; so if it is constant F, then the ABC will change every year. If it is constant landings, then we will just have a set ABC across the whole time period.

DR. BARBIERI: Yes, but I have to say, because we have been in this situation before, right, and I am still a little confused about how we handle OFL when we have a rebuilding stock and that ABC is almost automatic unless we disagree with the recommendation from the Review Panel to set it at yield at F rebuild. But then OFL, we have to choose a time period or a specific year for yield at FMSY?

MR. CARMICHAEL: OFL could be a value obtained from a projection of fishing at FMSY. Just as you have the F rebuild which gives you the ABC, the companion to that would be fishing at FMSY which gives you OFL. It is actually important because in one of the projections of the fixed landings that gets you to rebuild, I think in the first year the F that fixed landings gives you is over the FMSY.

When we looked at those and said that wouldn't even be a viable alternative, that would result in overfishing because your F would be over FMSY. We don't actually have the projections of yield at FMSY which gives you the OFL, but if that were something the council felt that it needed to have, it could certainly be provided. That has been our expectation in a rebuilding stock, then the fishing at the MFMT gives you the OFL.

DR. BOREMAN: Are we just recommending an ABC for the 2012 fishing year or 2013 fishing year or are we recommending it for multiple years?

MR. CARMICHAEL: Well, if you do it off of a particular projection scenario which gives you the yields until the end of the rebuilding period, then you could be giving it for multiple years; or if you are uncomfortable doing that, then you could give it for a couple of years out.

DR. BOREMAN: That is the point of my question is how comfortable are we going beyond a one year spec here? I agree that probably the OFL should be FMSY times the projected biomass for whatever year we are setting the ABC for. I would like to know what year that is. Are we starting with 2012? Okay.

DR. CADRIN: Yes, I think that is a good comment, and, Kyle, there were FMSY projections done that we confirmed at the Review Panel. It seems to me that the OFLs, as John suggested, are on the table, that we have those values available to us. But I also think John's question is valid for our ABC and the rebuilding ABCs.

When is the next time that sea bass is scheduled to be updated and how far – I wouldn't be comfortable taking this too far forward – is that one or two years projecting off this assessment I think would be valid. Anything beyond that would be very risky, and I wonder if there is a schedule for updating this.

MR. CARMICHAEL: At the current time there is not a plan for – there is not an update of black sea bass scheduled. Now this is looking through 2013. My expectation is that we would probably have to look at black sea bass by, say, 2014 or 2015. Our expectation is normally that we would look at a stock a year or two years, maybe, before the conclusion of its rebuilding time to see if there are any last minute adjustments and then look at it once it has reached that point to verify that it is actually rebuilt.

Just in terms of working ahead, what we are planning on SEDAR is black sea bass probably in 2014 or 2015 unless circumstances such as new MRIP values, perhaps, conspire that we may try to look at it even sooner. But I think when we think about the timeliness of a recommendation, if it is going to sunset at some point, we definitely have to seriously factor in what would the SSC require to give us the next series of recommendations.

DR. BARBIERI: Well, since the SEDAR schedule that we have in front of us, and I would think this was the latest that came out of the SEDAR Steering Committee decisions, goes through 2013, perhaps we should just extend it through 2013 and give a recommendation for 2012 and 2013 and that would encourage the steering committee to perhaps start thinking about a benchmark or standard or whatever assessment is needed for 2014 or 2013 if they see a need to have that done earlier.

DR. CADRIN: Yes, I am looking at the selectivities and there is near full selectivity to age 3, which would be consistent with what Luiz is saying is that we are going to start talking about mostly projected fish in our catch rather than estimated abundance. I would support that short-term advice.

DR. BELCHER: Does anyone not agree with that?

MR. CARMICHAEL: So wee are saying three years, 2012, 2013 and 2014, and then you would like some fresh information of some type.

DR. BARBIERI: No, in this case it would be two years, so it would be 2012 and 2013.

DR. REICHERT: Yes, that was the point I was going to make because the data are through 2010, correct, so that would already be three years.

DR. BELCHER: So the group wants to recommend then for consideration that black sea bass be an update for 2012 and 2013.

MR. CARMICHAEL: You mean 2013, correct; done in 2013 to have information, and there are things that can be done; perhaps updated projections taking into account what landings actually were might be something that could be looked at. I think those are details we can finalize.

DR. BERKSON: I think when you are talking about requesting an update or a benchmark or anything like that, it has to be looked at in the context of all the stocks and all of the issues that are on the table, and I don't know that is necessarily what we are supposed to be doing.

I think what we can do is point out the scientific issues; that it would really make it better to update black sea bass sooner rather than later and why the SEDAR Steering Committee should consider that when they are scheduling, but I don't think we ought to tell the SEDAR Steering Committee how to schedule their stocks, and I almost feel like that is what we were talking about doing.

DR. BELCHER: I didn't take it that way and maybe it was just my poor wording and how I was directing the conversation, but my understanding was it was a recommendation based on what would be happening beyond that point with this projected versus estimating.

DR. BARBIERI: Right, Jim, and in this case I think we are trying to provide the steering committee and the council with some recommendation. Our level of confidence in providing that catch level recommendation is short term, and then they know that we don't feel really confident in extending those recommendations beyond those, and then they are going to have to think about how they structure their schedule to address that.

DR. BERKSON: I think we are probably all in agreement with that; it is just a matter of finessing the language a little bit then, probably.

DR. BOREMAN: Just a point of information; in the Northeast the Northeast Region Coordinating Council, I guess, which is like a SEDAR Steering Committee for the Northeast SARC, so it is one of their jobs, just added the SSC chairs to the committee specifically for that purpose because the feeling is that the SSC should have input on the scheduling.

I think we are in one of the best positions because we are in a position of frustration now; knowing that we only have confidence in going a year or two out when we would like to see the

next update. Sure, there is going to be some tradeoffs with other species, but I think we should get our oar in the water whenever we can.

DR. BELCHER: Further comments? Okay, the next step then is providing the fishing level recommendations; include a discussion of uncertainties and their consequences. Basically, this is looking at the fishing level recommendations table that we populate through the assessment and review process and agreeing with those values, and those that are kind of a little bit more ambiguous like the F to F reference, making sure that those are adequate.

MR. CARMICHAEL: Procedurally at this point, if you are comfortable with the base run that came out of the Review Workshop as their recommendations, then you guys can obviously go fill in the blanks. I think you saw the table but if you want to put this in your report and make sure that as you finalize your report and submit it to the council, everyone on the committee clearly sees what values you are actually recommending. Then the important discussion probably here after these numbers is your take on what this all means, what are the uncertainties, what are the consequences, sort of bringing it all together here in this last piece.

DR. BARBIERI: Well, based on the discussions we just had, I think we can say that the SSC accepted the base run, the assessment and the recommendations of the Review Panel and the fishing level recommendations presented in the assessment, the values can be transcribed from the table that is in the assessment.

MR. CARMICHAEL: Which is the table that is now on the screen.

DR. REICHERT: That was basically what I was going to suggest, and then we have already addressed the ABC a paragraph up.

MR. COLLIER: Is there any concern about the 2011 landings and what is going to come out of that? I mean it would be nice to have some kind of indication of if we were at 100 percent, 150 or 200 percent.

MR. CARMICHAEL: At this time we don't know; they have closed based on projections and it seems that we are probably going to be in the 150 percent; is that sort of the latest, Gregg; in some cases maybe even – depending on how things fall out could possibly be a bit higher; it depends on who you talk to.

In some cases it sounds like probably not over 150 percent, if it reaches that. Some other preliminary indications, just looking at a couple waves, maybe you could easily surpass that. It really comes down to what has happened in these last couple of waves in the MRIP recreational fishery.

MR. WAUGH: We have the July/August MRFSS wave data and looking at what increase there was over last July/August, the projection that the agency did was that the recreational catches were exceeded. Now if you apply – and this is something that Mike did – if you apply the same percentage increase that you see in the July/August wave comparing this year to last year to the

September/October wave, because that full time period was under reduced bag limit, then our estimate is that would put you at 181 percent of the revised recreational ACL.

The latest estimate of the commercial harvest – and this is just from the selected dealers that have been required to report – is as of when the season was closed back in July, we were at about 110 percent of the quota. The landings have not been updated with dealer reports. We are trying to get that for our December council meeting. Our best estimate, when you look at the actual ACL, that we are going to recommend to the council that they look at the projection runs at 150 percent. We may be above that a little bit and maybe below that a little bit, but certainly closer to 150 percent than the 200 percent we feared.

MR. CARMICHAEL: I guess the general question to the SSC is are you comfortable with that, that at the time the council has to make the decision we give them the most information we have and staff will look at it and try to get a handle on what the actual landings overage will be for 2011, and let them act accordingly. Then knowing that with the accountability measures and such that is in place, there will be some reckoning for this type of business.

DR. CADRIN: I just want to understand the details of what you are proposing, John. Would the best estimate of current year catch be used in the projections and then any accountability measures be applied to the next year? I mean, how complex would this projection be? Would these be accounted for by projection or just qualitatively?

MR. CARMICHAEL: Taken qualitatively. I mean there is a question if you take the new projections which assume some increase in landings and then you look at next year, then I think in a way you have taken care of that so you wouldn't have to do a new projection necessarily with the actual landings and then potentially payback, because we don't want to account for it twice.

DR. CADRIN: It would be a reduction in the following year, so the overage in this year could be projected using a reduction in the next year rather than an F rebuild; a reduction the next year. There are different ways to do this. I am not sure if this can be done and I am wondering if we should support an approach and implement that approach as best possible; is that we maybe our recommendation is that our ABCs be based on rebuilding; and if the current year catch and next year's catch with accountability can be projected, that is probably the best way to do it.

If there isn't time, then maybe some qualitative adjustments, but I guess I would feel more comfortable with a general recommendation to use rebuilding projections; and if the catch can be modified according to these data, that is great; if they can't, then we will have to use what we have.

MR. CARMICHAEL: I think that would be helpful and appropriate.

DR. BELCHER: Any other thoughts from the group? Are folks in support of what Steve just recommended? Everyone is okay then putting the table forward and recommending. I have got quarter to eleven, so I am going to go ahead and say take a ten-minute break.

DR. BELCHER: Let's go ahead and get started, please. Are there any further comments or points of discussion the group would like to have relative to the black sea bass assessment and recommendations? John.

DR. BOREMAN: Just another point of information; next month we will be having an updated and not a benchmark assessment on black sea bass, a SARC up in the Northeast. Things are not looking good.

DR. BELCHER: Thanks for that, John. Anybody else, anything they would like to, or thought about over the break relative to black sea bass? Okay, because of the length of discussions relative to the assessments, I talked with John and I think we are going to actually do an early lunch so that we don't end up butting up on noon time, kind of breaking up the discussion and then coming back again.

Just because I am feeling nice today doesn't mean we won't start early later in the week, but we are actually going to break until one. Is that a problem? The only reason is that there has been an express concern from the audience to not have a breakup on it, and there is another meeting going on that Ben Hartig has to go to, so he wanted to be available for the presentation as well as our discussion. Is everybody okay with that? John.

DR. BOREMAN: Are we going to break now until one o'clock; is that what you are saying?

DR. BELCHER: It is eleven, yes.

DR. BOREMAN: Can't we cover another short topic between now and noon?

DR. BELCHER: Yes, if you would like to do that. I mean, we are going to do an hour and a half for lunch, regardless, because of the proximity to restaurants. If we want to do the SSC Workshop Report, we could do that. That will get us a little bit further into the agenda, but again the main thing is just keeping the connectivity between the presentations and the discussions of the group.

MR. CARMICHAEL: The SSC Workshop Report will be exceedingly brief. I don't think we will accomplish as much time as you would like to accomplish. There was the Fourth Annual National SSC Workshop hosted by the Mid-Atlantic Council and chaired by our own John Boreman. Mainly there were two groups that broke out and met separately during the second day.

One was devoted to ecosystem management type things and the other dealing with the socio-economic issues in fisheries, which was kind of nice to see a whole session devoted to that. We had lots of representation on our social and economic side. Scott was there, Sherry was there, John Whitehead was there, Brian was there, and then I think that was all of you guys.
Then for the ecosystem side I was there. Luiz was going to go but couldn't go at the last minute and Churchill was there, that is right, Churchill was the other one who was there, so we had a good representation. I think all in all people thought they got good things out of the workshop

and enjoyed the exchange of ideas with people in other regions and hearing what other folks are up to.

And the ecosystem session that I sat in, clearly it comes home that ecosystem management isn't exactly simple. When you start talking about what you can take out as a whole, it is not as much as the sum of the parts necessarily when we think of individual stocks and individual optimization, which I think is a good lesson to carry forth. There is a lot of discussion of forage species, which was interesting; and an acknowledgement that when you start dealing with that, you have to consider the other uses in the ecosystem beyond fishing removals that are important to supporting other things that society thinks is important, such as marine mammals which can be important predators of the same prey species that the fish we are trying to optimize are involved with.

It was interesting to see some discussions about that and realizing this higher level type of ecosystem stuff. Then there was some interesting discussions about what exactly a forage fish is and the differences in the different regions and how when you are talking about shrimp as forage, it may not be quite the same type of idea as when you are talking about something like menhaden as forage, which was good to get in our sort of push for our region. Scott or John, one of you guys who wants to comment any on sort of some of the take homes from the socio-economic side of things.

DR. BOREMAN: Just a couple of things; yes, the forage issue we thought we would get settled with an agreed-upon definition across all the councils, that didn't happen. Basically the decision was to leave it up to each SSC how they wanted to define and handle forage at this point. There are several reports coming out, national reports, international reports. The Marine Stewardship Council is coming out with a report and there is another one.

We decided to hold off with any general recommendations until we have had a chance to look at these reports and review them and assess their relevance to SSCs and ABCs and so on, and maybe come back at the next SSC National Workshop with some recommendations. What I tried to charge the group to do was come up with some recommendations to go back to the Council Coordinating Committee.

In the past the reports have been written and no general consensus recommendations have really risen to the top, strong ones other than ORCS. That went back and so we are going to come up with some – for example, on the social science side, a recommendation is to develop some generic terms of reference for SSCs that involve more social science aspects of ABCs and ACLs, put more thought into setting OYs and so on.

Believe it or not, there was no strong support for National SSC Workshop Number 5. People thought we've basically topiced out by now. We have all rung our hands over dealing with ABC Control Rules and looked at social sciences and ecosystem so we are going to hold off. Next year is one of these Managing our Nation's Fisheries Conferences next October. There was no strong feeling that we need to push the CCC to sponsor another national workshop soon.

Maybe a couple of years from now, we will have more topics like who won which lawsuit and what precedent was set by which judge and how we need to go back and rethink ABCs. The report, I don't know, Rich Seagraves is heading up the report writing. I haven't seen any drafts. I hope all the rapporteurs got their minutes in, but that report is supposed to be out by the midyear CCC meeting, which is January some time, early February, so look for something coming out prior to then.

DR. GRIMES: Yes, I thought it was a good meeting and I enjoyed it, but I do think that an awful lot of discussion and comments and stuff have been said and written before. There is a big literature on this and a lot of it was a rehash of that. One thing I was a little bit disappointed with was I thought that I would have liked to have seen more discussion about tradeoffs.

This seems like a thing that should be the first principle of considering ecosystem-based fisheries management is that society has decided that it has multiple objectives for the products and services and marine ecosystems beyond money and food and a huge nonlinearities in this and modeling 101.

You can't maximize all the variables at once, and so a little bit of gain for one is going to make a potentially big hit for another. I think more consideration should have been given to exactly how these tradeoffs are going to be made; how the winners and losers are going to reconcile this sort of thing. But still, all in all I enjoyed it and I thought it was a constructive thing.

And in the report I know I agreed to work with Mike Fogarty to write a little preface or preamble or whatever that would maybe try to motivate the fisheries management councils to be aggressive or more aggressive about EBFM, and the idea being that there are a lot of national policy matters, the National Ocean Policy, Coastal Marine Spatial Planning, IEA, all these things, ecosystem-based management in general that are national policies that the councils may as well acknowledge that they need to kind of get in line with this stuff.

There are these other things coming down the road that will challenge fisheries, like wave and tidal power and oil and gas development and energy development, wind and all that sort of thing that are big economic issues, and I think it would behoove the councils to be in the best position they can to react to this stuff so the fisheries don't get run over.

DR. CROSSON: Yes, I had forgotten about that until Churchill just stated it, but I think that was definitely something that people need to keep in mind for the future because it is going to happen very quickly probably when it does happen. I thought one of the more interesting discussions that came out of this was the question of remands for ABC recommendations flowing back from when the councils are unhappy, and some of them seem to be happy with ABC recommendations, and I am sure we have a little bit of experience in this matter.

There seems to be differences between some of the councils – well, first of all, whether this issue has come up, and it seemed to be a little more foreign to some of the Pacific Councils that they had not had this quite to the degree that we have. We have had it a few times where the South Atlantic Council has been unhappy with the ABC recommendation and we have reconsidered it.

The Gulf Council it seems is that plus more, and there was a member of the Gulf SSC that stated that they are now up to 30 percent plus of their time dealing with remands from the Gulf Council on ABC recommendations. The Mid-Atlantic Council in contrast has gotten to the point where they have agreed under what conditions a remand – of course, this is something the council has to agree with, but they have worked out something with their council under what conditions remands can occur and the SSC will willingly reconsider an ABC recommendation.

I think it is dependent on either new data that would significantly impact the process being there or a significant enough error being found in stock assessment or some other data that goes into it. Other than that, they are not willing to look at them again until the following year. I think that is something that the South Atlantic might want to bring into the discussion with the South Atlantic Council is setting up some sort of terms for reconsidering ABCs so that we don't go down the path of the Gulf.

DR. BELCHER: Any other comments on that? I appreciate everybody being willing to go and glad we had a good representation there. I know in my experience in the past it has been really eye-opening to see how other regions are dealing with things and putting it in perspective. It really does help you realize how good you do have it in retrospect to some areas.

John has recommended – and I am going to throw this to the group to see; we are at ten after eleven – the possibility of discussing the ABC Control Rule Development, whether or not we review the ORCS approach and then determine if we want to modify the ABC Control Rule; or does it need to be modified I guess is a better question on that. How do folks feel; do you think this is something we can discuss in a fairly short timeframe or would you prefer not to have that quasi-constraint on that? Obviously, we can talk more after lunch as well.

MR. CARMICHAEL: What we are asking for is – you guys all know about the report. It came out I guess not too long after our last meeting, it came out this summer and you wanted to review it, put it on there as an option on the table to consider if anything that is in the report would affect some of what you have done in your control rule, if you are prepared to make any modifications of the control rule, if it is something you want to consider down the road and look at some option, give us some guidance as to how you want to handle it; or if you just think you can use this to help inform your own deliberations of the stocks that fall out of the unassessed categories, so that is what we are looking at here.

DR. BERKSON: Well, I guess first we have to decide if we want to discuss it now, but if we decide yes, I have got a couple comments to open with.

DR. BELCHER: So, folks, proceed? Yes, okay, so Jim, start us out.

DR. BERKSON: Well, we didn't prepare a presentation for this because the report has been out for a while. I think everyone here knows the background of it and the working group that was put together to look at this. The bottom line is the ORCS report does have a recommended process for coming up with the ABCs for stocks where all you have is reliable catch.

The working group believed that this was a superior method for dealing with those stocks, a better approach than other approaches that were out there, and we did a thorough review of other approaches that were being used both nationally and internationally. The approach has gone through a peer review – the technical memo did – not to mention there were some very good people on the working group.

It hasn't been put together as a manuscript yet to be submitted for publication outside of Tech Memo, but that is a longer-term goal. I think that my own suggestion would be that we move forward with adopting that approach over our existing approach for stocks where all you have is reliable catch data.

DR. CADRIN: I also was a part of the ORCS Working Group and I would support Jim's approach. I think for this topic we had a lot of people with experience in those types of situations. I was pleased with the review that was fairly comprehensive of all the different approaches.

I thought there was a lot of development that went into the framework and it was a very – a lot of thoughtful development went into it that I am not sure each individual regional SSC has taken the time to do. I think the best science available is what was the intention of that, and I would support us adopting that.

DR. BARBIERI: Well, following the pattern of having working group members come up and make comments about the report, I agree with everything else that has been previously said. I think that the approach there is an improvement to what we have now. It definitely provides I think a different perspective than everything else that we have considered and should be considered by this committee as a way to go forward when we only have landings data.

DR. BERKSON: I think we need to change the wording over what is up there because it is not unassessed stocks. It is for stocks where all you have is reliable catch data. This method does not work when you do not have reliable catch data or if you have additional information beyond catch data.

MR. CARMICHAEL: So structurally within the control rule that you guys have devised, which is up on the screen, it has four tiers, so this would come in – essentially the approach that is in the ORCS report and summarized in their Table 4 comes in as Tier 4? Does this replace the decision tree approach that was applied at the next meeting or has it become another component to be considered within Tier 4?

DR. BERKSON: The ORCS approach actually would replace Tiers 2 through 4 because it starts out by saying if you could do a DBSRA do a DBSRA; if not and you can do a DCAC, do a DCAC; and if not, then you adopt the ORCS approach. It actually is fairly comprehensive in that way.

MR. CARMICHAEL: Yes, I was kind of thinking that because what you have in Tier 2 and 3 matches the ORCS is my understanding, and then this stock status for a hierarchal historical catch-only assessment sort of falls in as this last tier. The question for me is does the ORCS

approach for this last tier replace what you guys did at the last meeting or do you consider both of them worth something you would go through the exercises and compare and contrast.

DR. CADRIN: Yes, I would support that clarification; and also just remembering the time sequence of this is when this was developed for the South Atlantic, the ORCS Group was in process and so a lot of what we had been talking about is reflected here, so it is not as if we were taking a completely different approach, but I think it has been refined since then by the ORCS Group. I think it really builds on what we already decided.

DR. BARBIERI: Well, I just wanted to point out that the approach that we came up with or proposed at our last meeting, my recollection is we were explicit about the fact that was going to be an intermediate approach that we would – you know, it was developed sort of on an ad hoc basis, and we felt, yes, it follows procedures that we believe are reliable but it is not the ideal set up. I think in this case I feel comfortable adopting the ORCS approach instead of the approach that we proposed last time.

MS. LANGE: I don't see where there is a contradiction. Basically what Jim said for 2 and 3 is what we have already, so I think we may as well substitute the entire – didn't he say Tier 2 was the DBSRA and Tier 3 was the DCAC, which is what we have already got; so if substituting the whole package is basically what we were saying to do.

DR. BOREMAN: Yes, Mike Wilberg and Tom Miller and a post doc in the northeast have been doing a management strategy evaluation of our ABC Control Rule using a species similar in life history to fluke and one similar in life history to dogfish for modeling. In the process of that management strategy evaluation, they plugged in the ORCS approach, looked at different aspects of DCAC and DBA and all of that stuff and came up with some interesting conclusions about in which cases is one approach more conservative than the other approach.

They compared them all to the Restrepo approach. That is going to be coming out in publication. It is currently undergoing peer review, but it may have some impact on – it is not going to change the ORCS report but it will have impact on how one selects a methodology out of that report to use under certain circumstances. With that, I have no problem going with adopting the ORCS approach as long as we still realize that this is interim. This is going to be changing and something better might be coming along, but for now this is the best that we have to work with.

DR. BERKSON: Yes, I think that is exactly what the ORCS Report actually says. It says that this is going to be an iterative process and there is a lot of research being done, and that this approach is far from perfect because when all you have is catch data you don't have a whole heck of a lot and you don't have much of a signal if you don't have everything you need to tell you about the population dynamics of the stock.

There will be a lot of work that the SSC has to go through to implement the ORCS approach, because there are a lot of questions for every stock that have to be answered by the SSC in terms of the fishery and the biology of the species. It is going to be a difficult task but the working

group was convinced it made more logical sense and followed better population dynamics theory than existing approaches.

DR. BARBIERI: Well, Jim hit exactly the point – you must have been reading my mind there – that I was going to get to is that approach requires quite a bit of work to implement it. I was wondering whether that is suitable to be conducted here in a meeting setting type of approach. I think we would have to have some way to handle that questionnaire and go through all the biology and the fishery. Otherwise, it would take up most of the meeting, so I'm wondering if we shouldn't be discussing how we are going to be implementing that.

DR. BERKSON: There is a lot about that approach, which is really Tier 4 when you can't do DBSRA or DCAC, which we are going to run into a lot that is customizable, where we have really said it is up to the SSC and the region to use the criteria that make the most sense. I am on the Caribbean SSC and we use the ORCS approach. We didn't take the time to customize it really as well as we could have, because it required a lot of time.

We had like a two-day meeting jam packed like every SSC meeting. We just followed through with the standard ORCS approach as was written up in the Tech Memo, and I think the whole SSC wanted to have a meeting dedicated just to basically customize that approach for the region and the stocks they deal with.

That might be something that we want to discuss, not necessarily an entire meeting dedicated to it, but a day or a day and a half or something like that where we can go into it in more detail make sure we understand it and decide if we do want to customize it a little bit. The bottom line I am trying to say is this is not something we are going to implement in a half hour.

MR. CARMICHAEL: The comment and what is on the recommendations, the way I understand it is that Tier 2 and Tier 3 that we have are consistent with the recommendations in the ORCS Report, and then this concept that is classified as the ORCS Working Group approach is the means for guiding decisions within Tier 4. We will modify your ABC Control Rule Document accordingly with notes as we have done that keep track of what you have done when, so we will clarify where we stand.

DR. REICHERT: I think this comes back to the point Jim just made; so with this different approach, do we need to revisit the ABCs that we set in a previous meeting or is that something that this as of now, the next time we discuss the setting ABCs, this is what we are using.

MR. CARMICHAEL: Yes, you know, ABC Control Rules are specified by the council. The council has actions that are going into place to specify ABC Control Rules, so what this becomes is the next iteration of those recommendations. We are not asking that you go back now and say, okay, now that we have done this let's revisit all of our ABCs, not at all.

DR. REICHERT: Well, exactly, but I know that question may very well come up, so that was why I was asking it.

DR. BOREMAN: The comment up there, I just read it, the ORCS approach would replace Tier 4; I don't want to throw out Tier 4 the way it is done now. I think it would complement or add further guidance to handling Tier 4 species, but there are certain aspects in there now in terms of our decision tree approach I think we should retain, like is this species an ecosystem component or something, is it a discard, is it a directed fishery, and those types of decisions should still be made. I would change the wording there to be just to complement or add further guidance to handling Tier 4 species.

DR. BERKSON: That is really the kind of information we need to incorporate to customize Tier 4 to make it applicable for our stocks for the region. I think we just need to say that the other components need to be incorporated just as I said, as we customize it.

DR. BELCHER: So does everybody support the recommendation? Does anybody have any reservations about it?

DR. BUCKEL: I just have one quick question. I am total support of it. I was really impressed with the report and that it was based in population dynamics theory. The question I have is some of the things in the approach are data requirements. It is almost like you need the data workshop group to do that. I guess it is just a nuts-and-bolts question. Who would be working through the ORCS approach? Would it be the SSC or would it be folks that are part of the data workshop that have the expertise in making some of these calls that are in the ORCS approach, the catch only.

DR. BERKSON: I think that is really up to the SSC to decide. I don't think it is a hard and fast rule in terms of who is going to do that. I think ideally your SSC should have the expertise required to do that; but if they don't, I think they can go outside to other scientific experts and get guidance. I mean, that is how I would recommend moving forward with it, but that has not been decided yet.

DR. REICHERT: Well, I am not sure I entirely agree, because I think there is a lot of knowledge outside the SSC that I am not sure if we have the full suite of expertise to make those decisions. I am not sure what the solution is; but coming back to an earlier point you made that we may have to spend some time identifying what information we need and then getting that information from whoever has that information available and then go to the next step.

DR. BERKSON: That sounds like a reasonable way to proceed. Obviously, you can tell making this to the point where we can implement it once again it is not going to be trivial.

MR. CARMICHAEL: I tend to think often it works better if there is something done and created and brought to you for consideration and refinement. One way I think about doing this is that one option is obviously the staff goes through and does some research and thought and fills in the blanks.

Another approach is that we do like a workshop style approach where we try to fill in the values for the stocks that are now unassessed and don't fit into DBSRA and DCAC and try to bring in the experts from groups like MARMAP and the other state researchers in the universities who

know a lot about the life history and bring in some of the people from the APs perhaps to talk about the fishery issues that are involved.

Then we try to get a report on the stocks that you then review – and obviously SSC people involved in that also. That might be the best approach, and I think once the council gets its Comprehensive ACL Amendment through and we know what the new universe of stocks is, then maybe we can make some progress on that.

DR. BERKSON: I see it as really being a two-step approach. The first step is deciding what criteria you need to look at, how you adjust the tables that are in the ORCS approach for the region, and then the second step is filling in those blanks for individual stocks.

DR. BELCHER: Other comments? Okay, so with that we are going to recommend pulling in the ORCS approach for additional guidance in handling the Tier 4 species. Then obviously as things unfold, we will figure out where we enter into the process. Jim.

DR. BERKSON: Do we also want to recommend that we request time on our next agenda to start hashing this out in more detail?

MR. CARMICHAEL: You would like to do step one of the two steps you had mentioned there where we try to tailor this to the South Atlantic situation at the next meeting?

DR. BOREMAN: I hate to bring this up, but can we do some of that work offline prior to the meeting so we are not sitting here scratching our heads but there is actually something to look at and react to. I think the meeting would go a lot better, so perhaps set up a subcommittee of the SSC to take a first cut and then bring something to the meeting.

DR. BELCHER: Do folks want to volunteer for that? Jim is volunteering, Marcel. How many folks do we want? I have got Eric and Chip as well. Is there anyone else? That gives us four folks.

DR. BERKSON: We have a really good start with the table as is; so if we are talking about developing a strawman just for discussion, I don't think it is going to take much.

DR. BELCHER: Thanks for that. Any other further discussion or comments relative to the ORCS and the adaptation? Well, seeing none, let's go ahead and break for lunch. We will come back at one; that gives us an hour and a half.

(Whereupon, the meeting was recessed at 11:30 o'clock a.m., November 8, 2011.)

The Science and Statistical Committee of the South Atlantic Fishery Management Council reconvened in the Hampton Inn West Ashley, Charleston, South Carolina, Tuesday afternoon, November 8, 2011, and was called to order at 1:00 o'clock p.m. by Chairman Carolyn Belcher.

DR. BELCHER: Okay, we are going to go ahead and get started. Before we get into the Golden Tilefish Assessment, Marcel brought up a question just for a point of clarification for filling in the black sea bass table.

DR. REICHERT: Yes, most of the information in the table that we have to fill out can be directly cut and paste from the assessment report. We have language as to the ABC, but where are those numbers coming from? Do we have a table that has that ABC number, because that is what is called for in that table, and I forgot what the page number was.

MR. CARMICHAEL: The ABC would come out of the projection scenarios, so it comes down to which rebuilding strategy the council chooses and what the landings end up being in 2011, which the discussion we had about trying to get projections with the actual landings included if possible.

DR. REICHERT: So we are not providing an ABC, a number in the table?

MR. CARMICHAEL: Well, that would be correct, you are providing similar to what you have provided for every other stock we have dealt with which is in a rebuilding situation where you have said it is based on the rebuilding strategy the council chooses. In some cases you have recommended a range of rebuilding strategies, which is what we did the last couple meetings ago with red snapper where you gave them a range of alternatives that you thought was reasonable.

In this case they are looking at fixed landings, status quo and F rebuild. Then presumably the council is going to choose which of those they like, and then the modified approach, also, so they have four rebuilding strategies. Unless you felt that for some reason one of those rebuilding strategies were scientifically inappropriate, I think it is open to the council to choose the one that they prefer.

MR. COLLIER: Should we caution them on not going up to 200 percent over; that hurts the rebuilding strategy?

MR. CARMICHAEL: Well, what if it ended up it were 200 percent over; I don't know what you mean.

MR. COLLIER: Well, I mean it is concerning that they are able to get that high when we are trying to establish methods on preventing overfishing and they have exceeded their rebuilding strategy by that much.

MR. CARMICHAEL: Yes, I think that is a good point. I think when we get to the amendment where we deal with the black sea bass and the management regulations and accountability measures and that stuff, that is where I was thinking we should bring that kind of information up. Because, yes, I think if the SSC has opinions about getting so far afield that it has gone 200 percent over, that is the place to bring that type of information in.

DR. BOREMAN: Yes, last year I think in the northeast black sea bass was 450 percent over the recreational fish ACL, so don't feel so bad. If we are going forward with advice to the council, I

am not a big fan of constant catch, I'd like to see a rebuilding plan on F rather than catch. When you get into constant catch, to me in my mind it gets complicated when you are trying to determine what is an appropriate buffer between the ABC and the OFL. It gets a little messed up. I don't know people may have other opinions, but I would advise against sticking with a constant catch scenario during a rebuilding schedule.

MR. WAUGH: Coming back to Chip's point, I think when you all do get to make your recommendations, just clarify whether you are talking about where the council is setting their ACL versus what is being implemented and how the quotas are being tracked, because the council certainly shares this concern of these excessive overages.

DR. BELCHER: Does anybody else have any further comment at this point? Maybe we can bring up these points that Chip and John both have when we get into talking about the amendments. Continuing on, Erik, you can now have the floor for your presentation.

DR. WILLIAMS: Thanks Carolyn. I am Erik Williams from the Beaufort Lab in North Carolina. I am going to talk about the SEDAR 25 stock assessment of tilefish, which I will remind people that the official AFS common name for this fish is tilefish and not golden tilefish. The outline is very similar to what Kyle presented. I'll just do a quick run through the data, the assessment and the review.

This is by design very brief, so I am relying on the fact that everybody here has at least looked through the report and looked at some of the figures and tables, because I am not going to go through them exhaustively here in this presentation, but I will touch on the important topics, I hope, and then hopefully that will generate discussion or questions.

A brief look at the life history data that went into stock assessment, maximum age for this species was determined to be 40 years. That did change a little from the previous assessment. There was a lot of re-aging that went on during the SEDAR 4 process. They had aged a fish out to 55 or 56 years old and that fish, when it was re-aged, came back down to around 40.

Although this max age is what I think was used in the previous assessment, there was some revision of the aging process that caused some changes. Notably one of them was the Von Bertalanffy Growth Function changed slightly, so here are the parameters for that. I believe K increased probably relative to the last assessment. Sex ratio is assumed to be 50/50. The reproductive measure used for the stock assessment was gonad weight, female gonad weight, obviously.

Here is a look at the natural mortality that went into the assessment. The dark line is what went into SEDAR 25 and the dashed line below it is what was used in SEDAR 4, so there was a change in the natural mortality from SEDAR 4 to this SEDAR. Natural mortality went up a little. Here is a glimpse of the commercial landings. The take-home message here is this fishery is dominated by the longline catches. They account for more than 90 percent.

There is a little bit of handline and a tiny bit of other that only occurred in some of the early years. Recreational, the scale here, note the scale change. This slide in commercial landings is

in millions of pounds; this is only in thousands of pounds, so the recreational is quite small, and so therefore doesn't have a lot of impact. This is primarily a commercial longline fishery that we are dealing with.

Length composition data, as Kyle mentioned in the black sea bass assessment, just like that assessment we used age comps first, but where we had both age-and-length compositions we used aged comps first and then length comps if the age sampling wasn't sufficient. In this case, you can't see the headings here, but highlighted in green are the years in which we used length comps.

The first two set of columns that have highlights in them is the commercial longline and the second is commercial handline, and you can see the sample sizes and the number of trips. Sample sizes range quite a bit depending on the year and the fishery. We get some nice sample sizes, lengths up into the almost 10,000s with 60 trips, and then we get some that are down to only 2 or 1 trip being sampled, so quite a bit of variability in the sampling. Here is a look at the age composition data. We have a lot more age composition data for this species relative to the length composition data.

But, again, sample sizes are not tremendous for a species that lives out to be 40. That first column is the size of the commercial longline samples ranging up to just a little over a thousand with trips ranging in the 20s to 30s, so it is not tremendous, by any means, but we deemed it sufficient for this assessment.

The indices; we only had two indices which we used. One was a commercial longline fishery-dependent index that was computed from the logbooks, and that is shown in red here. You can see the remarkable increase that starts in 2004 and continues up. Then we had a MARMAP index and you will see those flat lines.

What we ended up doing was sort of grouping the MARMAP data into four-year chunks, basically turning into it like a quadrennial survey instead of using year-specific estimates. That was partly due to the amount of noise that we were seeing in that index and the sampling and all of that. We thought at the data workshop that it would be better to group this into a single point, really, to represent those four-year blocks, except for the last two was a two-year block.

The model shown here, in summary we modeled ages 1 to 25 plus, 25 being a plus group. We basically only had three sectors, commercial longline, commercial handline and recreational. But as you will see later, as I discuss a little further down, the recreational we basically assume that the selectivity for that followed the handlines. It really in a sense wasn't treated too much as a different fishery.

Discards we assume were negligible so we did not model any discards in this model. As I just mentioned, we had two abundance indices to go into this model. Selectivity was assumed – we assumed logistic functions for the commercial sectors, both longline and handline, and the MARMAP index as well, which uses longline gear to sample.

As I just mentioned, the recreational sector we didn't have enough age-and-length comp data to really get an independent estimate of selectivity. We just assumed that that selectivity was equal to the commercial handline, both being hook gear fisheries. Fishing mortality was estimated with annual estimates, free parameters for each fishery.

Stock-recruit curve was a Beverton-Holt Curve with lognormal recruitment deviations, and then as Kyle described we did the same thing here with an iterative reweighting approach for the likelihood components, where we set the standard deviation of the normalized residuals equal to one and then realized that the index wasn't fitting quite as well so we went back and then up-weighted that index until it got to a desirable fit.

I will go into a little detail of that later – actually right now. This is showing the different sort of a profile of changing that weight on the index likelihood component. This is the commercial index. You can see if we just stuck with the original SDNR weight of 1 that is shown in red, it is kind of a flat fit. It is not very desirable so we slowly incrementally increased the weight on that index and you can see the results here.

We ended up settling on a weight of 3 was the consensus of the assessment workshop panel. Another issue that came up, and I think is detailed fairly well in the assessment workshop report, was we had some issues fitting the composition data back in these – right around the early 2000s, mid-2000s.

You can see this residual pattern. These are the residuals to the age comp fits. It is not really a desirable pattern. We tried to figure out what was going on and how we could fix it. We did a whole bunch of gyrations and iterations and various things to try and make this pattern go away. In the end we ended up with what we ended up as the base run, which I will show what the result of that is.

Just to mention that this pattern was primarily in the commercial longline, so this is the commercial longline age comps. If we look at the commercial handline, we don't have as much data and that pattern, it is hard to say whether that pattern was there or not. Really what we are dealing with was just this commercial longline age comp data was suggesting some kind of shift in this time, and the model just wasn't capturing it very well.

Here is the fit to the commercial longline index, just to show a good residual pattern. Here is the fit to the MARMAP index, which for five points I don't know what more you could expect with what is an obvious – seems to be an obvious outlier. The model doesn't want to tend towards that point. Here is just a quick glimpse of the estimates of selectivity from the model.

Again, they were logistic functions and so age at 50 percent selection is right around age 6 for both of these – both the commercial longline and commercial handline. Here are our estimates of fishing mortality rate from the commercial sector. You can see it reached a peak here back in the mid-'90s, maybe early '90s, and then it has just been kind of a steady decline since then to some of the lowest values in the time series in the most recent years.

The commercial handline shows a very similar trend, and the recreational is just pretty small so it is kind of inconsequential. Here is one of the issues that kind of arose. This is the estimates of recruitment from the base model. This is the time series. You can see this one really large year class that was estimated in 2001, which would correspond to a 2000 year class. The model wanted to tend towards this solution to explain the shifts in the age comps.

We went through many iterations and attempts to try and change that single point high recruitment estimate and just every run we looked at did not improve the fit. Ultimately this was still from a likelihood standpoint our best fit to the data. That is kind of why we stuck with this. Here is the spawning stock biomass time series.

Again, this increase here is obviously driven largely by that one big year class entering into the spawning stock biomass. As I said, it was a 2000 year class at age 0, and so you can see it starts to enter in right around 2005 here. That is about when the fish are entering into the spawning stock.

Here is the stock-recruit curve. One of the things we did in this model was we could not get an estimate of steepness. It kept hitting the upper bound, and so we used a prior distribution, which we developed from a meta-analysis of other snapper groupers and other fishes that we thought are similar to snapper groupers.

That had a mode of 0.84 as a steepness and so for the base run we fixed steepness at 0.84 based on that meta-analysis. This is what is reflected here and that stock-recruit curve is a fixed steepness of 0.84. Again you can see the one very large year class showing up there. These are sort of just a table of the base run estimates that come out of that base model.

I will get into a little more on the stock status; what we can see is the stock status is suggesting a stock that is in pretty good shape. F over FMSY is right around 0.4 and the spawning stock is well above the MSST level. Here are the relative plots. This is F over FMSY, and you can see that strong decline over time, and the terminal F over FMSY is well below the FMSY levels, well below 1.

Here is the spawning stock biomass over spawning stock biomass at MSY, again over two times. Here is similar to what you saw for black sea bass. This is a set of the sensitivity analyses. It does not include the retrospective analyses, but I will show those next, I believe, but here is a look at all the sensitivity – a set of the sensitivity analyses we ran showing them all relative to each other.

This is the phase plot with F over FMSY and the X value and X axis and SSB over SSBMST on the Y. One thing to note is the base run that is shown here in the circle right here, is one pattern that emerged and you will see it in the uncertainty analysis as well, is that the base run, for whatever reason, tended to be a little more – indicated a higher stock size and a lower fishing mortality rate than the rest of the runs.

You can see that here with all these sensitivity runs; it is kind of up in this upper corner here compared to the rest. That also showed up in the uncertainty analysis as well, and I will

highlight that when we get to that point. Here is the retrospective analysis. Now for this one, we actually took it back all the way to 2002, and the reason for that was 2002 was the last terminal year in the SEDAR 4 assessment, so in a sense this last magenta-colored line, the 2002 represents the continuity run as well.

If you pull up the SEDAR 4 assessment, you will see that this is very much in line with how we assessed the stock from SEDAR 4. No signs of any retrospective error or large amounts of retrospective errors, so this was a good analysis in that respect. The uncertainty analysis, so here is the results – the probability distribution results from the uncertainty analysis, which we used the same technique that Kyle described for black sea bass, which is a Monte Carlo bootstrap procedure.

What you can see is our base run is noted here as the vertical line. With respect to SSBMSY, it is kind of right where you would expect it. It is near the mode and actually probably closer to the median, but for FMSY and MSY it is kind of near the periphery of the distribution. It is getting out in that tail and that started to give us a little bit of concern.

I don't know why I didn't have that slide after this – anyway this was a description of the Monte Carlo bootstrap pieces. It is in the document. Here is the uncertainty results for recruitment, and one of the things that came out of this that was kind of interesting is that base run with respect to this estimate of the 2000 year class or the 2001 estimate at age 1 was it seems to be right at the edge of the sort of uncertainty envelope.

The model is recognizing there is a tremendous amount of uncertainty in what the recruitment was in the early 2000s, but it doesn't indicate that it is very confident that this one solution is the correct solution, that there are a whole bunch of potential solutions there. There is even a suggestion that maybe the 2002 year class might have actually been even higher. Here are the uncertainty results for SSB over SSBMSY and F over FMSY, a tremendous amount of uncertainty here, as you can see, ranging everywhere from – this is the 90 percent confidence intervals, so anywhere from below SSBMSY to over 4 times SSBMSY. For F over FMSY it could be anywhere from – I think it was down to around 0.2 to over one and a half times FMSY.

You can also see that here, so this is the scatter plot of the 3000 bootstrap runs. This is where you can see that where these lines cross is the base run and the base run tends to be again up in this upper corner a little more than say the mass of these points would probably be a little closer to this area here, which would suggest a spawning stock size that is closer to MSST and a fishing mortality rate that is a little bit higher, so it is just something to note.

Projections, we just did a straight projection analysis. The difference from what black sea bass did was a couple points to note. We used an empirical boot strap for this because of that one large residual. We didn't feel like we could fit a reasonable parametric distribution to that because of one giant residual, but we didn't feel like it was appropriate to completely ignore that residual, so what we did is an empirical bootstrap that included all the residuals that were estimated for each run.

The other thing we did is in the model we did not estimate numbers at age or free recruitment estimates from 2003 to 2010, because the age at entry for this fish that enters the fishery is around age 7, as was shown by those selectivity curves where full selection doesn't really start to occur until roughly age 7.

We felt like there wasn't enough information towards the end of the time series to really estimate recruitment because we had no estimates of the juvenile fish until they entered the fishery, so we did not estimate free recruitment parameters for 2003 through 2010. As a result of that, when we did the projection analysis, we went back and actually in that numbers at age that comes out of the model in 2010 we actually added variability, recruitment noise back into those first few ages.

That is a difference from what was done with black sea bass. Then for the projection of F current we just used 2011 estimates of F and just projected that forward in time. Here is showing the projections of F, of fixed F at F current; so if we continue to fish at F current, which is off this chart, I don't know why it is not showing up here but I think it is okay in the report.

It doesn't result in much change in spawning stock size and landings as you would expect, so it is sort of suggesting that we are kind of at a equilibrium right now with this stock with the current F rate. If we bump it up to FMSY and, of course, the spawning stock, so this is the projection at F equals FMSY. The spawning stock is going to slowly come back to the FMSY level. Landings would go up at first and then slowly come back down. Then there are recruits.

I thought I would go over a couple of things that happened at the review workshop. A couple of things that the review panel asked for was a comparison of the BAM and ASPIC model estimates, just to see how they compared. Then again the review workshop keyed in, of course, on this big, large recruitment event and they were curious about some things that we might have done to try and affect that.

One of them was they wanted to look at an analysis of the effects of increasing the weight on the stock-recruit deviation, so constrain those recruitment deviations so that we maybe couldn't allow that large recruitment residual and see what happens. First, here was a comparison of the Beaufort Assessment model and ASPIC. This is F over FMSY, and you can see they are very similar and almost ending up with identical terminal year estimates.

Another interesting plot they had me do, which I haven't done before, which was good, was looking at the production curves that come out of both ASPIC as well as the Beaufort Assessment model, and that is shown here. You can see the scale of where K might be or the virgin stock size is quite different, which then, of course, translates into some difference in the MSY estimates.

These vertical dashed lines for each – which is basically the peak of the curve would be the MSY estimates; and then translate that over, that would be BMSY in the vertical and then the horizontal is the actual MSY levels. The production model was estimating a lower BMSY value but a higher MSY value.

Then the other request was to look at the effect of increasing the stock-recruit component weight, which by increasing that weight basically constrains those stock-recruit residuals. What happened is that where we would have hoped to have seen the effect was improving the fit on the age comps in the commercial sector, and that would be in this column, but what you can see is the base run, which has a weight of 1, still has the lowest likelihood component suggesting the best fit to those age comps.

If you start to increase the weight, you just really lose your fit to that quickly and even decreasing the weight you start to lose the fit. There is a sweet spot right in there that gets you the best fit to those age comps and that is with the stock-recruit weight of 1. The other thing to note is the tradeoff is if you start to increase that weight is you also lose your fit to your CPUE index.

You can see that by this increasing likelihood component for the CPUE for the commercial longline starts to erode quickly. I think it just kind of confirmed that although that single recruitment solution may not seem desirable, it is still from a likelihood standpoint seemed to be the best we could do. I think that was it. Like I said, I was intentionally brief so feel free to bring up other topics that I might not have included in the presentation.

DR. BOREMAN: Just a comment on that plot where you have the 2003 for the recruitment, the model keeps forcing back to that one and two or three years. The first time I saw that that really bothered me, but the more I think about it we just may be dealing with a species that exhibits a dominant year class every 20 to 30 years like surf clams.

We are seeing a short time series relative to the age that this species can get to, so maybe if we looked back – if we had a longer history of recruitment, we would see about every 15 to 20 years we might see a spike like that. I am not as upset about that as I was when I first saw it. It may not be an anomaly after all.

MR. COLLIER: There was also some discussion on the potential of a cold water event causing the shift from some of the individuals from deeper water maybe coming into an area that was typically fished by the longliners. That was very hard to determine. It was the right time period but we don't know exactly what happened.

DR. GRIMES: I guess this supports what John was – they are restricted to very narrow habitat conditions, 9 to 14 degrees centigrade and bearable substrate. Any kind of perturbation in that as a result of some cold water event or something like that could result in a reproductive failure or low recruitment. I mean they were – it has been a long time ago, but in the northeast, of course, in the late 1800s they were thought to maybe be extinct on account of just some things like that where there was an extreme cold event.

This is more kind of a question. Was there any consideration or discussion during the assessment about the potential for an elaborate breeding system in tilefish? They are sexually dimorphic; the males have that large adipose crest; and usually when you see sexually dimorphism in most any kind of animals, it is an indication of sexual selection in a breeding system. Anyhow, it is a potential consideration that something other than straight egg production

or female biomass might be just as important for a reproductive measure or reproductive potential.

DR. WILLIAMS: Yes, and I probably am not the right person to answer how much that was considered or discussed. I mean, Marcel, were you part of the life history working group at that data workshop; maybe you can elaborate.

DR. REICHERT: Yes, I think we discussed some of these aspects, but I think we concluded that we simply don't have enough information to take that into consideration. I need to back to the data workshop, but I think at least we discussed some research recommendations in that area. I am not sure if those actually made it into the report.

DR. JIAO: This is a pretty general suggestion or comments for both the black sea bass and tilefish. It s just for future work I think maybe to look into the stock-recruitment relationship by considering the non-stationary dynamics of both the recruitments. Also, I have concerns about how the natural mortality is incomplete in the Monte Carlo bootstrap. I think it is fine for this moment, but I think there is potential to develop something different in the future. But again, I don't know if there is a proper procedure here, but this is just my suggestion for the stock assessment.

DR. REICHERT: Yes, I quickly looked at the overall MARMAP CPUE and especially in earlier years there is a relatively high variability in the catches, but it struck me relative to the earlier remark that a period, 1997 to 1999 we seemed to have CPUEs that were comparable to the 2009. This pulse every ten years may actually be something we may want to take a look at.

DR. BELCHER: Anyone else? Okay, thank you, Erik. Continuing on, again discussions relative to best scientific information available; are we in agreement that everything was incorporated going back to the line of question that we looked at for black sea bass? Does anybody know of anything that wasn't included that should have been?

Is everyone comfortable with inputs into the model? I guess similar to black sea bass, Mike, I don't know if you want to start with just the cut and paste on that; so as a whole is the group satisfied with the data used in the assessment? Yes, okay, I am seeing nodding of heads.

DR. BERKSON: I would just have similar comments to the ones I said about black sea bass. As a member of the review panel, I felt very comfortable and the entire review panel did with the work that was done with this assessment, and I would recommend its use for management purposes.

MR. COLLIER: Coming from the data workshop perspective, it wasn't nearly as smooth. It went really rough and there were actually some problems in the data that were discovered after the data workshop because we were so rushed and didn't have a chance to truly review the data like we normally get to review the data. Erik and Kyle deserve a lot of credit on this by putting it all together in a short timeframe, but it was really difficult for the data workshop and then the assessment workshop and to maintain the current timeframe that they wanted everything on.

DR. BELCHER: Is everyone in agreement with Jim then that we can recommend the assessment for management?

DR. BERKSON: Yes.

DR. BELCHER: Moving on, then the next thing is to apply the ABC Control Rule and recommend ABC and OFL. John is going to put the table up. I guess the starting place obviously is our OFL.

DR. BARBIERI: Erik, to that point, this issue of coming up with the recommendation of OFL, you mentioned that steepness was fixed. In that case you don't have a straight MSY estimate or you do?

DR. WILLIAMS: You do; by fixing steepness, you get MSY estimates but they are conditional on that fixed steepness. It is probably worth noting though that when we did the uncertainty analysis, we used that whole prior distribution of steepness value in the uncertainty analysis so that incorporates the uncertainty in steepness.

DR. BARBIERI: Thank you, Erik, that is the issue I was trying to really assess. By fixing steepness, of course, we are giving up some of that assessment there of the uncertainty about it, and I feel a lot better knowing that was carried forward with the rest of the analysis.

DR. CADRIN: Following up on that, looking at my notes from the review workshop, that was also discussed there. It was confirmed that alternatives were tried to estimate the prior using the meta-distribution as a prior, heavy weights in the prior, and that really this was the best alternative was use a fixed one. The assessment workshop did try to estimate it directly even with priors and with strong priors; that's right.

DR. BELCHER: With that said then, are we falling to the FMSY to get our measure of OFL?

DR. BARBIERI: Yes, I think if we have a direct estimate of MSY; we're going to use OFL as yield at FMSY?

DR. BELCHER: Is anyone opposed to that? Okay, so OFL is yield at FMSY. Continuing on, we need to apply the ABC Control Rule.

DR. CADRIN: Yes, and again we were focused on the assessment and the projections and evaluating whether they would be a reliable basis for management. We posed at the review workshop whether the assessment and projections would be a valid basis for a P-star approach, and the consensus of the review workshop was that it would be.

DR. BELCHER: I was just going to say so basically that supports the P-star approach, which means we would be looking for our value, which would apply the rule.

DR. BOREMAN: I will go back to the same question I asked on black sea bass; are we doing a one year spec, two years, or ten years? When is the next anticipated update for tilefish? I would

be more comfortable doing an extended number of years on specs for tilefish than I would for black sea bass.

MR. CARMICHAEL: Tilefish is not on the hard schedule in 2013 nor is it any of the tentative stocks for 2014 or '15, but certainly by 2016 we would like to try and bring it in because of the timing of it, but it is a little bit farther out one.

DR. CADRIN: Yes, just for note-taking purposes, I agree with John that I am more comfortable with multi-year specification in this one. I assume it is because of the stock status.

DR. BARBIERI: Well, our Tier 1, quantitative assessment provides estimates of exploitation in biomass includes MSY-derived benchmarks. I think we are not using proxy's here and for the first dimension I think we are going with Tier 1.

DR. CADRIN: Yes, my personal view on it would be a medium because it is a fully age-based analytical assessment, but it has got issues with respect to the recent recruitment, assigning which year class that goes to. This is not a top tier information content. I would have to give it something intermediate because it still does have some uncertainties to it that would make it not top tier.

DR. BELCHER: Does anyone disagree with that?

DR. JIAO: It is not that I disagree with it; I think that probably we can clarify the uncertainty from the technical aspect and the uncertainty about the fishery status and population status there. I feel that technically probably medium size to high uncertainty there because the recruitment uncertainty and also the uncertainty about natural mortality. However, probably it will have a pretty low uncertainty about the fishery status and population status.

DR. BELCHER: Is everybody comfortable with that being classified as medium uncertainty? Next is the stock status and we are at Level 1 and 2 there where we are looking at neither overfished nor overfishing. The question comes down to have no penalties stock is at high biomass, low exploitation relative to benchmarks.

Then the next step down with a 2.5 percent penalty is stock may be in close proximity to benchmark values. What is the pleasure of the group in assessing that? Obviously, it is one of those two. How close is it?

DR. BARBIERI: Having accepted the assessment results and the stock status as determined by the assessment, I will have to go with Tier 1. I mean to me looking at the biomass trajectory and the fishing mortality trajectory, the stock is at high biomass and low exploitation.

DR. BELCHER: Does anyone disagree with that? Okay, so last is Tier 4, which has to do with the PSA analysis, which I consulted with the MRAG Americas results for the South Atlantic Stocks that they applied; and tilefish, there are three identified, tilefish, blueline tilefish and sand tile and all of them fall into the high-risk category, so that gives us a 10 percent weight. The

overall penalty that we are looking at then for the tilefish is 15 percent, which would put us at a 35 percent probability, so P-star is going to be 0.35.

MR. CARMICHAEL: Carolyn, I would like to ask a question about the OFL and thus the MSY, because Luiz raised the question I think it was about the steepness and noting that it was incorporated in the range of uncertainties; does that mean that the OFL should be based on like the median of the probability density or something as opposed to the actual point estimate from that base run?

That point estimate just includes that one value versus the uncertainties in that it t sounds like is more reflected in that overall distribution. Just see what people think about handling that; because if you look at the table of sensitivities, you can see the OFL, the point estimate – well, the yield at FMSY, it is pretty high on that base run relative to the other runs. If the justification is the uncertainty is captured in the MCB, should we somehow take the value from that?

MS. LANGE: It is not on that point, but was it the P-star at 15 or 35?

DR. BELCHER: The penalty is 15. (Inaudible answer)

DR. WILLIAMS: Yes, maybe this answers John's question is when we do – we haven't done the P-star analysis yet but we are going to do it, and the way we would do it is use those MCV runs for the P-star analysis, so it will in affect account for all that, I think.

MR. CARMICHAEL: Right, thank you for that, it refreshed my memory. So you do the P-star runs at FMSY and 0.35, and we will have the P-star runs at the other options in 0.35 and we will have all our numbers.

DR. BUCKEL: Carolyn, you mentioned you used the MRAG for the risk, and I just wondered if you had looked at the – because there are a couple other documents out there, I think of Patrick et al approach for assigning risk, and I didn't know if tilefish was in that document or if anyone has that document to take a quick look at.

DR. BELCHER: I did not; I just knew that MRAG had done it for all of the species in the South Atlantic three years back, I guess, and that was the document that I had quickly at hand to get it from.

MR. CARMICHAEL: We discussed both of these when we did the ABC Control Rule. We had the NMFS approach and we had the MRAG, and the big difference, as I recall, was how they treated unknowns versus the MRAG took a bit more conservative treatment of the unknown parameters. In doing the control rule and setting these up initially, we used MRAG values, so that would be consistent with our past.

DR. CADRIN: I just looked up at the Patrick et al report and tilefish isn't in there. Sand tilefish is but not this one.

MR. CARMICHAEL: Did they assume that was a high risk; was it the same categorization, I wonder?

DR. BOREMAN: Before we leave this, the productivity and susceptibility, the risk analysis, high risk, I just want to make sure that everybody agrees with the characterization that this is low productivity, which I agree with. Not being an expert on tilefish or the fishery, the high vulnerability and high susceptibility; do people agree with that?

DR. GRIMES: Well, I just don't know exactly what that means. How do they define that? I mean, does vulnerability mean their vulnerability to harvest. I mean, the fact that they are habited – very specific habitat conditions that fisherman can always identify, go right to where you are going to find them. I would agree with that, but I just don't know what that means. Then susceptibility; is that different?

DR. BELCHER: In looking at the susceptibility and how they are ranking it, it is based on three overarching – availability, encounterability, and selectivity. Then within each of those the availability breaks down into global distribution, behavior. Encounterability is habitat, bathymetry. Selectivity is size at maturity, maximum size, and desirability, and then also post-capture mortality.

Those are the main things that are all encompassed, and then they are ranked high, medium and low within that. Then productivity is based on age at maturity, size at maturity, maximum age, maximum size, fecundity, reproductive strategy, and trophic level. Under productivity there are only two categories that they gave it high and that was age at maturity and maximum age.

Then you had one medium, which was the size at maturity – I'm sorry, two, and then trophic level was also a medium and then you had fecundity and reproductive strategy as low. Going into the susceptibility, the availability, they had global distribution and behavior both as high. The encounterability, habitat, bathymetry, both were high. Selectivity, size at maturity was medium. Maximum size was medium. Desirability was high. Then the post-capture mortality was classified as high.

The higher score was actually in the susceptibility. There is an average of 0.275 for that. Then productivity was 2. The numbers are obviously relative to what the scale is on. All of the tilefish pretty much had the high. There is just some degree of variation in the productivity, and then for sand tile there were unknowns in that one. Folks, still in support of what is there or is there any reason to –

DR. BARBIERI: Yes, John had mentioned before, John Boreman – I mean, this is one of those things where you have to defer to the people who have the most experience with the biology of the species. Church, you worked quite a bit with this; and if you feel comfortable with it, then I will trust your judgment there.

DR. GRIMES: Yes right, not to put me on the spot. Well, no, that was a lot of information in a hurry there without sitting down and looking at it. I think I actually contributed to that MRAG report a long time ago.

DR. BELCHER: It is two years old by the report date, by the way. It says March 2009.

DR. GRIMES: Well, I don't think any of that stuff would have changed over time. I mean, that is all some basic life history characteristics and stuff.

DR. REICHERT: Well, since the report is old, I think there were a couple of changes and one of them was the maximum age. I don't think that change was sufficient enough to move it to a different category. I think all the other parameters really didn't change relative to information we had prior to that report, unless someone refreshes my memory to the contrary. I think the age of the report in this case may not matter that much based on the information that we have.

DR. BELCHER: Is everybody still okay with the P-star value of 35 percent?

DR. BOREMAN: Yes, I will defer to the experts, but the reason why I raised it is because our experience in the Mid-Atlantic is it is not a linear relationship between the P-star value and the decrease in landings. In other words, as you get lower P-star, it is not linearly like 15 percent lower landings, it is more like an exponential relationship, so the further you move away from that 50 percent the more sensitive you are going to be in terms of what the impact will be on landings. I just want to make sure that we are comfortable with that; because taking a 10 percent whack like that out of the 15 percent, two- thirds of it is due to this one criterion here. I just want to make sure we are comfortable with that.

DR. BELCHER: Does anyone care to comment to that?

DR. CADRIN: I guess I will build on the Mid-Atlantic example. Some research we had done built on Church's historic or early fishery maturity work has showed that there may have been a population response to fishing or accelerated maturity, which if you follow that through you should take a more precautionary approach. I would agree with the high risk. That would support it as well.

DR. BELCHER: Anyone else? Okay, so we are still going to carry forward with a P-star of 0.35. The next recommendation is to provide the fishing level recommendations, include discussion of uncertainties and their consequences. This is getting back to the table from the report and populating that fishing level table. Is everyone comfortable with assuming the table from the review?

Let me ask it this way; does anybody have any issues with assuming that table? We are just going to adopt the table straight from the review. Then, lastly, any further discussion of uncertainties and the consequences? Obviously, we had the one relative to the steepness, but it is incorporated in the MCV approaches. Does anybody else have any other discussions they would like to put out relative to uncertainties?

DR. BOREMAN: Yes, I am just thinking in terms of other experiences I have had with species that may be like this in terms of having this dominant year class every once in awhile that kind of lifts the stock and carries it along. Just some precautionary advice to the council that if this is the case, that if this is a species that relies on a dominant year class on a ten-year cycle or more, that

they need to take care of nursing that year class through because that is going to provide the spawning biomass for the future dominant year class. It's the same issue with striped bass or sturgeon or surf clams.

DR. BELCHER: Does anyone else have any points that they would like to caution the council on relative to the uncertainty? John can you –

DR. BOREMAN: I forgot what I said. It is just that if what we are looking at is indeed a species that exhibits a dominant year class every decade or so and that is typical for its life history, then the council may want to exercise some caution in making sure they nurse that year class through, because that year class is probably going to provide the spawning biomass for the next dominant year classes 10 or 20 years from now.

MR. CARMICHAEL: In other words, they shouldn't rush out to try and harvest that extremely high yield that seems to be apparent, because you could be doing so at the detriment of your next good year class in 10 or 15 years.

DR. BOREMAN: Exactly.

MR. CARMICHAEL: I think that is going to be really important advice to go to the council because it can be very appealing to think, man, we should raise up the catch limits and take advantage of this. In some stocks that makes sense, those fish might be gone, but it seems in this, with its life history and maybe if this is part of its strategy, that would not be advised.

DR. GRIMES: I ask Steve the question actually is I would expect if there are these strong year classes that are dominant, I would expect that more in the northeast or in the Southern New England Mid-Atlantic tilefish than I would down here. Are there extremely weak and stronger classes?

DR. CADRIN: I don't think the assessment determines that it has been one single year class.

DR. JIAO: I just wanted to somehow elaborate some of the results showed from those figures. It looked like this tilefish has very interesting – well, those estimated recruitments seems has very interesting dynamic patterns. Actually it is very stable except for those one year extremely high recruitment. There is another relatively higher recruitment there.

Other than that, they follow the Beverton-Holt Curve almost perfectly well. That is something that may be worth to be explored in the future. I guess because of that so the estimated be divided by BMSY is increasing steadily over time after 2000; and also for the F divided by FMSY it is decreasing steadily over time after 2000. I think those interesting patterns need to be explored even though I think the fishery status and the population status, the result is probably reasonable, yes.

DR. BELCHER: Any other further comments on golden tile?

MR. CARMICHAEL: Maybe Marcel is the one for this; isn't there something about the aging is pretty good plus or minus a year, so there is some difficulty in getting them that precise on the tilefish? Is that perhaps one of the issues why it is hard to pin down that year class?

DR. REICHERT: Yes, they are not easy to age, so there is definitely a variability in the aging and that is one of the results from that aging workshop we had a couple of years ago. Yes, that is definitely an issue.

MR. CARMICHAEL: Because it might seem to the council, they might say why can't you figure out one of those curves, but the other thing I was noting that Erik said is there is really not any information on them until they come into the fishery at age seven, so then you are relying on they are already a bit older, which isn't that precise.

If you had a juvenile index that showed you a year with really good juveniles that matched up with which year does the year class occur, like you have in many stocks, it would be a lot better – a lot more capable of pinning it down exactly when it happens. But I think you have the age realities with the data realities and it is really hard to figure out just when it occurred or whether it was one year, two years or three years, maybe.

DR. BELCHER: Other comments? Okay, we have already pretty much covered everything in today's agenda. I am going to go ahead and break for ten minutes. I wanted to talk with John Whitehead about the SEP report.

DR. GRIMES: I don't know when the appropriate time to say it or bring it up is, but about commenting on these research recommendations that were in so many of the documents, I thought that the suggestion of some sort of, I don't know, drop camera or some sort of a visual survey to be an adult abundance index was a good idea.

You could stratify it by habitat type because they are very specific habitat so you could stratify the survey very effectively that way and you could also look at these burrows and tell whether they are occupied or not. I just want to encourage that.

DR. REICHERT: I think that is a great idea and I will think about – we have the equipment; I will think about how MARMAP can provide some preliminary data there. I know there are some other techniques that have been used, sides-can sonar to look at that. I am not sure if they were able – they were able to identify burrows; I am not sure if they were able to identify whether they were occupied or not.

DR. BELCHER: Any further comments to tilefish before we take a quick break?

MS. LANGE: Well, actually to both tilefish and black sea bass; as Chair of the Review Workshop I just want to thank Kyle and Erik for the work they did. They responded to questions, to everything quickly and appropriately. They were very, very helpful and as Chair I really appreciate what all they did to make my job easy, as well as the panel itself. The members of the panel worked hard and were very diligent. I appreciate that again; it made my job easy.

DR. GRIMES: One more thing came to mind, and this is in respect of both sea bass and tilefish, there were some research recommendations in there about improving the stock structure information, and doing more genetics and I think mostly genetics is going to give you information that is on a evolutionary time scale and not very useful for things about demographic time scales, and that is really what you want to know about for managing fisheries.

If you are going to do more stock structure kind of research, maybe otolith-based techniques or something, looking at micro chemistry or something like that where you could identify a tag and actually get mixing rates, that would be useful.

DR. REICHERT: Yes, I think there has been quite a few tagging studies done on black sea bass and the results have always been that they don't move that much. I am not sure if that would be a study that would yield a lot. I don't necessarily disagree with the fact that we may need some more information, I am wondering if that would be the right approach.

DR. GRIMES: Well, I wasn't thinking necessarily about physical tags as much as I was otolith-based, identifying a natural tag or something like that. My point is just some technique other than genetics, which is going to tell you something more than stock structure and exchange between populations on an evolutionary time scale.

DR. CADRIN: Yes, it may be hidden in the review workshop report, but there was a comparison to the Mid-Atlantic stock and the South Atlantic stock here, and there was significantly greater age at maturity up north and significantly slower growth up north. At least on those vital rates, it does appear that the Cape Hatteras Boundary appears to have some basis to it.

MR. COLLIER: For some of these species we are looking at otolith shape as a potential for looking at stock structure. We are doing that for black sea bass and we are trying to expand to some other species, but it just takes time to do it and try to get help collecting otoliths from the different locations.

DR. BELCHER: Any further comments to SEDAR 25 as a whole. All right, again, let's break until two thirty and then we will start up with Snapper Grouper Amendment 18A.

DR. JIAO: I think if extra information can be provided, it will help us to judge which alternative management option is more reasonable. For example, definitely the risk of overfishing and being overfished can be presented over time for each management strategy; am I correct? The probability of F larger than FMSY and the probability of a B smaller than the BMSY or the rebuilding BMSY, those can be presented over time for each of those management alternatives. Then we would be able to say whether there is a high risk of overfishing in some year and for some specific alternative.

DR. BOREMAN: A technical question I should have asked this morning; on these projections I am reading the captions and it says based on a projection that assumes 150 percent of ACL met in June 2011 to May 2012; does that mean that those projections for 2013, '14, '15 and '16 don't assume 150 percent ACL but assume 100 percent?

MR. CARMICHAEL: Yes, that shows you what the yield should be by 2013 and 2014. If they were to say Alternative 3B there, if they were to go over from the 881 in 2013/2014 there would be a penalty to pay.

DR. BOREMAN: Okay, this is not rocket science; it is more complicated than that. What I am asking though is the numbers on that table reflect only one year overage now, not an overage continually every year like we have seen in the fishery.

MR. CARMICHAEL: That is correct, right. What the projections have attempted to do is capture that critical uncertainty as what will the landings actually be for the current fishing year even now that all the fishing is closed. Right, and then this is what could be caught. I think it comes into the issues of these become the ABCs but ABC equal ACL is a bit of a problem when you have a tendency to repeatedly exceed your limits.

Then I think that is where the SSC perhaps makes some comments when we talk about ACL, and when we talk about accountability measures, maybe that is the appropriate place for you to bring in some guidance to the council and certainly the consequences of the continued overages of ABC and of your projected yields.

DR. BOREMAN: Otherwise, as a council member I would say this is a license for us to have an overage. I mean, what is wrong with 150 percent; it still gets us to where we are going. But there is a penalty there; we need to be explicit about what that penalty is both from the science side and the management side.

MR. WAUGH: To follow up on that; we are very fortunate that the stock has increased this year; otherwise, there may not have been a recreational fishery in 2012 due to this huge overage. There are a couple of factors that will address this issue of overage into the future. For next year, since the stock is no longer overfished, we are still in a rebuilding program, but the recreational sector will not close in 2012 if they go over.

The way the accountability measure is written is that season is closed if the stock is overfished. It is not overfished anymore; it is still in a rebuilding program. The recreational season won't close but any overage will be deducted from the 2013/2014 fishing year. In addition, right now the council's proposed alternative is these increases in ACL will not happen if the total ACL is exceeded. If we have a situation again where due to our current programs in place to track the commercial and recreational landings, if the ACL is exceeded, then the fishermen won't get this increase.

DR. CHEUVRONT: Well, that is a good segue into the next question which I have for you, which is Action 1B. Action 1B is to set an ACL for the black sea bass fishery. Currently it is set to – or the preferred is ACL equals ABC equals OY. That is the council's preferred and they also other additional alternatives are set; the ACL equal to 90 percent of ABC or set ACL equal to 80 percent of ABC. We would like for the SSC to comment, based on what you have heard and all about what is going on in this fishery, what you think is the biological appropriateness of the different ACL/ABC relationships.

DR. WHITEHEAD: We have a little bit to say about this, so I am just going to read from my report if that is okay with everybody, so I don't mess things up. While ACLs and ABCs are beyond the expertise of the SEP, the SEP did not endorse making the ACL equal to ABC. The buffer between the ACL and the ABC exists to account for management uncertainty, and the large number of proposed actions in this amendment in combination with the evidence for recent derby activity increases the difficulty in predicting future fishing behavior. The buffer may be necessary to account for this behavioral uncertainty.

DR. BOREMAN: Does this management plan allow for setting annual catch targets below the ACL? That is basically what the Mid does is they set the ACL equal to the ABC and then they set a target below that. That allows them to vary around the target without kicking in the accountability measures. That is not on here as an alternative, though. To follow up, the annual catch target may be the potential for overage; you deduct that from the ACL and that would be your target, the recreational landings minus 175 percent of the recreational landings or whatever.

MR. CARMICHAEL: Do they then set – say take something like summer flounder; do they then set bag and size limits for the recreational sector that they think are appropriate to meet the ACT?

DR. BOREMAN: Yes, that is done by the technical committee of the Atlantic States Commission. They are given the total allocation for the target and then it is up to the states to decide how to develop regulations to meet that target.

MR. CARMICHAEL: So one of the differences then in this situation is that the sea bass is essentially set up that the fishery opens and then when they project that say the recreational quota is going to be met, the ACL is going to be met, and then it is closed. It would require some change to close when you say the ACT is going to be met or to come up with some apriori season and bag combination that you think will keep you constrained to that appropriate limit.

Now I think the last action, the council took bag limit changes off of the plan so we are at five fish and not really considering looking at anything lower. I think it could be an option but it would take them to take a couple other actions to actually make it work out similar to what you guys are doing up there.

DR. CHEUVRONT: The council did consider reducing the bag limit even further but it took that action out of the amendment, but it can be brought back if they choose to do so. But just to follow along in this discussion the way it is going, the next action has to do with setting an ACT. I don't know if you all would like to prefer to look at those things in conjunction or not, so let me scroll down and show you what the ACT alternatives are that the council is considering. Right now the preferred is not to set an ACT for the commercial fishery. And 1D is to set an ACT equal to the recreational ACL times 1 minus the PSE of recreational ACL times 0.5, whichever is greater. That is the preferred for the recreational fishery.

MS. LANGE: Our responsibility as the SSC is to provide the ABC taking into account scientific uncertainty. The council's responsibility is to set the ACL taking no greater than ABC but taking into account management uncertainty. I think the biggest thing that we need to do is make

sure that we express ourselves the concern we have relative to the most recent years in the ability to stay within the ACL.

The overage and the fact that you were getting 150 to 250 percent is clear evidence that the current management hasn't been able to constrain landings or catches within the ACL. I guess I am a little – I am not sure how we would word this one because we are not supposed to provide ACL management advice. It is the ABC that we provide. I think we just need to make sure that we are clear that the management uncertainty needs to really be taken into account. I am just trying to get sort of clarified on that.

DR. CROSSON: We don't give the council binding management advice, but we can give them management advice.

MS. LANGE: I guess that was my point, that we need to make clear what it is that we are saying; that we have concerns that their level of monitoring or uncertainty or accounting for their uncertainty has not worked and that we need to be sure that –

DR. BOREMAN: I am going through the Magnuson Act – I should have had this memorized by now. I am going through the Magnuson Act, but the wording in there, just like Scott says, it is not binding advice but the council can basically ask us for advice on anything related to OY.

MS. LANGE: No, I wasn't suggesting that it is not our place – we are not recommending the ACL; we are recommending what needs to be taken into account or advising on what needs to be taken into account.

DR. CROSSON: I guess the way I would pose that question is, is the way that the council is including the behavioral model of fishing behaviors, the way the council is including that into its management process currently working to make sure that the council does not exceed the ABC?

MR. CARMICHAEL: You guys have already stated it several times that you are concerned that these overages are leading to situations where you may not reach your targets; you are continuing to have overfishing. You have raised concerns about the management system, and I think you are kind of saying that it doesn't sound like you like ABC equal to ACL.

By saying that, it is not telling the council you can't do that, but you are doing what the question asks for you, what are you guy's opinions on this? You would be I think within your right to direct it toward the biological concerns that people have raised several times today.

DR. BOREMAN: I don't think we are saying that we don't like ABC equal to ACL as long as we have a target or something else there below the ACL. That was my original question; if there is no annual catch target then, yes, I have major problems with setting ACL equal to ABC, but somewhere in there they need to account for the management uncertainty that is going to go out and have a buffer so they can avoid kicking in accountability measures every two months.

DR. CHEUVRONT: If what I am hearing John Boreman is saying is that you need – you would all feel more comfortable if there was a step down from ABC somewhere in the process, either

ACL or ACT to account for management uncertainty, the fact that they are not able to at least constrain the recreational fishery to the ACL; that somewhere along the line they need to step it down, either through an ACT or reducing the ACL. Is that what we are hearing you saying?

DR. BOREMAN: For the record, too, I am reading here a charge to the SSC in the Magnuson Act. It says each SSC shall provide the council ongoing scientific advice for fishery management decisions, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield and achieving rebuilding targets; so there we are.

MR. WAUGH: You might want to mention the issue of needing a system to accurately and in a timely manner track landings; because if you don't – I mean, if you look at it, we are assuming 150 percent has been landed. If the council wants to step down to account for the current system, then we would have to set the ACT equal to 50 percent of our ACL. Is that reasonable to impose that type of impact on the fishermen without any comment about the system that should be in place to monitor these catches? Certainly, I would think the socio-economic panel would want to weigh in on that.

MS. LANGE: Earlier you commented on the projected overages and it is, what, 110 for the commercial at this point and 181 for the recreational?

MR. WAUGH: And the 181 refers to their reduced ACL because of last year's overage, yes.

MS. LANGE: Okay, so it is clear that it is a recreational – the need to improve the timeliness and accuracy of the recreational data, which as MRIP improves or gets more fully implemented, that may happen; is that true?

MR. WAUGH: Well, it is twofold. I mean, the recreational numbers are available 45 days after the end of a wave. The commercial, we still don't have the commercial numbers for 2011. In terms of timeliness, the recreational data are a lot more timely. What is lacking is a description of how you are going to project when you exceed on the recreational side. It isn't so much a timeliness of the data but the lack of a projection methodology to use that recreational data to close a fishery or to adjust your management.

MR. COLLIER: The PSE that is listed here is it an average PSE or is it for that year? How is that going to be put into the system?

DR. CHEUVRONT: I am not sure.

MR. COLLIER: Overall it is pretty low for the species/ It is generally less than 15 percent, so that is not the big buffer that is being put in.

DR. REICHERT: Gregg, just for my clarification; you said earlier since the stock is not overfished, the fishing year will not be closed in 2012 but the overage will be deducted from the 2013 fishing year, correct?

MR. WAUGH: Yes, assuming you sign off on the stock assessment, which you have, then the determination is that it is not overfished because our overfished definition is a minimum stock size threshold, but it is still in a rebuilding program because it has to get to the BMSY.

DR. REICHERT: So if the stock theoretically would be overfished 200 percent, there would be a closure of the recreational fishery for a year?

MR. WAUGH: Right, what you are saying is in 2012 if they were to land – go 100 percent over, then that 100 percent would be deducted from the 2013 fishing year so there wouldn't be a 2013 fishing year.

DR. CROSSON: From a social and economic standpoint I think we can safely say that closing the recreational fishing for black sea bass for a year would be a very negative thing and is to be avoided.

MR. CARMICHAEL: Do you have a comment on the ACT relative towards some of the issues that John Boreman has raised about how this could be implemented? I mean, if they are going to shut down the fishery – if you're going to open the fishery up and then close it based on projections of reaching ACL, is ACT doing anything; does it mean anything or should there be some modification here to give ACT some teeth?

DR. BOREMAN: Well, if they're expecting a 150 percent overage, then the ACT should be at 67 percent of the ACL to account for that, or a third less. If you are going a third over, it should be a third less.

DR. CHEUVRONT: Are you making that as a recommendation that the council should consider?

DR. BOREMAN: I am putting it out on the table. I said if you want to account for the – if you assume the 150 percent overage is going to continue and is part of the management uncertainty, then it would be appropriate to set the ACT equal to 67 percent of the ACL for the recreational fishery.

MS. LANGE: Do we have a track record like for a couple of years, not just 2011, as far as what the overages have been in recent fishing seasons or fishing years overall or by sector?

DR. CHEUVRONT: I am sure those numbers are available, but you have to remember I think it was in Amendment 17B that they finally put in measures for the recreational fishery. I think it was 15A that did it for the commercial fishery. They were fishing over but there was no consequence or they had not been told anything about whether or not they were overfishing. There was no shutdown of seasons. There was nothing else done because the council had not taken action on that recreational fishery yet. So, yes, we could get you the numbers but it was under a different set of rules then what they are playing under now.

MS. LANGE: Well, I guess I would think that given all the discussion, that it would be appropriate for us to advise the council that using some measure to help keep the landings for the

catch within their ACL that an ACT would be appropriate, and the level that John suggested I think would be where we should start, 67 percent, as our advice for biological as well as socio-economic reasons to prevent a complete closure in subsequent years.

DR. WHITEHEAD: This is a followup to what Scott said. The SEP looked at this and we decided we couldn't say too much because we don't have the numbers in front of us about relative values. It is easy to construct a scenario where people are catching a bunch of fish early on, and then the fishery is shut down for anglers where the benefits of that exceed the cost due to discount rates and how far advanced in the future that is. It might be unlikely but it is possible, so we decided not to make a recommendation.

DR. ERRIGO: Just one quick problem I have noticed about what is going on. I don't think everyone on the council really knows what an ACT is or how to use one, and I think that is part of the problem of why they are having a hard time keeping their landings below the ACL. Perhaps you want to suggest how an ACT should be used in order to stay below an ACL, because I don't think anyone quite understands it. They know that exceeding the ACT doesn't trigger anything so they don't understand what it is for.

DR. CADRIN: Yes, I think that is a good point is that just setting an ACT itself can be ineffective, and that there are other plans in which the ACT is implemented such that if the monitoring data suggests that the fishery is at 80 percent of X percent of the ACT, then regulations are implemented. You kind of need that triggering to happen to make the ACT really work to avoid exceeding the ACL. The scallop fishery has an effective ACT right now. I am not sure if the Mid-Atlantic has some examples, but it has these detailed implementations and not just the setting of an ACT.

DR. CROSSON: Yes, you set an ACT because you are worried about the consequences of accountability measures. It depends on how severe your accountability measures and how badly you would like to avoid having them implemented. That is the purpose of an ACT. It is something for the council's own protection, so it doesn't have to go down that road.

DR. CADRIN: Yes in fact it is categorized as a preventive accountability measure where there are implications of exceeding the ACT so that you don't have the costly accountability measures. I guess I would broaden it; it is not to save the council, it's to save the stakeholders the cost of the accountability measures.

DR. BOREMAN: Yes, I see an ACL as a cap and ACT as a target, and that is the difference in the purpose of ACT is to have a breaking mechanism for the fishery when it starts getting up to the ACT. It depends on how much uncertainty or what kind of buffer you have between your target and your ACT is how much of a break in mechanism you need. Is it a strict shut down the fishery when it hits the ACT or is it slow it down quite a bit?

I am looking at the wording here. I should keep looking at this wording because every time I do I got to have a correction. The sentence up there, if an overage of 50 percent is taken, it should be 150 percent and not 50 percent. That was what we were talking about, 150 percent overage in the recreational fishery.

DR. ERRIGO: I just want to clarify to make sure I understand and everyone understands; when we say that we are getting 150 percent overage, what is actually meant is that we are catching 150 percent of the ACL, so you are going over the ACL by 50 percent of that ACL. That is what 150 means. I just want to make sure everyone understands that.

MR. CARMICHAEL: One approach the council could use on this in giving an ACT and black sea bass that did something is perhaps instead of projecting to meet ACL, it were projected landings AND close the fishery when you meet ACT. Then that gives the time to find out if – there are plenty of fisheries that operate in that way and then decide, oh, look, we have got enough landings to have another two-month season, two-week season, what have you later on in the year.

If your projections were good that year and you are well below ACL, there is nothing to stop a group from taking advantage of that. I think that has happened in quota management here even in the Southeast in species like king mackerel in the past where they shut down based on projected percent and they get all the numbers in and they are a little lower then what they are some years so they open it back up. It seems like black sea bass recreationally, with the uncertainty in the numbers and waiting for the wave data to come in would be a perfect candidate for that type of approach.

DR. BOREMAN: You don't work for the regional office I take it; that would be an administrative nightmare.

DR. BARBIERI: I think the message is explicit of how the committee feels about the ABC equal ACL and the ACT and the role that the ACT would have and some recommendation. I mean, that can be beefed up as we prepare the report and flesh it out. Mike was good capturing the spirit of what the message is, but I think w have enough here to build a solid recommendation to the council.

MR. COLLIER: I think one thing I want to point out here is that we are kind of handcuffed on what we can put the ABC at. I mean, it is equal to OY because it is in the rebuilding plan and that is based on I guess in the previous assessment. We can't drop our ABC due to scientific uncertainty in this one. We can?

MR. CARMICHAEL: I think it is within your right if you wanted to recommend to the council that they should have a rebuilding strategy with a different probability of success; I mean, that is your control rule now and we are looking at that. I think it has been our understanding that was something that could be considered. Now what I would caution against is dropping the ABC, because the concerns about the council going over ACL, and I think that would be totally inappropriate.

MS. BELCHER: I have got a question for the group, and I apologize if this is something that I am just totally missing, but we are recommending that F is F rebuild, right? We are talking about it still needs to be under a rebuild so there is an F value which is giving us the value of ABC, right? If F target is OY, how is F rebuild and F target the same? There is a question about the appropriateness of ACL equals ABC equals OY; are we really saying that F rebuild is OY?

DR. BARBIERI: This is because for the purposes of rebuilding stocks the two are actually considered the same. There is language – and maybe John can find there the language – either in the Act itself or in NS-1 where you see there that you have to rebuild to biomass at MSY so you consider that to be your level of OY for rebuilding purposes. It is sort of complicated but I have seen the language and that is what it says. It would be interesting if we could find it.

DR. BELCHER: Yes, I am just looking – this is actually out of the stock assessment, actually the SAR, Section 3 Report, but it talks about if stocks remain overfished and has not reached BMSY, F equals F rebuild, which is defined as the max at rebuild and allowed time – that is the paraphrasing after that. But then when you go down if it says that the stock is neither overfished nor overfishing, then F equal F target is equivalent to OY. That is where I am not – so at that point F target and F rebuild are the same thing?

MR. CARMICHAEL: No, because you are overfished or overfishing.

DR. BARBIERI: In this case it might be because this was generalized terms of reference that did not take the status of the stock into account and the fact that you have to have a rebuilding plan.

DR. BELCHER: I guess I just get caught up in the language differences, because again there is that comment on the appropriateness of ACL, ABC and OY all being equivalent. I didn't know if that was germane or not germane. To me it seems counterproductive to what we put up earlier.

MR. COLLIER: My question comes in as we were told not to go through our ABC Control Rule when we are looking at this stock because it is in a rebuilding plan, so we are limited to the 50 percent probability of recovering the stock if we are not going through our ABC Control Rule.

DR. BERKSON: Well, this is one of the things that confuses me about this whole process, and believe me there are plenty of things that confuse me about the whole process, but when we are calculating an ABC we are taking into account the scientific uncertainty from OFL. When we have a stock that is rebuilding we look at the F rebuild, but we are not taking into account the scientific uncertainty around F rebuild even though we know there is scientific uncertainty around F rebuild. That F rebuild is assuming a 50 percent probability of rebuilding. If you were going to take into account scientific uncertainty, you would make that a lower probability or actually a higher probability at rebuilding, I mean. But that is not what we do, correct?

MR. CARMICHAEL: Well, this is the discussion that we had earlier today about this when we talked about black sea bass; that is what you often do. In the case of black sea bass the rebuilding plan was set up before any of this existed and the council stuck with 50 percent; and when we have looked at black sea bass along the way in developing our ABC recommendations, the SSC has never recommended that the council deviate from that.

You have accepted black sea bass where it stood on its ABC and on its uncertainty and on its path on an existing rebuilding plan. As I said, if you wish to go through and apply your control rule and make a recommendation to the council, then in addition to considering moving from the fixed landings to an F rebuild, that they also consider what we would prefer to as changing the

goal posts and changing their ultimate endpoint and probability of success, you should make that recommendation; you should go through your ABC Control Rule.

But when we had the discussion earlier today, we said that and said are you comfortable with the 50 percent and where the stock is headed and everything else and don't see a need to have the council make a recommendation to change that level; that is what I think was said earlier this morning, that people were comfortable with that at this point in time, and that we would focus on this other stuff. The problem seems to be within exceeding the management side of things and not necessarily with the level of scientific uncertainty, which is what I thought where we were this morning. Now perhaps people are having second thoughts about that.

DR. BERKSON: That is why I brought it up, but if everyone is fine with where we were, that is okay, too. I see it as a separate issue from the management uncertainty. It is scientific uncertainty and pretending we don't have any.

MR. CARMICHAEL: You are not really pretending you don't have any, because you have a projection that accounts for a lot of uncertainty in establishing what landings levels gets you to a 50 percent probability of success five years down the road. You have already accounted for that some way by saying you are only comfortable with ABCs going out two years.

That may be one way of saying, you know, by pushing a limit to 50 percent you are not as comfortable with a projection that goes out five years versus where if you were putting something with maybe a 75 percent chance of success and knowing how that uncertainty is promulgated forward in the model, you might be more comfortable with a longer series of projections because you have a higher probability of success. In a way you sort of have addressed that uncertainty by drawing your line on your ABCs two years out.

DR. BERKSON: I agree with you beyond the two years. I don't agree with you for the first two years because you are at that midpoint.

MR. CARMICHAEL: So then your concern in the two years would be overfishing? You're concerned about the difference between the F that you get at F rebuild and the F that you have at MSY?

DR. BERKSON: No, and once again I don't know how concerned I am about this. I am just bringing this up for discussion sake to see what the group thinks. I am concerned about F being greater than F rebuild, because you still want to rebuild by 2016.

MR. CARMICHAEL: Yes, but F being greater than F rebuild next year is kind of a separate question on whether or not you get to your rebuilding strategy five years down the road. We are worried about getting the stock rebuilt and we are worried about not overfishing. Overfishing doesn't occur if F is over F rebuild. F rebuild is essentially a target.

Overfishing occurs when I am over MFMT, which is FMSY. As I recall, F rebuild is on the order of about 0.5 and FMSY is like 0.7. We had fairly good separation at least in terms of the nominal values between F rebuild and FMSY. Now we have never requested in any of these

rebuilding strategies scenarios that compare the probability of F being over FMSY if we're given F rebuild, because the P-star sort of goes one way or the other.

In the rebuilding the P-start goes toward the probability of success at some point down the road. If it is not a rebuilding projection, then the P-star goes to the probability of exceeding FMSY. They can't do the two simultaneously, too many dimensions, I guess.

DR. BERKSON: Once again that is not my concern.

DR. BARBIERI: I just wanted to quote – I found paragraph 600.310 Line F3-2 which says, determining ABC for overfished stocks, for overfished stocks and stock complexes a rebuilding ABC must be set to reflect the annual catch that is consistent with the schedule of fishing mortality rate in the rebuilding plan.

As long as you have a rebuilding plan the council approves that has a schedule in F rebuild, according to the Act it automatically sets your rebuilding ABC. In this case it is not an ACL. It actually corresponds to an ABC, and, of course, you have an associated probability of achieving that rebuilding target of 50 percent. Now the council may decide to go with a rebuilding plan that is more conservative or more aggressive than that.

MR. COLLIER: I guess that was one of my points was we need to let the council know that we are kind of handicapped where we can be. It is up to them to be more conservative. It can't be us in this point.

MR. CARMICHAEL: Well, that is where I think your cautions about the biological impacts of exceeding ABC are important, because you are saying the rebuilding strategy is already at the maximum allowable, so continued overage is severely jeopardize this because there is no additional cushion in there to help you out down the road if you don't achieve it. I think you are right, make sure that that is in there, that that is reflected, and that is the biological concern over landings that exceed ABC.

That is the added risk that comes in when there is no mechanism as been suggested that keeps landings from actually exceeding ABC. Whether it is ACL or ACT, it doesn't seem like the SSC has a strong opinion just as long s there is some mechanism and that mechanism addresses or accounts for the realities of the monitoring.

DR. BELCHER: Doesn't some of that assume some degree with the overage, because the way it is looked at – and you can correct me if I am totally wrong on this, but the overage is basically deducted from the next year, so somehow it is assumed that the cumulative removals can be partitioned however over a number of years.

If you were to catch – by some chance you went over in a four-year period by, I don't know, 200 percent or something, then technically would that mean you would carry over and have zero landings two years after that is how the management would adjust, right? But then the question is, biologically what is that 200 percent overage going to do to your ability to rebound to actually have landings in the following years?

MR. CARMICHAEL: I think that is one of the later questions that comes up because that is an accountability measure. Yes, that is the question, is the penalty adequate. Now I think some people would say there should be a little bit of interest on that penalty. On the other hand, there are so many other uncertainties going on in a population, that what does that really accomplish?

I don't know, but that is a question and I think that is the question that comes up later when we get past ACT and get into AM. Is a straight one-for-one penalty in the later year, is that adequate to offset the potential damage done from the overage? I think it depends on the direction the stock is showing, because the projections we have now show that you don't quite take the full hit because the stock is improving. AMs aren't in this and I am thinking about one of our other amendments that have AMs, but that question is asked in your overview somewhere about whether or not that accountability measure of payback in the following year is adequate.

DR. BUCKEL: Yes, I think we do have evidence from the stock-recruitment that if you keep the spawning stock biomass low, you are going to be at these low recruitment values. One of Kyle's slides showed the spawning stock biomass for the last three or four years and it was fairly flat or just slightly increasing, compared to what the projections from the previous assessment showed, which was much steeper. That is likely due to keeping the biomass low and getting these low recruitment values. We need to capture those biological issues in this comment, which you have already mentioned, John, so it is going to affect these projections.

DR. BELCHER: Okay, moving on, Brian.

DR. CHEUVRONT: Okay, that was the second question; there are only six more. At this rate we will be finished about quarter to nine this evening. I just thought I would warn you all. Question Number 3; the council is proposing to limit participation and reduce the over capitalization problem in the black sea bass fishery – and they were talking about the commercial fishery – by implementing an endorsement program. That is what Action 2 here is dealing with. The council has selected Subalternative 2F as their preferred.

We would like you to talk about the appropriateness of choosing participants in the fishery using a method such as this. I will get into a little bit detail about what these different subalternatives under 2 are about. But also there is a new Alternative 3 that no South Atlantic state shall have less than two entities that qualify for black sea bass pot endorsements provided that no entity qualifies whose minimum averages are less than a 1,000 pounds whole weight or 2,000 pounds whole weight.

Part of the reasoning behind this is that the council considered looking at average annual landings over a 12-year period, from January 1, 1999, through December 31, 2010. The difference between all of these different subalternatives is the average annual weight that they had to have over that 12-year period.

They could achieve this by having – for example, in this first Subalternative 2A, over the 12-year period they would have to have landed at least a total of 6,000 pounds over that 12-year period. Years where somebody did not fish are not missing data, those are zeros. Now the other

thing that the council wanted to consider here also was that to get an endorsement somebody had to fish between January 1, 2008, and December 31, 2010.

In other words, they had to have participated in this fishery in those last three years to be qualified for one of these endorsements. The currently preferred Subalternative 2F at 3,500 pounds brings in about 21 endorsements, the majority of which will be in North Carolina. One of the issues that is facing the council in this pot fishery now is that there is an emerging fishery in Florida that has really only taken off in the last couple of years.

Because they have only been participating in this fishery for the last couple of years, a lot of these guys are not going to qualify for this 3,500 pound average landings. What we would kind of like for you to do is to talk about whether there are any problems with using this kind of an approach. This may be primarily a socio-economic issue from the SSC's perspective, and I think that is a good way to segue into what John probably has about that.

DR. WHITEHEAD: The SEP does not believe there are any social or economic justifications for limiting endorsements based on catch history or poundage. Concentrating the fishery to the highliner fisherman will likely be contrary to the council's stated goal of extending the season as these fishermen are the most dependent on maintaining their current harvest levels and fishing effort in the face of other regulations.

While a derby fishery can contribute to lower prices, there is not sufficient evidence that the derby fishery for black sea bass is negatively affecting the price. Other factors may exist such as competition from supplies of other species in the snapper grouper complex and from black sea bass under the jurisdiction of other fishery management councils.

DR. CROSSON: Another thing I forgot we could have included in there, John, which is that the council has been trying to reduce effort in the commercial snapper grouper fishery since 1998 using a two-for-one buyback, which shares some similarity with the approach taken here, and that has not worked sufficiently to reduce fishing effort below the level that has caused some stocks to be in trouble. I think that there is definitely a regulatory history of doing something at least somewhat similar to this by trying to reduce the number of participants. It hasn't worked in the past with the council and I am not sure why it would work in this case either.

DR. CHEUVRONT: One of the other council's stated objectives, which may run contrary to the idea of extending the season based on the logic that John just presented, is that the council has said that they want to professionalize the fisheries. The idea of concentrating the catch among the highliners would meet that objective. At the same time that puts it in conflict with their objective to extend the season. That may have been part of the reasoning behind what the council was thinking when they wanted to set up a preferred alternative such as this.

DR. YANDLE: Just really quick, I don't know this fishery specifically, but I think you can reasonably argue that someone who is fishing can have a diversified portfolio but still be professional. The fact that these folks are not taking a lot out does not mean they are unprofessional.

DR. CHEUVRONT: To that point, prior to the closure of the seasons where we had closure in the commercial fishery, there was a very large hook-and-line component of landings of black sea bass, which have been greatly reduced in the last couple of years because of the early closures. On those trips where black sea bass are landed hook and line, usually the majority of the landings are something like B-liners or gags, which are two other species that the council has struggled with recently. Lots of times these fish are caught together with other species hook and line and it is very hard to differentiate sometimes.

MR. COLLIER: This fishery is a lot different than the typical snapper grouper fishery. It concentrates on black sea bass and you have to have a specialized boat with a pot puller. Most boats don't have that so you are not just jumping in this as a non-professional. I mean, you are going to be set up; you are going to have probably 50 traps that you can fit on your boat that you now have to take in.

You have to have a fairly large boat that can incorporate all the regulations that are going into the pot fishery. These guys are professional to begin with. It is just a matter of how you want to divvy up the landings data. That is going to be the hard part. It is hard to imagine that they are not getting hit economically.

The majority of the cost or the prices increases during I guess early spring; late winter, early spring. The cost for black sea bass, the price of them just skyrockets, and that is generally during Lent and I believe some of the Chinese holidays as well. That is where these guys really make a lot of their money, and they are not getting that anymore because the derby fishery begins well after the price increase has already gone through.

DR. BOREMAN: Just a question out of ignorance; would somebody define what you mean by professional? I heard professional, non-professional, unprofessional, I haven't heard amateur yet, but could somebody define that? It must be a social science term.

DR. CHEUVRONT: I was the one that introduced the term because that is what the council has used. I am not sure that they actually have an official definition of what they mean to professionalize fisheries.

DR. CROSSON: A comment on what Chip said; I don't disagree, and I don't think the SEP disagreed with the idea that somebody who specializes in the black sea bass potting fishery is a specialist who invests a lot of time and money into his fishery. The question is, is somebody who catches black sea bass as a smaller portion of a larger portfolio any less of a professional and invested any less and overall in equipment.

If it is part of a portfolio of fisheries for some fishermen, again we don't question that the guys that specialize in it are dedicated to it. That does not necessarily follow that those are the only people that should be catching the fish. Now that is the best mechanism for catching the majority of the fish given some of the history with this fishery entering into a derby state.

DR. BELCHER: John Boreman, did you get the answer to your question? Not really.

DR. BOREMAN: Not really, but, hey, I don't even know what FMSY is.

DR. WHITEHEAD: My opinion is if you catch a fish and you are paid for it – you sell them and you are paid for it, you are a professional.

DR. CROSSON: I know the terms generalist and specialist, I have seen those used before in fisheries economics. It is just how tight your fishing portfolio is. But, again, when these fish are caught by other commercial fishermen, a lot of times it is part of a large portfolio and it is not any less professional.

Yes, you can be a generalist; sure, a lot of fishermen in southeast are generalists. Especially the further north you go in the South Atlantic region, the water temperatures and habitat change quite drastically as the year progresses and so it is not actually to a fisherman's advantage to specialize in only one or two species.

It is better if he is able to move as the species move around, as he is able to jump in and out of fisheries. That is the argument a lot of the guys in the southeast use as they feel hammered in or corralled in with catch shares and single-species fisheries, because they feel like unlike the North Pacific where the habitat and the fisheries are available year round, it is a lot more difficult to do that in the southeast.

MR. HARTIG: Yes, John, this has come up through my whole life in fishing, and in South Florida it is much more of a problem. We have a lot of people who have other jobs who participate in commercial fisheries. The intent of the council over the years has been trying to get past that and just have commercial fishermen participate in commercial fisheries.

Certainly, somewhere an income qualifier would work; something on like 75 percent or more of your income derived from commercial fishing to be considered a professional fisherman. I think really in the tax code there is something in order for you to get all the existing exemptions from tax-related fishing expenses, you have to be 66 percent – I think that is it.

There is some level that they allow you all your tax write offs. Something in that level were we thinking about professionalize the industry, at some higher level. The portfolio argument is a good one and it is one that I participate in. I participate in a whole range of fisheries and I don't have high landings in some of those.

In black sea bass we are going to have to go back and look at that portfolio issue and that is a good one. I am glad you discussed that today, but that is where it came from, in trying to get some of the part-time interest. We have insurance, pilots, firemen in South Florida that participate to a pretty large degree in a number of our commercial fisheries.

MR. COLLIER: I guess my next question with this is what happens with a license that is in a corporation name as opposed to a person's name? Then you are becoming – is it the person that is professional? I guess we need to get that documented a little bit better, because a vessel can have multiple captains through a time series.

DR. CHEUVRONT: Action 5 limits the number of pots an individual fisherman may use. Please comment on the use of this management measure as an effective way to limit harvest or to minimize endangered species interactions. Actually, I want to back up to one of the other things under Action 2.

This Alternative 3, I mentioned it in the discussion but we never really discussed it, it was the alternative that no South Atlantic state shall have less than two entities that qualify for black sea bass pot endorsements provided that no entity qualifies whose minimum average landings are 1,000 or 2,000 pounds.

The issue is that this is a way to try to make sure that each state is going to have at least two participants who get endorsements in this fishery. Now you basically have said that the idea of using these endorsements is not something that you support, but that doesn't necessarily mean that the council is not going to go on with it and choose an endorsement program for this. We would like to hear if you have any comments that you want to make specifically about this Alternative 3.

DR. BELCHER: What happens if you do – it is just in the language of no state shall have, what happens if like Georgia has small potatoes in it to start with, what happens if that number does go below 2?

DR. CHEUVRONT: Actually, and even with Alternative 3 and the subalternatives, nobody from Georgia would qualify as this alternative is written right now.

MR. COLLIER: What would happen if one of the fishermen, let's say South Carolina moves to North Carolina; does he lose his endorsement at that point and then another one opens up for South Carolina?

DR. CHEUVRONT: Those are all really good questions. I think you guys need to talk about those sorts of things because what has happened is the council has not really fully discussed this alternative yet. If you guys have reservations about implementation or how this would work, this is now the time to talk about it.

DR. BELCHER: I guess that is a good question. If Georgia has nobody and then some folks decide to come into Georgia and operate out of Georgia, does that mean that they are – you get one person who tries to reestablish in Georgia; does that mean they can't because there would still be few than two?

DR. CHEUVRONT: My guess is if they had met – if Subalternative 3A was chosen, if they came in and moved to Georgia and they had a thousand pounds average landings, then they would get in.

DR. CROSSON: If other members of the SEP want to chip in on this, I would like to hear it from them as well, but I can't think of an economic or social reason why it matters where these would be distributed in the southeast. The only reason I can come up with why it is important is that it is a political question as to whether you want some of the states that are in the council's

jurisdiction to not have any people with these permits. Again, that is a political question. I don't mean that as a negative thing, but I can't see of any socio-economic justification for trying to keep them in certain states if you are keeping the same number of endorsements.

MR. CARMICHAEL: When the council discussed this at the last meeting, the argument put forth on its behalf was about preserving fishing communities, so then I guess the question is does this preserve a community better than the ones above. There was a fear that if you had people that were fishing in black sea bass, say, in a state that didn't qualify under 3,500 pounds that they were fishing now, could you keep at least two to get a community preserved. I think that is a good socio-economic question.

DR. ERIC JOHNSON: I just have a quick question about how these are working. Would you enact Subalternative 2F; and then if there is a state that has no one that meets that, then Alternative 3 would kick in?

DR. CHEUVRONT: I don't necessarily see Alternative 3 – if the council is to choose one of those as a preferred, it would be mutually exclusive from one of the subalternatives they could choose under Alternative 2.

DR. MacLAUCHLIN: You maybe talked about this for a minute when I stepped outside, so right now under Preferred Alternative 2F there is no Georgia, and then no one in Georgia qualifies for those subalternatives either. I think the whole idea behind it was to make sure that all the states had an equal opportunity to get some endorsements in there.

That is why this was proposed and I think what would be useful to the council is maybe some other ideas of is this important that there be endorsements in every state; and if not, can we say why it is okay for there not to be any in Georgia or something like that or another idea of how to distribute these.

But, really the communities that are dependent are really dependent and have been for a long period are in North Carolina. The ones that are more recently coming more dependent is probably because they are moving around because of closures in other fisheries, this is an alternative fishery for them to work in, are the ones in Florida.

Those are the two that are going to take the most hits. Some of the communities in North Carolina where they only depend on black sea bass for maybe a few months out of the year or historically have, and so that is why their landings don't seem as – it doesn't appear like they are dependent on it financially. Then in Florida they just haven't had enough time to really show their dependence on black sea bass. I don't know; I think that is what I would like from the SSC, is either is this an important goal for the council from the SSC's point of view; and if so, are there some other ways to reach that goal?

DR. CROSSON: Without agreeing to the idea of a black sea bass pot permit or endorsement to begin with, because I don't – for the reasons that John and the rest of the SEP explained, I think it is not a particularly wise policy. But if it were to be a policy, I think you would not want to have just a couple of permits stranded in a state like Georgia.

From a regulatory perspective it is going to be a nightmare. You are going to have to tailor some kind of system for keeping those inside that state. I am not sure what – and there probably might be some legal difficulties as well with doing that. I am not qualified to answer that, but I understand the reasoning behind trying to keep a couple of them in Georgia or certain parts of Florida, but it is a zero, some game in terms of endorsements that can go around, and so it is going to come out of some other community further up the coast.

I don't have enough data I guess just to make a statement as to whether it is better to have four permits in a town in North Carolina and one in Georgia versus all five of them in a town in North Carolina, but it still has to come from somewhere. I mean, it is not an unlimited supply. I think it is not particularly wise to try and keep this one in here.

DR. BELCHER: Yes, I think my concern, too, from that – again being the representative from Georgia – what if we get someone who does decide that they want to get in at a different level and there is no endorsement for the state of Georgia at that point; how does that person come into the fishery?

Does that mean that they won't ever be allowed in? That would be the blocking point to me to be thinking about four states to allocate and now all of a sudden the wealth is going to three or even two. How do the other states weigh in if someone else makes a shift or has the ability to get back into that fishery?

DR. CROSSON: It may also be that if this endorsement were to come into fruition is that some fishermen from other areas in the southeast decided to move to Georgia because there wasn't anybody currently potting in that area, and so that it was from a – I mean, the problem may well solve itself with this if this endorsement existed. I don't think it is to the council's advantage or to the fishermen's advantage to try and put this special qualifier in here.

DR. BARBIERI: Maybe I wasn't paying attention, but I have two basic questions. One, where does the 3,500 pounds whole weight minimum qualification come from?

DR. CHEUVRONT: Frankly, it was kind of back-calculated. The council had in mind they wanted to reduce the number of participants in the fishery. What they did is they chose numbers to be analyzed and then to have them come back and tell the council how many participants there would be with the idea – nobody had stated exactly what they wanted that number to be, but somewhere in the 25 to 30 participants, roughly, I think was numbers that I had heard that they wanted, that they thought the capacity of the pot fishery could withstand.

This one came back with 21 participants, and you will notice then that there is now another Subalternative 2G, which is – well, they are all kind of out of sequence. But I believe 2G would allow in 28 participants in the fishery; Kari, is that correct, 28 for 2,500 pounds? I think it is pretty close to what it was, so it was kind of back-calculated.

DR. BARBIERI: Just to that point, I was thinking history of landings, ten years or more; would that be taken into account at all? According to this proposal, it would be just a flat minimum level of landings. I was just thinking after an industry has sort of developed in a certain area and

you have a number of participants there, how do you weigh – if there is a way to take that into account as well, catch history.

DR. CHEUVRONT: Well, the only way that I can think of to answer that question, what the council had done is the qualifying years used to be I think only through 2008 initially, and that was really going to shut out basically the Florida participation. The council then agreed to extend that period two more years. I believe that extension from ten years to twelve years actually got a couple of Florida fishermen in there. I think that was the only attempt that was done to sort of modify the strategy. That is how we even ended up to 12 years, I believe.

MR. COLLIER: Going from ten years to twelve years, did that knock out other people to get those two included?

DR. CHEUVRONT: Actually, I can't recall but I am not sure – I think the total number of endorsements you would have gotten based on having active landings, because the active landings were roughly in the same year still, so it would have just been a fewer number of endorsements; that it wouldn't have taken away, for example, endorsements from North Carolina. I think it would have just knocked out endorsements from Florida. I think that's the way it would work.

MR. COLLIER: The goal from what it sounds like to get down to less than 30 participants in the pot fishery, what is that based on? Are you trying to get to a limited entry fishery with this gear?

DR. CHEUVRONT: Well, that is what the endorsement would do, it makes it limited entry. To get into the fishery after this point, after the endorsements would be issued is you would basically have to buy your way in and buy one of the endorsements or something to participate.

DR. CROSSON: If that is the case, then the fishermen that are in the state that don't meet the 3,500 pound minimum requirement are by the council's own definition less committed to the fishery than fishermen in other states that did meet that requirement and are therefore more likely to try and transfer it or sell it to somebody from outside the state. Does that follow? Again, that is another complication the council should consider.

DR. CHEUVRONT: And conversely somebody in Georgia who wanted to be in the fishery could buy an endorsement from somewhere and move that endorsement to Georgia.

DR. BUCKEL: I guess I just had a question. If this is the 3,500 pounds at the annual catch, then that gets it down –

DR. CHEUVRONT: Average annual.

DR. BUCKEL: – average annual catch and that is going to take it down to roughly 30?

DR. CHEUVRONT: 21 endorsements at this point.

DR. BUCKEL: It doesn't seem like the comment that we have typed up now matches – that 3.500 pounds is a highliner. No one is surviving off of annual landings of 3,500 pounds. If they are making 60 or 70 percent of their income from commercial fishing, then they are catching something else to do that.

DR. CHEUVRONT: You are right, that is an argument that some of the highliners actually use. There are a few people who black sea bass pot fishing is what they do; and until the seasons started closing early, they didn't do other things. That was all they did was black sea bass pots. I think most of those guys were in North Carolina, but there is not that many of them, but there are a number of them.

DR. MacLAUCHLIN: In response, that is the minimum – 3,500 is the minimum. Most of them have over 10,000 pounds, averages 20,000, 30,000. Some of them have very large averages. I would say two-thirds to three-quarters of them are over 10,000, like they could have hit the 10,000.

DR. CHEUVRONT: To follow up with what Kari was saying, there is a table in the plan, and I think if I remember my numbers correctly, Subalternative 2E of the 10,000 pounds, I think that was 8 – that was 9 participants who would have made the 10,000 pounds a year. Realize that the fishermen – and you are going to see this coming up later when they talk about trip limits – fishermen will tell you that a profitable trip is roughly 1,000 to 1,200 pounds in the trip. Even at 10,000 pounds, you are talking probably ten really good trips in a season. Okay, have we beat this horse enough now; ready to move on?

DR. BELCHER: What is the total number of participants currently?

DR. CHEUVRONT: I believe it is somewhere around 50, slightly above that.

DR. BELCHER: So in addition to reducing the number of participants, you are still going to consider reducing the number of pots as well?

DR. CHEUVRONT: Yes, and trip limits and some other things that are being considered. Let's move right along. They had a 45-day season this year.

MR. COLLIER: Well, that is not just the pot fishermen. That was the hook-and-line fishermen as well.

DR. CHEUVRONT: Yes, everybody was really hammering on them this year; the fish were there. Okay, the next question I had for you involves a question about Action 5. Action 5 limits the number of pots an individual fisherman may use. Please comment on the use of this as a management measure as an effective way to limit harvest or to minimize endangered species interactions, particularly in the black sea bass pot fishery.

The council's preferred alternative right now is to limit pots to 35 pots per year. Just to give you some background, really the majority of fishermen are fishing probably somewhere between 15 and 40 pots. There are a subset of fishermen that fish over 100 pots, largely off of New Hanover

and Brunswick Counties in North Carolina, but there is just a handful of those guys, not too many of them.

Most of the guys are fishing somewhere between 15 and 40 pots, depending on where they are fishing. The guys, who are fishing more that 100 pots are actually fishing the pots differently than the way most of these guys who are fishing fewer pots do. They call them a trawl, but it is two pots together that they are dropping, but they still are counted as two pots. Really they have about 50 ropes or so in the water, but 100 or more pots.

DR. BELCHER: That was actually the question I was going to ask because I know relative to at least what we are dealing with potential interactions with blue crab pots outside of state waters, the number of ropes in the water versus – if you are like the lobstermen up north I know tend to use that trawl system, too, where it is multiple pots on a line, but you have one float line down, which would have less impact.

DR. CROSSON: I have two questions. The first is that – you will have to refresh my memory – are poundage trip limits included as proposals in this amendment for endorsements?

DR. CHEUVRONT: Yes, they are.

DR. CROSSON: Both, so poundage trip limits is not for the endorsements, for the qualifying, but for actual – okay, and then in addition to that possible gear restrictions?

DR. CHEUVRONT: Yes, all of it, different options are all included.

DR. CROSSON: Okay, and here is my second question. I have been around black sea bass pots before, I know what size they are roughly at least in Sneads Ferry, but is there a reason that they happen to be that size right now? Are there limits on how big a black sea bass pot has to be legally or is this just because that is the easiest size to handle?

DR. CHEUVRONT: I know there are restrictions on the pot. Ben, are there size restrictions on those; do you know?

MR. HARTIG: No, there are, and it was because of the fish trap ban. Those pots are configured to catch black sea bass almost specifically, and that is the reason they are much smaller than the fish traps that we used to have.

DR. CHEUVRONT: Also, just to let you know that one of the other actions that the council is considering is to require the fishermen to bring the traps back at the end of every trip. In talking to some fishermen, 35 traps is probably the maximum number of traps that most of these fishermen can fit on their vessel in one trip. There is going to be some – if they go with both of these actions, this will line up the number of pots that they can use with probably about the maximum number that most of these vessels could carry at one time.

MR. CARMICHAEL: Will it be lined up with the trip limit? How many fish do you catch on average with 35, and then, of course, how many could you catch on a really good day when you stand a chance to make a profit?

DR. CHEUVRONT: One of the things that you will hear the fishermen argue from different perspectives – and this is where you are getting folks who are fishing in different areas, so you have to take this with a little bit of grain of salt, there are some of these guys who may be fishing 20 traps who are able to get 2,000 pounds in a single trip, as many folks did this past year, and the same guys who are fishing 35 or 40 got 2,000 pounds on a similar type trip. Part of it depends on soak time and how often you fish the trap in a single trip. There are several different issues that are related to this.

DR. CROSSON: Now, the proposal in here to require fishermen to bring their traps in at the end of every trip is designed to reduce the potential for right whale entanglement or interactions; is that also part of the reason behind this 35-pot trip?

DR. CHEUVRONT: That is part of it, but part of the other issue is that there is some concern also about ghost fishing. If a pot gets lost by not being brought back at the end of a trip and a buoy line gets severed for some reason, the pot could keep on fishing even though it can't be retrieved.

DR. REICHERT: But one of the objectives is also to reduce catch. Do we have any data on whether this would accomplish that and what the socio-economic effects are of this regulation? I remember, for instance, I think it was in black sea bass where a bag limit wouldn't do anything to reduce the catch because of multiple trips a day. I remember vaguely an issue that we discussed earlier.

DR. CHEUVRONT: We do have the data that allow us to know roughly how many traps a fisherman fished on a given trip. The problem is that people fish differently and we don't have any information on how they are fishing those traps o a given trip. We don't know how many times, for example, if they are only fishing with 20 traps, did they fish that trap 2 times, 3 times on that trip, or if they have had 40 traps did they just fish at once? We don't know that. We don't know the interrelationship between soak time and catch.

MR. COLLIER: Would that matter for anything. If they are fishing 40 traps, that is 40 traps. Their behavior might change given that they might stay out longer and fish it more often as opposed to coming home every night they might stay out for two days. The guys that fish 100 traps right now, they pretty much would leave them for the winter. That was one of the issues. I don't understand how having 35 traps, a limit of that is going to change how much they are going to bring back in.

DR. CHEUVRONT: I think that is really tied more to the idea of how many traps can you fit on a vessel. That's where that was headed.

DR. CROSSON: If you said that most fishermen felt – at least most of the fishermen that you spoke to felt that 35 traps was roughly about how many fishermen could deploy and retrieve in a single trip, then I don't think I misspoke and what is –

DR. CHEUVRONT: Well, that is how many they could carry on their vessel at one time. That is how many traps most of the guys can carry at one time and not necessarily how many they could fish. There is a difference.

DR. CROSSON: I am just wondering whether the other proposal in here required them to bring all of their pots in at the end of every trip is just going to take care of this naturally.

DR. CHEUVRONT: Perhaps it could, and if you think so you might want to state something like that.

DR. REICHERT: That was exactly the point I was going to make; maybe that would accomplish this. If we feel that that may be the case then –

DR. BELCHER: Other comments from the group on that? I am kind of with you guys in that it seems like there is a lot of confounded reduction in this. I mean, we are starting with numbers of people, numbers of traps, limits per trip. I guess the question is, is it multiplicative, is it additive, what are the reductions going to be overall?

DR. CROSSON: This also feeds back in – now you are starting to understand why this feeds back into the idea that the ABC and the ACL probably should have some buffer in between, because trying to predict what the effect is going to be if all of these changes compounded at once; plus you are trying to do that based off of modeling a fishery that has had shorter and shorter derby season for the past few years. I mean it is extremely difficult to predict anything out of this.

MR. COLLIER: One of the issues I see is if we are going to try to establish a trip limit and then we are trying to tell them how many traps they can take out, why not let the fishermen figure out how many traps they need to catch the fish. They are the professionals. They are going to know it better than we would.

DR. YANDLE: It seems to be really – there is all this sort of prescribing behavior, and why do we seem to be getting more and more into that game, instead of just saying this is the limit of what can be safely caught, this is what we needed to do to protect the ecosystems, and then just let them figure out the best way of doing it and just set that limit and set it in a way that can be enforced, going back to our earlier conversation, and stop trying to micromanage behavior.

DR. CHEUVRONT: Just to summarize what we are hearing and put it back into the context of Action 5, is what the SSC is recommending that the council should really ought to be looking at Alternative 1 for this action; do not annually limit the number of black sea bass pots deployed or pot tags issued to holders of snapper grouper commercial permits?

MR. COLLIER: When you getting into the Endangered Species Act, that is where this one gets a little confusing, because if somebody has a consistent behavior of leaving his traps out all the time and potentially interacting with a right whale that could end the fishery for everyone, that is problematic. But if we are going to require them to bring it in every night, that is a little bit different story. I don't know, balancing the two of those, that is the complicated one.

DR. CROSSON: That was the qualifier I was going to put on there was that exactly. Other than potential ESA reasons for worrying about right whale interactions, I cannot see a reason that we would endorse this.

DR. BELCHER: I think to a degree there are ways around – well, I shouldn't say ways around, but there are mechanisms for dealing with ESA. Crab traps are required links, what do they call them the weak links? In those situations, I understand the issue of ghost pots. That is one of things that those of us who are familiar with the blue crab fishery and knowing what goes in, especially North Carolina they cleaned up with – cleaning up pots, nobody wants to see extra effort out there as far as lost gear and it continuing to fish. ESA, there are other mechanisms, and there are requirements of the excluder devices, the biodegradable panels, whatever to help address some of those issues, which I think in the past have actually been part of that fishery, haven't they, Brian, as far as like the biodegradable panel requirements?

I know some of the issue is just the fact that if multiple traps are out per fishermen there is some degree of rotation that goes on with fishing. Even though they may technically fish 50 pots in a day, they could have 150 pots out and rotate through them every three days. That is kind of how our commercial crabbers do theirs. They put 200 pots out and rotate lines every forth day. I guess in that sense you can understand that issue if you can only fish 35 pots in a day.

DR. REICHERT: I've got a question for Brian. I just remembered at the council meeting there was some discussion about the effects of not doing anything to – the potential effects of not doing anything to certain fishing communities with a very short season and how that effected certain communities and by managing the fishery in a different way that may preserve some of the fishing communities because you have a longer season. Can you refresh my memory on that, because that would kind of go against let the fishermen figure it out. I remember a little bit of that discussion, or someone else can refresh my memory on that.

DR. CHEUVRONT: I think what Tracy was saying would probably – and I am not speaking on behalf of the council now – you are putting constraints on the fishery, the biological constraints as well as the ESA constraints, and there are other things. For example, folks are saying, well, what you are talking about with limiting the traps, well, if you require somebody to bring all their traps at the end of every trip, then you are going to deal with the ESA problem and let the fishermen determine what is the best way for him to fish traps.

That is one way to approach it; and if they are going to have a trip limit on top of that and there doesn't seem necessarily to be a one-to-one relationship with the number of traps that you put out and the size of your catch, it may be then from your discussion what you are saying is that trap limits may be extraneous to achieving the goals that the council is trying to get.

I am hoping I am synthesizing what you all are saying. If I am saying it wrong, somebody please jump in and correct me. It doesn't mean that you are abandoning necessarily all of the management measures that the council is considering that could help extend the season is that you are looking at them one at a time saying maybe some of these are not going to achieve the goals that perhaps the council was considering that they might achieve, and so we are giving you our best advice and warning you of that; that this one may not help, but some of the others might. We are getting to some of those others and you may want to discuss those more fully. I hope that helps.

DR. REICHERT: Yes, I think that was the clarification for the record that I was looking for.

DR. CHEUVRONT: If I said anything wrong, somebody please jump in and correct me. I had not asked a question in the overview about Action 6, but you all have discussed this as a possibility. I believe you have addressed this issue before. It actually shows the average number of pots that were fished between January 1, 2005, and December 31, 2010.

It looks like 32 vessels – of the folks who fished fewer than 55 pots per vessel, and there were 97 different vessels that had done that, they averaged 32 pots per trip. Of those who fished more than 55 pots during that 5-year period, there were 24 of those and they averaged about 99 pots per vessel.

You have to understand there are some vessels, for example, some headboats during the winter can actually go out and fish black sea bass pots and they can put a lot more than 35 traps on one of those vessels. That is what some of them do who have some of these commercial snapper grouper permits and black sea bass pot tags. I know that could happen as well.

But the council's preferred alternative is right now for reducing bycatch problems and ghost pots and things is to bring back pots at the end of each trip. Now one of the things is to define what you mean by shore. Do they actually have to come off the vessel, whatever? But the idea is that you can't leave them out in the water at the end of the trip. That is the council's currently preferred alternative and that might achieve some of – from what you were saying, some of the things that they were trying to get from limiting the number of pots.

MR. COLLIER: If I was a fisherman and I could only fit 20 traps on my boat, I would still apply for the 35 traps, take out 20 one day and then the next day take out 15 and continue to bring back 20 every day. At that point I would be telling you that I am only fishing 20 traps because that is all I am bringing back, but I could potentially have 35 out there. Is this enforceable?

DR. CHEUVRONT: Well, just like all other traps, you leave a trap out in the water, they are all identified with fishermen's name and permit numbers and things like that, so you actually have a federal tag on that trap, so somebody would have to find it out on the water or somebody would have to turn you in or something.

MR. COLLIER: I don't know, I just see a problem with giving somebody – if they only want 20 traps, if they can only fit 20 on their boat and that is how many they generally fish, you give them 35 traps, then they are going to have an extra 15. But somebody that can fit 35 on their

boat, they are going to take all 35 out and then if they lose one then they have lost that. I don't know how you would potentially replace it where the other guy has a replacement.

DR. CHEUVRONT: Well, it sounds like what you are saying is you are going back to Action 5 and saying no trap limits. But what about Action 6, requiring them to bring them in; are you saying that this would not be enforceable?

MR. COLLIER: It becomes very difficult because at that point when the Coast Guard gets the call that they have found it out there, does the fisherman all he has to do is untie from the dock, because then he is not at shore. It is a slippery slope so you have to be watching them at both places at one time, because there is no definition on how close you have to be to your pots. I mean, some guys might fish overnight.

DdR. CHEUVRONT: I see the points that you are trying to make.

DR. CROSSON: The only way I would see that you would be able to enforce this would be to ban pots at night.

DR. CHEUVRONT: That is not something the council is considering at this point is prohibiting at-night fishing. The council is not considering that.

DR. CHEUVRONT: In Action 7, this is the action to modify accountability measures for black sea bass. The consideration here at this point is under Alternative 2 is the council wants to consider dropping the three-year running average for calculating recreational ACL overages and do it just based on the most recent year of landings. I guess the issue is would payback provisions done annually; is that adequate?

MR. COLLIER: The reason for the three-year running average was because of inherent spikes in the MRIP data, right?

DR. CHEUVRONT: And trying to smooth it out some. The problem is that depending on when that overage in that three year – say you had a real big spike the first year of doing this, well, it would be out of the three-year running average after that first year; but if it happened in the third year you are stuck with it for three years.

There is an inequity that could occur as to when these overfishing amounts could affect the amount of the reduction in subsequent years. In response to that inequity issue the council considered, well, let's just drop that idea and just take off annual overages in the subsequent year. We are just trying to see if you all have any comments about whether that is a good approach or not.

DR. BELCHER: I am going to refer back to the group on this because this kind of reminds me of back when we were actually discussing the P-star approach. This might have even been when Brian was on the SSC all those many moons ago, but this issue of the overall probability for the total projection timeline versus individual years of probability of overfishing in any one year and that compounded overall.

DR. CHEUVRONT: Right.

DR. BELCHER: That is kind of what I was saying before that concern is that, okay, it is an overage in the first year, but you really don't know what you are gaining/losing by trying to iron it out the next year and the year after that. The biological losses and gains are not as clear in those adjustments.

DR. CHEUVRONT: Well, that sounds like a good response to that question, so it sounds like you are saying that dealing with overages on an annual basis is probably a more straightforward way to go.

DR. BELCHER: I guess if that is what it sounds like, I will let the rest of the group talk about it, but that is my one concern about that is that whole – again, we talked about that when we were trying to determine how we were going to work those projections relative to the control rule; was it 65 percent or whatever the probability of overfishing for the entire time projection or did we do it on an annual basis and that each year had to be 65 percent and then whatever your projection length determined what that overall probability was because of that multiplicative 65 percent on each of the individual years to get the overall probability and not necessarily additive. They are probably something in between additive and multiplicative.

DR. CROSSON: There wasn't sufficient social or economic data. Actually there wasn't any for the SEP to comment on this as well, so we declined to take a stance on this. We can make arguments for conjecture.

SSC MEMBER: I didn't hear what you said.

DR. CROSSON: No, the SEP, there were a lot of questions about the social and economic impacts of these different approaches, but we didn't have any economic data for making any kind of judgment on that and so we declined to conjecture on that same issue.

DR. CHEUVRONT: You guys can always punt if you want to as well.

MR. CROSSON: I would say John is more of an expert on this, but do you have any comments on if the data is more smooth now with MRIP the way the new estimates are going to be done? Are they more precise or are we going to be continuing to run into the same problems that we were before that we could have a huge spike in this fishery and let's just do the sampling.

DR. BOREMAN: It is hard to predict. What we can predict is that the numbers will be more accurate, but they will probably be much less precise than they are now, because the older numbers, the MRFSS numbers didn't account for all the uncertainty, all the variance. Now we have more factors entering into the variance estimator but they will be more accurate.

In terms of the spikes, if it is more accurate probably the spikes will be reduced somewhat, but again it is hard to predict which way it is going to go. All I can say is like in the Mid-Atlantic and New England they have requirements for allocations on the recreational fishery based on the PSE – the coefficient of variation has to be less than 20 percent or 15 percent in order to use that

sector as a basis for allocation. That is probably going to have to change. The variance estimators are going to go up; pretty sure about that.

DR. CHEUVRONT: Action 8 is establishing the spawning season closure for black sea bass. As the stock recovers and presumably the season gets extended, there is a concern that there may be fishing during the spawning season as there had been in the past. Action 8 proposes potential spawning season closures.

If the SSC thinks a spawning season closure is appropriate, what would be the most appropriate closure for the black sea bass in the South Atlantic region? Now, realize that the fishing year starts June 1 now, which as everybody agrees is after the spawning season is over; but if the stock rebuilds, presumably the season is going to go longer.

You will find that if you look at this table that I am showing you here right now shows that the amount of catches that are happening under landings under MRFSS, headboat, and commercial, and the total landings. You can see that March to May is the peak spawning season, and you can see that roughly in each of those months 7 to 9 percent in each month of the total landings come from those three months; whereas the peak of the season actually occurs – the peak landing months are November and December. If you all would like to just comment and give some advice to the council about what you think that they ought to do in regards to this; as you can see they have no preferred alternative at this point.

MR. COLLIER: A longer spawning period is probably better to prevent recruitment due to the closed season if you are going to try to use that to control harvest. Additionally it protects the fish for a longer time period.

DR. CHEUVRONT: You're probably then suggesting Alternative 4, March 1 through May 31, which I believe is the longest closed season.

MR. COLLIER: Yes, actually I was trying to look through the data workshop report to look at the spawning season for black sea bass.

DR. BUCKEL: I don't think there is any evidence that this species aggregate during spawning. I think that is the reason we have spawning season closures for gag, because the catchability goes up when those fish aggregate. These fish, as far as I know, do not aggregate so this is just – you are just trying to reduce F. That can be done at any time of the year, and there may be a more appropriate time that we could talk about. I don't necessarily see the reason to do this during the spawning season. There could be other times that we could discuss if we are trying to reduce F.

DR. BARBIERI: Brian, it looks like from the gray box on the side, that the main purpose of this action – anyway, Brian, the gray box, it looks like the main goal of this action would be to reduce interactions with the right whales?

DR. CHEUVRONT: They do occur – well, it is a little bit more complicated than that, because the spawning season actually starts earlier further south and sort of migrates heading north. Yes, basically the whales are going in the other direction. But, one of the issues is that the council

consider this in Regulatory Amendment 9 and dropped it because they had difficulty figuring out based on where this spawning season kind of shifts.

It starts earlier, like in February down in Florida, and it is later up in North Carolina. They couldn't come to an agreement on when would be the appropriate time to close the fishery for a spawning season. But it sounds like what some folks are saying is that maybe the spawning season is irrelevant, the spawning season closure is irrelevant.

DR. BARBIERI: May I just follow up to that point? Brian, I just don't see any data or analysis that would indicate a significant biological benefit from having a spawning season. I mean, obviously if you close the fishing during the spawning season, there might be some benefits.

We just don't have any metrics to be able to see how that contributes; you know, what would be the goal of the spawning season to get to, and is that goal being met by closing during the spawning season, or is just an idea that would benefit the fishery by reducing that encounter with the right whale? At this point, I don't think we have the information. I cannot determine if there is a significant biological benefit.

DR. BOREMAN: We talked about this in the Mid-Atlantic and the thing about black sea bass is they do have a complex spawning behavior. They have the male with female harems. I am not sure if this was a published article or what, but the sense that I got from that discussion is that fishing during the spawning season could be much more disruptive to black sea bass than a lot of other species, especially when you are removing the dominant male.

You have basically lost a spawning potential for that whole group. They are not going to recover in time. That is one side of the coin. The other side of the coin is black sea bass also tend to aggregate in different seasons, outside of spawning season. My understanding is they move offshore and they tend to aggregate, so they are more vulnerable then to exploitation. I really can't come down one way or the other; but because of their complex spawning behavior, my tendency would be to push for a spawning season closure.

DR. JOHNSON: I would just say, just to bring not necessarily a concern but just to bring it up, the average sort of the total savings are more or less equivalent across those three months that would affect each of those sectors differently, so there would be an allocation issue. For example, it looks like 30 – it is roughly a third of the headboats catches are during that particular time relative to some of the other.

MR. CARMICHAEL: Well, it would seem part of the problem then is that it is not clear in here at all what the council hopes to achieve with the spawning season closure. If you want to reduce fishing mortality and you are essentially treating it as a season, then like what Chip mentioned, making it longer is better because there is less chance for recruitment.

If you really want to protect spawning fish, then you have to account for the fact that spawning season varies between Florida and North Carolina, which isn't taken into account there. If you want to deal – if what you really want to do is have some kind of closure that deals with the right

whale situation, then you probably need to have your trajectory go the opposite direction in terms of time and space, then the spawning direction, and deal with that issue.

It would seem like the council has sort of got three things, maybe four things it wants to hopefully do with some kind of closure and we are going to magically pick a two-month period that is going to do it and not irritate everybody. It is easy to sell, because a lot of times people just sort of think a spawning season closure, it sounds good. It is like Mom and apple pie and we shouldn't be fishing on spawning fish.

But from the stock assessment, dead fish are dead fish and that has always been the case; and unless there is an aggregation issue or a vulnerability issue, it usually doesn't make sense to really focus on this at the cost of other things that make a lot more sense, because the bottom line is they need to figure to figure out what they want to do with this closure.

DR. BELCHER: One of the problems that I see at least relative to thinking about timing of right whale season off of Georgia and North Florida, your commercial fishery is encountering them during January/February, which is predominantly when the right whales are off of Georgia and Florida.

Even though when you look at the overall – am I doing that on the wrong thing? It's June 6, right? Okay, just making sure. So I am looking down because you see where your lowest ones are basically January through until May, but commercial-wise there is that hit that gets taken in the January/February block. But who is going to be more likely to encounter right whales is your commercial fishery. I am just kind of trying to throw it out there if you are talking about possibly extending it to account for right whales and a spawning season closure, those first five months seemingly make sense although the recreational people will probably argue against January/February.

DR. BARBIERI: I would second what John Carmichael brought up. I think the council should reevaluate this action and alternatives to really see what they are trying to achieve and then develop some set of metrics that would give us an idea of the actual benefits that would be obtained by implementing this action.

MR. CARMICHAEL: Question about the right whales; this has come up a couple times. We have got a lot of state people and maybe some people involved in whale monitoring and at least know what is going on in the states; is it an issue; are we having whales getting tangled up in black sea bass pot lines?

DR. BELCHER: They will tell you they are interacting with any float line. I don't necessarily that it is black sea bass. I don't know that there is – I know that our teams go out in the wintertime and they are always dealing with entanglement issues that happen to be float lines. I don't know how close they can relate it back to a fishery other than if there are traps still attached to it when the animal is entangled.

That would be a question to pose to the right whale, but I do know that in our state – again falling back to blue crab fishermen – there is a large magnifying scope on them right now, and

most of our fishery is in inshore waters, which is where right whales aren't. But they are still, because of the marine mammal protection stuff and endangered species on top of that, limiting those encounters. I mean, dolphins are in that same thing. We are looking at those weak links relative to dolphin encounters. It is hitting a lot of the different fisheries where any mammal is going to be entangled in the gear.

DR. CHEUVRONT: Moving on; there is only really one more question that I had and this one is an open-ended one. But, this one is a pros and cons of trips and size limits regarding Actions 9 and 10 in here; establish a commercial trip limit for black sea bass. The council's current preferred is a 1,250 pound trip limit, which is most black sea bass pot fishermen would consider that to be a profitable trip.

You also have to realize that there were a large number of pots that had – a lot of pot trips had even more than 2,000 pounds landed this last short season that we had. The idea behind this is to sort of constrain some of these guys that on any given trip they know when to stop at 1,250 pounds gutted weight, and keep them from having these super trips that they were having, so thinking that that would help to extend the season. That is the issue with that one.

The other that we have here is Action 10 is to modify commercial and/or recreational black sea bass size limits. The current recreational size limit is 12 inches. The commercial size limit is 10 inches. The Alternative 2 is to raise the recreational size limit from 12 to 13 inches, and Alternative 3 is to increase the commercial size limit from either 10 to 11, 10 to 12, or else to step it up from 10 to 11 to 12. I believe the SEP had something to say about all that as well.

DR. WHITEHEAD: For Action 9 the SEP did not endorse trip limits for the reason stated at our February meeting. Our primary concern with utilizing trip limits is that fishermen will increase their number of fishing trips to maintain a constant level of total revenues. The real change in the system will result from an increase in operating costs. For Action 10, increased size limits may be appropriate for this fishery because of the relatively low mortality rates in the hook-and-line and trap fisheries. There is economic evidence that larger fish are more valuable on a per pound basis than smaller fish.

MR. COLLIER: Is there any data on what poundage limit is actually going to extend the season? I mean, there is a reduction that says you reduced it by this much, but we are not going for a reduction, and we are trying to actually extend the season.

DR. CHEUVRONT: I think the presumption is that if some of these trips where they landed say over 2,000 pounds in a given trip, if they had been restricted to 1,250 pounds, those pounds would have been added to a subsequent trip that would have occurred later. Whether that was immediately after they brought their landing in and sold it and turned around and went right back out, I don't know. But, it would probably result in a subsequent trip, especially if they limited the number of folks who were able to go out there. But as far as how much would that extend the season, I am not sure.

MR. COLLIER: It was only 56 trips, it looks like, that landed at 1,271 pounds. I don't know if that is wet weight or not, but reducing after that you are not extending the season that much. Is

this truly getting at the overall goal of extending the season? I mean, 56 trips can be made up in 3 days by 21 fishermen.

DR. CHEUVRONT: That is I think part of the value judgments we considered there, is that enough to make it – but then on the other hand they have to be able to – to then institute a trip limit, they have to be able to catch enough fish to make the trip profitable. You have got six of one and half a dozen of the other and figure out whether that is a viable alternative or not.

MR. COLLIER: It really seems like this is trying to get to a quota for each fisherman without actually doing that. I mean, it seems like it is taking every approach to get there.

MR. CARMICHAEL: I wonder given what we saw in the assessment and the trajectory of the population and the increasing size composition and all that, is anyone on the SSC feeling that you are unlikely to get really any type of real reduction from any sort of size limit change at this point in time. It seems like the availability of fish above the size limit is plenty ample. You know, if the stock is really depressed and you raise the size limit by an inch or two, maybe you get a little bit of reduction for a year, but fish quickly grow.

DR. BELCHER: If you have got a trip limit – and we are still talking about the issue of traps, too; I mean, this is like that whole give and take of what is going to happen. You want to limit the number of people, the number of traps in a means of trying to prolong the season. But if you limit the number of traps and say you hold it to 35 but yet they can catch that amount of weight in 20 traps, now you have got 15 traps of regulatory discards. I guess the question then plies in with what that mortality would be. What is the gain of putting those fish back at that trip limit?

MR. CARMICHAEL: Yes, on the one hand the mortality is relatively low in the traps. On the other hand, if you get in a situation where fish is repeatedly getting caught in a trap, you know the more times he is encountered, the mortality rate tends to go up. I expect in that situation you are going to end up with fishermen at times, when fish are really abundant, ideally fishing just fewer traps on their own accord because they want to fish, as we mentioned earlier, whatever the limit catches them, but I had that concern earlier, too.

You are leading to regulatory discards. In this case we believe they tend to be low. But, we also know that in a lot of cases what they are releasing is smaller fish; would it be higher with larger fish? What other behavioral changes go on in this fishery that might negate that currently low discard mortality rate, in which case this regulatory discards could become big. If the numbers goes up, even if the rate is relatively low, you are creating more of a discard problem, also.

MR. COLLIER: Some of the discard mortality estimates came from during the wintertime when the fishery was typically operating. We have switched it to more of a summertime. There are higher discard mortality rates during the summer. Larger fish tend to have a higher discard mortality rate just because their swim bladder gets larger; it impacts other organs as they come up. Yes, there are other factors that are not incorporated into that discard mortality number just because we had no data on it, but anecdotally, yes, there is evidence that all those factors come into play.

DR. CHEUVRONT: So what is your recommendation to the council for these two issues?

DR. CROSSON: Without endorsing any of these options, I would think that trip limits have less of an economic impact an a fisherman's business than limits on the number of traps, which has less than – which is still less than the impact would be of both of them together. Does that make sense? If I had to order them, that is how I would order them. I don't know that I could make a statement beyond that without more economic data.

MR. COLLIER: It would be nice to have some information on how many pounds make a trip worthwhile. Having some educated information on that and not bumping against the minimum to make it worthwhile going, that would be my caution.

DR. CHEUVRONT: I know from talking to fishermen that those 1,250 pounds is a good healthy trip. I think 1,000 pounds is probably a profitable trip, but the 1,250 is considered a pretty good trip.

DR. CROSSON: If fuel prices were to rise 25 percent next year –

DR. CHEUVRONT: Yes, all bets are off.

DR. CROSSON: – which is the reason I think trip limits are a bad idea. Because I think very economically and very quickly this could become an unproductive trip and the council would be stuck with this particular number in regulations and have to go back and try to adjust it through the amendment process. I think that is something to consider.

DR. BELCHER: Other folk's comments? I see a lot of head nodding in support of that.

DR. CROSSON: It is dependent on both a stable economic price for fuel and a stable price for black sea bass, and I don't know that either of those is going to be particularly stable in coming years. Again, if they are in an amendment formally, it is going to be very difficult to quickly undo them.

MR. COLLIER: One last thing to consider with black sea bass, although you do get more money for the larger fish, they tend to be the most difficult to sell. Sometimes you have to have those smaller fish in order to unload your larger fish. The smaller fish have better plate appearance; larger fish tend to be fillets and fried. It just depends on which the chef wants. Generally the whole fish is more presentable.

DR. BELCHER: One of the issues, just speaking off the top and knowing that these guys are sex changers, we have got the added pressure to the males of the population if we increase that, that you put more pressure to those males if you increase – am I reading it right, the size limit, the minimum size to 13, so the males get more pressure; and if it is a single male to a large group of female, we are preserving females but whacking out the males.

DR. REICHERT: The data workshop report says that 50 percent transition is at age 4, which because there is a high variability in size at age, that would be between, say, 200 and 400

millimeters, so that would be right in the – the 13 inch would be right in the middle of that size range. Make sense?

DR. GRIMES: Although it might be worth saying that most likely the size at sex reversal has to do with the number of males or interaction with males and probably the density of the social group they are in and that kind of stuff, so there might be a lot variation when it actually occurs.

DR. BELCHER: Further points of consideration?

DR. BUCKEL: I just want to point out the current two-inch mesh size on the traps. That was set for the commercial size limit of ten inches, and I talked with commercial fishermen out of Sneads Ferry to find out if it went to 11 inches would there be a lot more discards, and they felt that definitely would be an issue, because you have got that 2 inch right now, and it is allowing pretty much everything less than 10 inches to get out, so there is very few fish that they have to throw back. So if you go up an inch or two inches, then there has got to be an increased number of fish that will have to go back over, and then you would run into the issue do you want to require a slightly larger mesh size.

DR. BELCHER: Other points to bring up for the council? Okay, I guess that brings us basically to the overall on that, which the last recommendation from us would be review amendment and provide guidance on any other issues the SSC wishes to discuss not specifically mentioned above. Anything else that you are concerned about relative to 18A? .

DR. ERRIGO: There were some people who had concerns about some of these issues with – now that sea bass is not officially considered overfished, that they will no longer be able, according to the current amendment, to shut the fishery down when they approach the ACL. I don't know if you guys wanted to perhaps mention whether you think that is fine or not. And also there is something in the amendment where if the fishery exceeds the ACL during the rebuilding plan, they don't get the step up.

If you are under constant F and your catch is increasing each year or the ABC increases each year, they don't get the increase if they go over their ACL at all. I don't know if you guys perhaps maybe wanted to comment on that as well.

DR. BELCHER: I think we kind of did comment on the one part of the whole issue with the AM, because there was concern about that fact again of not knowing what the biological cost is for just exceeding ACL and the recommendation back to looking at an actual ACT and what that ACT should be doing to keep us from exceeding the ACL. Anybody else; didn't that kind of hit that point? I am falling to the group to remember.

DR. ERRIGO: That is true; I think that is under SEDAR 25.

DR. BELCHER: I think that is kind of captured there, and I guess we can refer to those comments coming out of this support and concerns with SEDAR 25 and the recommendations from there.

MR. COLLIER: I feel that we hit the caution with not being able to close the season fairly good. It is really concerning that there is a potential for losing the fishery for one year and potentially two years if they really do have a good season. Based on the way they were going this year, yes, they would have potentially closed it for three years. They were having really good catches. That is something for the council to strongly consider is giving the Regional Administrator potentially flexibility to close the fishery during certain – if they see they are going to exceed their ACL or ACT.

DR. BELCHER: Other comments and directives from the group?

MR. CARMICHAEL: I certainly would have a concern with any language that says if there is any overage you don't get an increase, because you could have an overage of 5 pounds. Just as we say 1.07 on your F says you are overfishing, 5 pounds over is an overage. We look at these projections for black sea bass; you could have a 200,000 pound increase coming next year, and you are going to say, sorry, you went over 5 pounds, you don't get the 200,000. You know that just seems ludicrous. It just seems exceptionally punitive; I don't know.

I think that the program that is in place where you subtract the overage from the next year is self-correcting. If they go over by 100,000 pounds but there is a 200,000 pound increase, then you only go up 100,000 pounds that year. It doesn't really seem like there is any need unless I am missing something on this.

DR. BELCHER: Unless that 100,000 pounds hits a critical age class.

MR. CARMICHAEL: Yes, but if you are going to play that "if game", then you could say you could hit a critical age class and not be over.

DR. BELCHER: That is true as well, but that is what I am saying is that we don't know what that biological cost or gain is in that happening.

DR. REICHERT: The one-and-one payback does not account for future yield, and it may not account for the fact that we may not get to that rebuilding. I was just briefly talking with Steve. Is it possible for us to get some information from the stock assessment, an analysis to see what that does, to give us some guidance so we can provide the council with some guidance in terms of what that would do with the future projection?

DR. CADRIN: Well, the question was can we evaluate this with a stock assessment, and the answer is yes, but maybe the more meaningful answer is do we want to do that? But what we could do, similar to the way you derive F rebuild, where you iterate the fishing mortality that achieves your rebuilding target in the long term, we could take the short-term rebuilding expectation; and after an overage has happened, what is the reduction and catch in the next year that would still get you back to rebuilding that waypoint in your rebuilding, and you could iterate the catch that does that.

My concern about doing that is that we are not responsive enough. We are still talking about what is the overage last year. We are not going to know that information in time to do that,

unless we do that two years out. I guess I have a more crude approach to it is that there needs to be accountability for exceeding the catch limits.

I agree with John that they don't necessarily have to be punitive, they could be very proactive. All the guidelines say that if overfishing happens, then you need to respond by identifying what happened and have corrective measures. They don't need to be one-to-one paybacks. They can be just improving the data system. They could be a lot of different things that don't necessarily have to be a pound of flesh is my opinion on it.

DR. BELCHER: Okay, anyone else? All right, if folks have other comments or want some time to ruminate, I will reiterate in the morning to see if anybody has any new comments they want to bring forward relative to 18A. If not, we will pick up with 18B in the morning. We will recess until nine tomorrow.

The Scientific and Statistical Committee of the South Atlantic Fishery Management Council reconvened in the Hampton Inn West Ashley, Charleston, South Carolina, Wednesday morning, November 9, 2011, and was called to order at 9:00 o'clock a.m. by Chairman Carolyn Belcher.

DR. BELCHER: Good morning, everybody, and welcome to Day 2 of the SSC. We are going to start off the agenda with Snapper Grouper Amendment 18B. There is a little bit of shift in the order because Andy Strelcheck will not be here until after lunch. Item 7 and 8 are going to be moved to later in the schedule.

We are going to proceed with 18B Snapper Grouper 24. Depending on how time progresses relative to lunch, we may get into Golden Crab Amendment 6. It is just a matter of how much discussion we have on the earlier items. With that, Myra, we will go ahead and let you get rolling on 18B.

MS BROUWER: 18B is very similar to 18A. We call them the 18 twins. Back in June the council decided to move all the actions that pertained to golden tilefish out of Amendment 18A and put them in a separate amendment and call that 18B. It is very similar, the same type of thing, endorsement program, appeals process, revisiting the MSA parameters based on the results of the assessment.

What I have here is the decision document up on the screen that the council used to discuss this amendment in September. I should tell you that in September the council only got through Actions 1 through 3, and then they decided not to continue discussing this amendment because some key council members were not in attendance.

They made some motions, the motions passed the committee and were accepted at full council, but we have chosen not to really make the changes that the council requested in September until they have a chance to revisit this amendment in its entirety at the December meeting; because as I said there were some council members that were not there to provide their input.

The goals of the amendment, as I said, are similar to 18A, to limit participation in the golden tilefish fishery. They really just want to cap that fishery at the level that it has been. Everybody

is happy with where things are. They do not want to reduce effort. They are considering changing the fishing year, changing the trip limits that are currently in place for the commercial sector, and update the parameters based on the results of SEDAR 25.

The timing of the amendment is to approve it for public hearings at the December meeting. As I said, it is still very rough. The council doesn't have preferreds for many of the actions, but this would be the last time that you guys get to see it since you are not meeting again until April. If we go to public hearings in the beginning of the year, January/February, then the council would approve it for submission to the secretary in March, before you all have another chance to see it.

That is where we are, and so the regulations would be implemented by January of 2013. Action 1 is to limit participation in the golden tilefish fishery, and the council discussed this in September. They decided to get rid of two of the subalternatives that would essentially let the council decide who would get a hook-and-line endorsement, who would get a longline endorsement, if they qualified for either one of them, and they decided that was not really appropriate.

If folks qualified for either one of the endorsements, they should be able to pick which they wanted to receive, so they suggested getting rid of the subalternatives that you see crossed out. Then they requested that we add a new subalternative and they picked it as their preferred, and that is to only have a longline endorsement program.

They are leaning towards not even considering an endorsement for the hook-and-line sector. The Snapper Grouper AP met earlier this fall in October, and they got a chance to see this amendment as well, so I have included their recommendations in this presentation. I am going to walk you through this fairly quickly. If you have questions, stop me. I don't really have any specifics to ask other than what we were talking about yesterday when we broke, this issue of whether ACL increases would happen if an overage of the ACL happened to occur. The council gave us guidance in September that their intent is to not allow those increases to take place if there are overages.

This same issue is going to affect Amendment 18B and Amendment 24. That is mainly what I would like your feedback on for this amendment. Then we have eligibility requirements for the golden tilefish hook-and-line endorsement. Since they are now leaning now more towards not having a hook-and-line endorsement, they didn't discuss this very much. All these alternatives have been analyzed and there are a lot of them.

It goes all the way down from A to M. The last two were added by the council in June, and the reason why they added these two is basically just to get more recent years in the analysis, because all the other alternatives basically only went through 2008. The AP, of course, suggested going no action for this, to not have an endorsement for the hook-and-line sector.

Then there is the action that would establish eligibility requirements for the longline endorsement. The council currently has a preferred and that is to receive an endorsement the individual must have a total of 2,000 pounds gutted weight of tilefish caught between '06 and '08. The council provided some clarifications on what this means.

They asked that we change the word "individual" to "permit", because the landings, of course, are attached to the permit not the individual, and so that would make keeping track of this a lot cleaner. They also requested that we add a new alternative to look at a time series from '07 through 2010 as a qualifying period and include subalternatives for the level of landings of 10,000, 20,000 and 30,000 pounds.

Those are currently being analyzed, and the council will see that analysis in December. The AP recommended supporting the council's preferred, so going with that 2,000 pound gutted weight level of landings. This is something that I received recently, just so that you have a better idea of where this fishery is.

This table shows that 300 pound gutted weight trip limit, when it went into effect and when the quota was met. As you see over here on this column, the quota has been met earlier and earlier, and it wasn't even implemented this year because the quota was met very early in the season. This table shows the number of vessels that caught tilefish with longline or hook and line during '04 through 2010.

This is the universe of fishermen that we are looking at. As far as the percentage, longline versus hook and line, the hook-and-line sector has always been very small, hovering. The breakdown is 90/10, 90 percent longline and 10 percent hook and line more or less over time. Any questions so far?

All right, these are the actions that the council didn't get to see in September and will revisit again in December, establishment of an appeals process, same thing that we have in 18A. We have some recommendations for how to word this, and the AP provided their feedback on this. Then allocating the quota among the gear groups; currently the preferred is to allocate commercial based on a 90 percent longline and 10 percent hook-and-line division as I mentioned. The AP supported that alternative.

Then they need to talk about whether these endorsements are going to be transferable. As you see in this Alternative 4, that breakdown, when you apply it to the landings, would be 254,000 pounds gutted weight to the longline sector and only 28,000 pounds to the hook-and-line sector, so it is a very small amount that the hook-and-line sector would receive.

This is going to be relevant when we get into actions towards the end of this. This is transferability. Again, the council will just have to decide how they want to handle this. They do have preferreds so we will just have to see what they would like to do. The AP suggested that longline endorsements be transferable.

Adjusting the fishing year, they would prefer to retain the existing fishing year which starts January 1, and that is also what the AP is recommending. Then there is the fishing limits, so the preferred is to remove that 300 pound gutted weight trip limit when 75 percent of the ACL has been met.

Here we are going to suggest that the council consider just getting rid of this action since now they are going to be putting ACLs for each of the sectors, and so the existing trip limit is not

going to be applicable anymore. The AP actually preferred no action, so no action would be to retain that trip limit.

Then the council wanted to establish trip limits for fishermen who did not receive endorsements. Again, this action would only remain in the amendment if the council decided to go ahead and do the hook-and-line endorsement. Otherwise, it wouldn't be relevant anymore. Currently their preferred is to establish trip limits of 300 pounds for the hook-and-line fishery, for those fishermen who would not qualify for the endorsement.

They asked us to add a new alternative which is just a lowered trip limit of 100 pounds. Of course, as I said earlier, this would apply to a very small quota of 28,000 pounds or thereabouts. It doesn't seem useful for the council to be considering trip limits for that amount of landings, so they may want to consider deleting this action.

Then finally, Action 10 is to establish trip limits for fishermen who receive a golden tilefish hook-and-line endorsement, and again this one does not have a preferred. The AP recommended selecting no action. These are the actions that are currently officially in the amendment, Actions 1 through 10, and then we are going to recommend that the council consider adding a few more to update those MSA parameters, as I said, based on the stock assessment.

The first thing to do would be to update MSY, MSST, and all that. Currently this is what is in the books. The overfishing level is another thing that they would have to update. This, of course, is provided by the SSC. What you recommended in April 2010 was an OFL of 336,400 pounds and an ABC of 311,000 pounds, and this was based on the results of SEDAR 4.

Presumably we would have a new ABC that you would recommend based on the assessment and the application of the control rule, so this would be the amendment that would adopt that recommendation. Then to be consistent with what the council has done in other amendments, they would then have to establish an ACL. These are the alternatives that were in the Comprehensive ACL Amendment and the ones that are being considered in Amendment 18A. The council, as you know, has consistently chosen Alternative 2, which is to set the ACL as the ABC.

Golden tilefish, the council did not consider yet setting of ACTs; however, they have been consistent in not considering an ACT for the commercial sector, but nonetheless there would have to be an action to take those steps. Then for the recreational sector, this is here basically just for completion.

It is something that the council may want to consider but the recreational sector has such a small ACL that it may not be worthwhile. We will just ask them what they would like to do with that and, again, they have consistently chosen to set that ACT equal to the ACL times 1 minus the PSE.

The accountability measures, what is in the books was what was established for Amendment 17B, and again the council chose a different route in the Comprehensive ACL Amendment so they would have a chance to be consistent with what they did then and apply that to golden

tilefish as well, so these are the same alternatives that were in the Comprehensive ACL Amendment.

For specifying the level of landings that would trigger an accountability measure, the council has chosen to just stick to annual landings. That would be Subalternative 2B. We don't have in-season AMs and for post-season AMs, for species that are not overfished, the council has chosen Subalternative 4D, which would be to monitor the following year and shorten the season as necessary.

Other things that I wanted to bring to your attention are motions that the AP made at their meeting in October. They want to suggest that the total ACL increase for golden tile not be subject to a double-jeopardy penalty, and this is how they chose to refer to what I was talking about earlier, not getting that ACL increase if there is an overage. They feel that it would penalize them twice. They say they don't want to see that happening.

They also talked about recommending that the ACL for golden tile be increased based on the latest assessment and then allocate that ACL on a 90/10 commercial/recreational split. Then they said the council should also consider increasing the ACL for golden tile by 100,000 pounds based on the latest assessment. These are the motions that the advisory panel made, and again the council has not had a chance to consider any of this yet. That is all I have on 18B. Are there any questions?

DR. BELCHER: Okay, so if we reference the roadmap, we are being asked to provide recommendations and comments relative to each of the action items. Myra.

MS. BROUWER: The reason that is there is the council – each one of our amendments has a section called council conclusions. Right before an amendment is submitted to the secretary we summarize the rationale for why the council chose that preferred alternative. In that discussion we talk about what the AP recommended, what the SSC recommended, what the Law Enforcement AP recommended, all the relevant bodies. If I don't have an SSC recommendation for an action, then that is what goes in there; the SSC did not have a recommendation for this action.

But if you would like to include more rationale for why that is, sometimes these actions obviously are administrative or they don't have a lot of scientific or technical consideration and so the SSC doesn't really play a big part in it. This is just an opportunity for you guys to comment or provide your feedback if you would like for that to be included in the council conclusions in the amendment document.

DR. BELCHER: I guess the easiest thing to do is just going to be to hit these actions one at a time and see what the group's comments are; starting back with Action 1, which is limit the participation in the golden tilefish fishery. What are the group's comments relative to that particular action?

MR. COLLIER: Based on the season closing earlier and earlier, it seems like an ideal candidate for limiting participation in the fishery. It seems like a good idea for the council to be

investigating that, and I believe the fishermen were the ones that were instigating this, which is a key component as well; get them to buy into the process before management says you are going to do this.

DR. CROSSON: Is there any economic data, even anecdotal, that the earlier season closures are affecting the price of tilefish. I guess this competes with other snapper grouper species in the market place. Do we know – Brian, does anybody know?

MR. HARTIG: The opening of tilefish is January 1st. The groupers is closed at that time so it has pretty much taken the place of grouper in the market place, so the prices still remain strong even though production is high. It is kind of one of those things that you wouldn't expect, but they are still getting good money for their fish.

DR. WHITEHEAD: Just in general, it is not surprising that fishermen would be in favor of limiting participation in their own fishery – I should add to that, shouldn't I – because it reduces competition and concentrates a quota among the existing fishermen and raises their own revenues.

DR. CROSSON: I guess just in keeping with what I said yesterday, the discussion between generalist and specialist for fisheries, if the goal of the council is to concentrate the catch among a lot of specialists; those fishermen are going to be more susceptible to fluctuations in the supply due to biological factors or regulatory factors.

If for some reason a future stock assessment comes back negative and you have a lot of specialists now that are very dependent on that fishery, they are going to be more likely to take a hit than if that fishery is distributed among a lot of other fishermen who are is only more of a part-time, a smaller portion of their catch. It is something for the council to consider that dependence is going to be developing.

DR. BELCHER: Other comments? Okay, I will let Myra caught up first on typing and then we will move to Action 2.

DR. CROSSON: I'm sorry, the first sentence; did I miss something? Did we endorse an endorsement program?

DR. BELCHER: Chip was basically stating just that relative to what has happened with the season, it seems to make sense that there is limited participation being looked at. I was kind of thinking the same thing is that these are more generalized group comments and not necessarily overall SSC recommendations.

DR. CROSSON: That is my point; I am not sure that the SSC recommends an endorsement program.

DR. BELCHER: Yes, I think that is just – and Myra changed it to comments, so – Some of these things, unless there is a biological reason or a socio-economic reason, I don't know that we necessarily have a dog in the fight. Do you have any other comments?

DR. CROSSON: Myra, the slide that showed the season closures over the past few years and how it had been closing earlier and earlier; given what Ben said about it substituting for snapper grouper species during the closure of January through April, I just wanted to see when – okay, so at least the past couple of years it has been able to fill most of that four-month period. We just don't want it to get any shorter, okay.

MS. BROUWER: There is also a spatial consideration here, because this doesn't reflect the split between the northern area and the folks that are fishing in Florida, but because of the seasonality of the fishery throughout the range there are differences in when fishermen can participate. That is another reason that the council would like to limit participation, is to give everybody a chance to participate in the fishery.

Otherwise, all the Florida folks catch most of the ACL and the South Carolina folks who have to wait a little bit longer until the weather is friendly enough for them to go out and fish don't get to participate as long as they would like.

DR. CROSSON: I think definitely make sure in the recommendation what John said about fishermen generally are in favor of limiting participation in a fishery in which they specialize. That is not unusual, so the council should take that into consideration as well.

DR. BELCHER: I am going to ask for a clarification, Myra, because if I understood you correctly, the idea of limited participation with the temporal aspect, how exactly is limiting participation going to control that north/south line?

MS. BROUWER: This is where I am going to ask Ben to help explain that.

DR. BELCHER: Because it would seem like if you limit your participants but they are all centralized to Florida, Florida is still going to catch the majority of the quota before the northern section would.

MR. HARTIG: That is an excellent point and the council is going to have to address that and regionalize this fishery in the next amendment. That is exactly what we are going to have to do if South Carolina and North Carolina are going to continue to participate. The effort shift has been in Florida. It is just being caught quicker and quicker, because more people are getting into the fishery in Florida.

MR. COLLIER: We haven't seen any golden tile longline fishermen since probably 2002 up in North Carolina, and it is mainly due to the season. That should be a consideration when they are trying to establish criteria for getting into the fishery.

DR. BELCHER: Any other comments to that? I think that would be the only thing that I would caution on if part of that is limiting is to deal with that transitional fishing. I am just not quite sure, unless they are going to balance that with some regional division, how that is going to achieve that goal.

DR. WHITEHEAD: This is not a question about tilefish. Mike is doing a good job taking notes, right? What are the rest of us supposed to do? I have been duplicating effort over here.

DR. BELCHER: Mike is capturing more of the group's recommendation. That is his responsibility is for anything that is coming forward that we are posing as a consensus statement or an overall recommendation from the SSC. The role of other folks around the table is just catching the dialogue and helping supplement. Mike is doing a good job, but just to make sure that those debates and discussions are captured around the table to help fill in those gaps of what the discussions were relative to that general statement.

MS. BROUWER: To add to that, the reason that I am taking notes, if you are confused as to why that is, is this is basically just to help me so I don't have to go back and listen to all the minutes when I go to write my council conclusions paragraph, but the official note-taker is Mike.

DR. CROSSON: Again, in terms of the timeline for this particular amendment, you said the SSC is not going to have another chance to look at this again or we are?

MS. BROUWER: It is not likely, depending on how far the council gets in December. I imagine they are going to spend a lot of time on 18A. Amendment 24 has a statutory deadline so they have to spend time o that so it may be that they don't even get to talk about 18B. But if we stick to the timeline, then they would approve it for submission at the March meeting and you guys wouldn't get a chance to see it again.

MR. CARMICHAEL: So I guess what we are hoping is the members who are assigned to this will go back through the recommendations and flesh out maybe the justifications and discussion a bit where necessary, and this is just a sort of core nugget of what it is you are agreeing to. In some of these things, because of the hearing stuff and the council wanting to report a bit quicker, they will at least have this recommendation to go forth and share while you are working on your report. Your normal couple of weeks to get it into the council, at least they will have the benefit of these brief recommendations for black sea bass and stuff that are coming up in the hearings next week.

DR. BELCHER: I know that is hard, too, because obviously, yes, it does say recommendation on it, but I think as long as we make sure to couch it as – some of these are generalized comments, I don't really know that the SSC is going to recommend anything relative to alternatives because that in the past has not been – all we can do is give some thought for folks to think on as they are making those choices. Okay, so anything else relative to the limited participation? Moving on to Action 2, establish initial eligibility requirements for golden tilefish hook-and-line endorsement; does anybody have any comments relative to that?

DR. WHITEHEAD: (Inaudible)

MS. BROUWER: That is what the council is considering doing, yes.

DR. WHITEHEAD: In any other industry this might be illegal under antitrust regulations.

DR. CROSSON: I'm sorry, still back on Action 2, when it says Subalternative 2A is preferred, who prefers this again, the council or the advisory panel?

MS. BROUWER: Okay, let me try to think. I think this was their previous preferred – 2A was the council's previous preferred. Then they decided not to have that as a preferred and to add these last two subalternatives. The advisory panel would like to see no action. It may be that this entire action goes away if they choose not to consider a hook-and-line endorsement. From what they decided to do in Action 1, it sounds like that might be what the council wants to do. It is confusing.

MR. CARMICHAEL: Interestingly, a very different entire approach than what is in black sea bass. Smaller years, best of three, and entirely different things, it is not like there is a very consistent approach for these endorsements.

Just pondering how often the SSC has been criticized on behalf of the council, well, you guys are not consistent, you have got a different steepness in red snapper and the Atlantic assessment than what has been approved in the Gulf assessment, and how can that be? I just wonder socio-economically, what do you guys think about this kind of stuff? I guess in general there is the general dissatisfaction I guess overall with endorsements, so people just sort of stand back and let the council work it out?

MS. BROUWER: Let me just give you a little bit more background, and this is relevant to what John just asked. A lot of these subalternatives were fleshed out by the Golden Tilefish LAP Workgroup, so at one point a group of folks got together and they considered establishing a Limited Access Privilege Program for the golden tilefish fishery. A lot of these recommendations with these particular years and all these caveats came from the fishermen themselves, so that is how those came to be.

DR. WHITEHEAD: I will add to that if separating quota by gear is a good idea and then separating quota by region has been suggested is a good idea, it is just a hop, skip and a jump to separating quota by fishermen to be a good idea; which would extend the season.

MR. CARMICHAEL: It is kind of like there is no real technical basis for this. There is really not a lot of science for the SSC to comment on when it comes to these types of endorsements, especially given the origin and what is being done with them. I don't know what you guys can say about them.

DR. LARKIN: Just to add to that, there is a note in the write-up that says there is no quantitative information on this, so I would just reiterate that it might be a good idea to have that before making some of these decisions, and I wouldn't discount the cost. I mean we don't oftentimes talk about the cost of implementing these new programs, but implementing any new program does come with costs and not think about the benefits versus the cost of that might be an issue.

MR. COLLIER: The other thing with that is we hope that it doesn't end up in another wreckfish situation where there is a lot of people that have coupons but are not using them anymore and nobody is really getting into the fishery with the exception of recently for wreckfish, but it hasn't

worked out great for that fishery. Trying to figure out how to make this one an improved version of it might be a strong consideration.

DR. LARKIN: That is a good point. We actually talked about this, I think it was Monday, and what the difference is between these fisheries. A big one is that it seemed like when the quota was established on wreckfish so many years ago, it wasn't in line with what the actual catch was. I think that is a really important point of difference between these two.

Now we are in a situation where we have to rethink what that quota is, and it is so drastic that it has implications for the catch share. It is not like a result of the catch share program not working or maybe part of it could be to blame because they are thin markets, and we think that if we put these programs into place everybody is going to trade.

But there are some real practicalities with people getting together and being able to trade. I think there was a comment made yesterday about providing information so people can find each other. That is really going to be critical and it is not going to work if it is all contingent on people trading. Sometimes we may have to provide the information so we know.

I mean it is a basic tenant of markets working is that people have information on past trades and use that to form their opinions. If there is no information on trading or even knowing who these people are, then the catch share program would never work.

MR. CARMICHAEL: We were talking about wreckfish the other day. I looked back at the rule that put in the quota program, the ITQ, and that problem shouldn't exist, because according to the rule all the shareholders should receive a list every year of who the current shareholders are and then anyone else can get that list by writing the regional office.

It was in the Register Notice. The list is supposed to be available, so I don't know if current shareholders get that and I don't know if anyone has actually tried to just write and request a list, but that was in the Amendment 5, that was in the final rule. It sounds like at least back then they thought about that idea that people who have shares that they are willing to let someone else use could be put in touch with others who are maybe really active and looking for something to get.

DR. BELCHER: Any other comments relative to Action 2? Okay, so moving on to Action 3, establish initial eligibility requirements for golden tilefish longline endorsement/ comments from the SSC on that.

DR. REICHERT: Myra, could you remind us why 2A was preferred, in particular the 2,000 pounds?

MS. BROUWER: I think this was what the Golden Tilefish LAP Workgroup preferred, because they figured that this pound is level of landings and between these two years would basically capture all the participants in the fishery and cap it at that level.

DR. REICHERT: Okay, but the participants between '06 and '08?

MS. BROUWER: Since then I guess that is why the council added here Subalternatives 2D and 2E to capture more recent participants. They also added a new alternative in September that looked at time series from '07 through 2010 as a qualifying period. Like I said, the analysis for that is underway right now, so I don't have any quantitative information on that.

DR. REICHERT: We really don't know what it will do until that analysis is done?

MR. HARTIG: If I may, the landings qualifier is really low from the tilefish workgroup, and the reason that was is they actually took into consideration two new fishermen who had gotten into the fishery during that timeframe and that low landing qualifier would allow those two to be included.

It has been a long time since this was discussed. We have been with MSA and all the things we had to do. Why we have older qualifiers is because this amendment has been around that long, and that is the reason. We are having problems now trying to incorporate new entrants into the fishery and that is the reasoning why we are looking at newer dates now.

MR. COLLIER: I think John Carmichael brought up a good point on setting these things up. Is there a decision tree on how to establish why you are doing these certain years, why the pounds are a certain entrants – we need to know the goals of the overall program in order to establish – and the council needs to know them as well in order to establish certain guidelines on how you are going to set it up, who is going to be in the fishery and who is going to be excluded. Having that setup makes it a lot easier to say, yes, this is an appropriate method to use or, no, it is not. That has really helped us with the ABCs.

DR. CROSSON: This is unrelated but it is one to have in the record for the council. You can look up – in answer to Sherry's earlier point, you can look up wreckfish permit holders, wreckfish certificate holder, on the Southeast Regional Office's Website. It is updated regularly with the names and addresses of the permit and quota holders. The information is out there so you don't need to probably ask the regional office to do that.

DR. BELCHER: Just for me keeping on track, these are all back to 2, right? These comments have all been relative to 2 or were we actually carrying them forward to 3? We kind of backtracked a little bit. Again, coming back to Action 3, I guess that is Action 3, so any further comments on Action 3? Then moving on to Action 4, establish an appeals process, any comments?

DR. REICHERT: One comment; it says black sea bass endorsement in the text there. That is probably a leftover from the copy and paste.

DR. BELCHER: Any specific comments? Okay, so moving on to Action 5, allocate commercial golden tilefish annual catch limit among gear groups; comments from the group.

MR. COLLIER: I think this is another one that needs the decision tree on how they are going to establish it. In past amendments they have done it different ways, and this one is looking at a

variety of different ways to establish allocations. Just a consistent method on how they are going to do it or reasons why they are going to do it would be helpful.

DR. REICHERT: Well, maybe, Myra, relative to that point, can you say why 4 was preferred? Was it based on prior catches?

MS. BROUWER: Yes, I believe that this is basically the distribution. It mirrors the distribution of the current catch and you have the breakdown in front of you.

DR. CROSSON: If for economic reasons it is not profitable for one gear group to go out, and you see that evidenced in the landings history, is the council going to want to reallocate some of those landings to the other gear group in the middle of a fishing year or the following fishing year? I mean, how are they going to be able to adjust?

Just because there is a historic pattern of this split does not mean that pattern is going to continue in the future, and so again it is a matter of the council tying itself to one distribution that may need to shift over time, especially considering these gear groups are divided between specialists, and I guess theoretically the other group is going to be the generalists that are going to pull up the occasional tilefish in the hook-and-line industry as part of some other fish group that they are targeting.

MR. CARMICHAEL: One thought here in this discussion of things like generalists and specialists and the advantage of generalists over time as things change is if there is some increase coming in this, it would be an opportunity the council could keep the existing longliners with what they have and then some; and if there is an increase in quota, it could allocate a bit more to encourage some more generalists, perhaps.

I don't know if there are people encountering tilefish now with hook and lines but don't bring them in for some reason or that might could in the future and would be kept from doing that. I don't think you would want to get into something where seeing the growth in the population, if there started to be an increase in the hook-and-line encounters, which the table showed maybe to some extent there was, that would to lead to, say, regulatory discards when you have got the opportunity for raising the quotas and allowing people to bring those fish in.

DR. BELCHER: Other comments? Okay, so moving on to Action 6, allow for transferability of golden tilefish endorsement; comments? John, did you want to restate your earlier comment relative to this?

DR. WHITEHEAD: Yes, the transferability of endorsements can only increase the economic efficiency of this amendment where economic efficiency can be measured by profits.

DR. BELCHER: Other comments? Action 7, adjusting the golden tilefish fishing year; any comments relative to this action item?

DR. CROSSON: If it is substituting for part of the market loss from the seasonal closure for the snapper grouper species, then I think it definitely would be preferable to keep the opening of the season at January 1.

MR. COLLIER: It has been stated a couple times that the current way it is set up right now is eliminating the northern sector from fishing for it, so that is another consideration.

DR. CROSSON: Yes, this is something the council may be forced to make a choice here because if they try and allocate some of the quota to the northern side of the council's jurisdiction at a time when other species are competing in the marketplace, that may lead to an overall decrease in the value of the fishery. It is a tradeoff to consider. Again, without economic data in front of me, I can't make a firm case for that.

DR. GRIMES: Yes, this business about them trying to engineer the fishery to allow people further north to harvest the stock, the reason that happens is because their habitat is pretty much restricted to the southern part of the distribution off of North Florida. They burrow in these carbonate muds and that is where you find that and not further north. It is an extreme case of social engineering here to try to jigger it so the guys in North and South Carolina can get down there and fish.

DR. BELCHER: Other comments? Moving on to Action 8, establish golden tilefish fishing limits; I guess this is more to the form of trip limits.

MR. CARMICHAEL: This is proposing the preferred is there would be – the trip limit would be removed when the quota is almost reached? So you could catch a thousand pounds after 75 percent of the ACL is taken?

MS. BROUWER: My understanding is that this was put in place to allow the hook-and-line sector to have a go at the fishery. That 300 pound gutted weight trip limit kicks in when 75 percent of the quota is met so that the hook-and-line sector can then participate. If that is not correct, I believe Gregg could clarify.

MR. WAUGH: That is correct; it was to try and slow down the harvest and to stretch that out. The intent was that the longlines would not direct a trip on the 300 pound trip limit, but that has since proven to not be the case. They are making directed trips for 300 pounds. The advice we have gotten from the National Marine Fisheries Service is that the current quota monitoring system isn't such that they can tell when we are at 75 percent of the quota to reduce this, so we blast by it before they can implement this reduction.

DR. JOHNSON: I just need a little clarification. It seems that when the 75 percent of the ACL is close, you are actually pushing your foot on the gas and not hitting a brake; is that correct? It looks like you are removing the trip limit allowing them to take more per trip.

MR. WAUGH: Well, there is another trip limit – do you recall what that is, Myra – that is in place and then the intent was when you got to 75 percent you would slow it down by going to

this 300. But again we have been advised that the National Marine Fisheries Service can't do this with the existing quota monitoring program. What is the trip limit, Myra, normally?

MS. BRAUWER: The existing trip limit is 4,000 pounds.

DR. JOHNSON: It seems to me under Alternative 2 you are removing the limit. It says removing the 300 pound trip limit; am I not understanding that right?

MR. WAUGH: That is correct, but if you look at this last year, the way the quota was tracked the National Marine Fisheries Service couldn't say when 75 percent of the quota was met and then reduce the trip limit. While, yes, we are taking it off the books, but in the real world right now this can't be applied. It is not changing what is happening in the real world.

DR. ERRIGO: I understand where the miscommunication is coming in. This exists now. When 75 percent of the quota is met, they are supposed to go to a 300 pound trip limit. This action removes that from existence.

MR. COLLIER: Recently the National Marine Fisheries Service has really pushed anybody with a snapper grouper permit to report electronically. Has that improved their overall ability to monitor quotas?

MR. WAUGH: Once they fully implement it, it will. We haven't seen any improvement thus far. We continue to exceed our commercial quotas. I don't know if anybody else has a better handle on that.

MR. COLLIER: Do we know how many people are in compliance with it now, and if they are not at 100 percent why they are not getting there or how this program is working? I know this isn't your –

MR. WAUGH: We would have to ask the Center to provide that. I know at our last council meeting we had a presentation on this, but I don't recall that there was information about what proportion of the snapper grouper permit holders are currently reporting electronically. There are a couple of measures in Snapper Grouper Amendment 18A that you all dealt with yesterday that could improve reporting.

DR. REICHERT: If you would have the information, the council would like to retain this action, is that correct? It hinges on the fact that we cannot tell – or there is not information to tell when the 75 percent is reached. If we would have that information, then the council would prefer to leave the 300 trip limit in place?

MR. WAUGH: Ben is here; he can better address that.

MR. HARTIG: No, not really, because once you separate out the two gears, you don't have the need for the step down and that 300 pound trip limit becomes moot. The longline fishery can catch their fish, the hook-and-line fishery can catch theirs. This group does need to comment on

the way that the data is being collected in that we can't control the overages in the tilefish fishery.

We had a 25 percent 300 pound that went over, but we went over an additional 30 percent, so before they could close the fishery in tilefish it was 56 percent over in tilefish, essentially. That is alarming to me and it is getting worse instead of better. With the new ACLs in place, it is only going to get worse over time.

DR. BELCHER: I think that problem exists in all of them. I mean, black sea bass alone kind of gives us that indication, doesn't it? The point is that if you can't get that control with the commercial fishery, to me that is kind of alarming that the commercial fishery can't be controlled better.

You see it with HMS species as well, the overages on HMS, and they are pretty ratcheted as far as their control as well. I guess to Eric's point, how do you brake it then? I mean, if you are going to take it off and not have a trip limit, okay so you hit 75 percent as an estimate, then what?

MR. CARMICHAEL: The point was they don't even know when they are hitting 75 percent. It is happening so fast or the monitoring is not that good, and I think as Ben said, when Chip brought up the point of the electronic monitoring, it would seem like from the discussions we have had around this table, the SSC supports mechanisms, as the word was used yesterday, that monitor these fisheries adequately to make sure that you stay within your ACLs.

In terms of what those mechanisms are, there are a lot of things that are underway. There are electronic reporting things that are underway; there are a lot of things that are on the table that seem to be lagging at the implementation stage. As Ben mentioned, tilefish, with this, and then all these other stocks that we have recommended ABCs on that are going to have ACL management, there is going to be a lot more stocks next year.

MR. WAUGH: The solution is really simple. All the dealers have permits, all the fishermen have permits. They need to be reporting electronically. It is simple. We can't get it implemented. The bothersome part – and we have been told that the Center is in the process of getting there. The problem we face is we are headed in the opposite direction.

We are going to do public hearings next week and we have to explain to the fishermen that because you went over, because the reporting system isn't adequate to track your landings, that what the council is proposing to do now is take away – make you pay back your overage plus take away any increase from the stock rebuilding because we can't track your landings. That is a tough, tough sell to the public.

DR. GRIMES: I guess somewhat in defense of my former employer, the Southeast Fisheries Science Center, I think it is actually a region that probably has this responsibility. Is it a regional office who tracks this, so it is not the Science Center?

SSC MEMBER: The Science Center collects the data.

DR. BELCHER: It just seems so counter – again, we are all sitting here saying the same thing – it is counterintuitive to what the ACL is for. It is like, well, we can't monitor it so it is just kind of is going to let happen what happens and then we will adjust at the end, which is self-defeating for the whole purpose of coming up with that and that whole adjustment. We can't guarantee anything relative to where we are setting the ABC; we could still go over ABC at that point.

DR. BARBIERI: To supplement that comment, what would be the benefit? What is the intent of the council to remove this action? What would be the perceived benefit by having it removed that would improve the current process that is in place?

MS. BROUWER: I think the purpose of removing it is because they are considering, as Gregg said, the two individual sectors, the hook and line and the longline, so therefore is no longer needed, and on top of that it is not really working. It is a little bit counterintuitive that we are actually having an action to take something away.

Gregg likes to say when we increase or decrease a size limit, we don't have to have an action to take away the old one in order for the new one to be implemented. This is sort of like that. It is one of those things where it has been in the books but it is just not working and now if we are considering a hook-and-line sector, then it is not going to be applicable anymore.

MR. CARMICHAEL: But if we look ahead, the next three actions are all tangled up together, because Action 10, the preferred is not to establish a trip limit for fishermen who receive a golden tilefish hook-and-line endorsement. The other point is that it would seem, which again goes back to black sea bass and the issue that John Boreman raised about ACTs and ACLs and having a mechanism to do them, we are projecting things based on ACL, and it sounds like given that the management system has proven that it cannot, there is a great management uncertainty.

And the Act says ACL decremented to ACT to account for that management uncertainty. As the committee noted with black sea bass, from what we have heard, the same problem happens in golden tilefish where actions are tied to the ACL and ACT is not being used and we are running with this – in golden tilefish, what, 25 to 50 percent management uncertainty, and reaching this quota, and it is not being accounted for.

There is an important part of this checks and balances system that seems to have been glossed over by the council. I know that we struggle here at this table about mixing the science and the management, but I think in terms of commenting on whether or not technically is the system working, it seems like it is not as we have acknowledged in what we have heard loud and clear.

All these overages are showing it is not working. Here you have another one when you reach ACL, when we project you are going to reach ACL, we shut down. Well, logic would tell you, if you tend to go 50 percent over or 25 percent over, then you should shut down when you project to reach 75 percent.

Frankly, they are having trouble even predicting when they reach 75 percent. It sounds like there are systems in place in other regions where they use like step-down trip limits, they use pauses, catch up on your data, see if you can get the thing going. There are a lot of other ways that don't

result in the fishermen ending up having to take these next year hits, the double jeopardy as the AP recognized.

I guess maybe we will start getting to some of these places as these problems get worse and worse, but it seems unfortunate that at least around this table people recognize them as a problem. It just doesn't seem to be that anything is changing in these actions and there is nothing in this amendment about going to ACTs and dealing with that management uncertainty. There is no evaluation of this management uncertainty, and yet we have heard from the fishermen, from the council members and everybody that it is huge, this management uncertainty. It seems like there is a problem there that we are not addressing this.

DR. BARBIERI: John, I think that tells us an excellent point, because what might be happening here based on what Ben had mentioned about how long this amendment has been in development and on the table, is that we are going through this transition phase between what used to be the old system to the new system, which has to be responsive to the ABC or the ACL management system.

This is a good opportunity and perhaps the group should make a statement to that effect that this is a good opportunity for the council to look holistically at how it is trying to address this new management system that better aligns with the recommendations that are coming out of the SSC and is more responsive to those measures.

I think this is the time, before something like this goes to final approval, will be for them to evaluate all of this. John Boreman yesterday made an excellent comment about the ACTs and how that could be used by the council to have better controls on what is going on and a system that is more rational than what is in place right now.

My recommendation would be basically to voice what John just said in terms of recommending the council look at these things, look at how integrative the ABC, ACL and ACT system should be looked at, not as just necessarily separate steps. It needs to be looked in this more integrative way and take advantage of the whole set of tools that you can use to improve the current system.

DR. BELCHER: I keep coming back to the whole idea that this is predominantly a commercial fishery and yet we can't get a handle on controlling that catch. It is amazing that – I mean to me I guess and that is the whole idea is what is the brake then? I mean do we just not brake it at all? It is just going to basically roll up on itself and you penalize the folks for that. I mean, it is kind of – again it is defeating the whole purpose of the system that we have been working on for two and a half years of setting these ABC, ACL limits. Anne.

MS. LANGE: Never mind, I just want to make sure that it wasn't left that it should be integrated. It is the issue of integrating it with a current data monitoring or landings monitoring system. The management system is what it is. The regulations or the law is that you have your ACLs, but it is a matter of accommodating the current data collection programs in our recommendations for things like the ACT. I just sort of stumbled on that, sorry.

DR. BUCKEL: Someone brought up this point yesterday, and I don't know if it needs to be made explicit here, but the ACT can be thought of as pause, as John said, and you have that pause, you reevaluate and if you haven't met the ACL, then you can open it up for another month or two to catch that. The council knows that by going to an ACT, that doesn't mean that you can't catch the ACL, I guess.

DR. BELCHER: Yes, but the thing that I think is even more disconcerting is that if you use – technically the 75 percent of the ACL is an ACT and they are telling you it won't work. That is where it is like you do not even have that ability at that point to put a check in there because it is not working at 75 percent, which is why they are taking it off the table.

They can't be certain that they have hit 75 percent; there is no other target we could set that they would be anymore certain about. Again, it comes back to what we were just saying, it is all relative to that ability to get real-time data. They said if you can't get real-time data through dealers when the fishery is 90 percent commercial, like I said, it puts you back on your heels because it is like, wow, if we can't get it with census data, how are you ever going to hit it with MRFSS/MRIP data?

Ideally in a perfect world that 300 pound step-down should work. If the system is doing its job, we already have that in play, but now we are completely taking the target off the table. There is no target. The ACL is pretty much the target; and if we are going over the ACT, we are definitely going over the ACL.

MR. CARMICHAEL: This isn't new. I was just looking at North Carolina's rules on flounder, because I know they deal with this, and the state closes when 80 percent is projected to be met, and it says they will reopen if there are any left. If a state can do that, certainly it seems the Regional Office can handle something like that.

Summer flounders are jointly state and federal managed species, but it has got state-by-state shares, and we have seen the same thing in black sea bass. We have talked a lot about regionalization, absorbing schemes to try and come up with and make sure you get two fishermen in one area and two fishermen in another area, different endorsements and stuff, the shifting of effort in golden tile, all those points to breaking some of this up regionally.

Maybe we will have an amendment for that someday, but there are means there to do this kind of stuff. You have just got to get serious I guess about doing it. Anything the SSC can say about monitoring this stuff and getting the mechanisms in place, short of saying yes, and put everybody on the electronic monitoring.

Beyond that, I guess it is kind of in their hands, but I think if the SSC comes out and makes it clear that these problems – the first two amendments we have dealt with and they are ripe with these problems, that something has got to change. We are not crossing management boundaries to tell them they have got to do a better job on collecting the data and keeping up with these limits.

DR. BELCHER: Other comments? Does everybody feel that what Myra has up, and obviously we are looking at two versions, but Mike's recommendation capture section and Myra's comments are reflective of the concerns that we have on this? Okay, so ready to move on to the next one.

DR. BOREMAN: It is one thing to say that it is disconcerting about the monitoring system, but do we have any more active type of recommendation, like recommend that they do an evaluation of their monitoring system to determine why they can't even track at 75 percent.

DR. BARBIERI: I don't know, John, this for a fact, but I think that for fisheries where they have implemented an IFQ program, there is mandatory electronic reporting, because they have to keep track of that quota very closely. In that case it seems to work well and they actually keep tabs of what is going on.

I think it is in these other fisheries that haven't made that far, and I don't know about the council's ability to weigh in and actual request for some of this licensing and endorsements, you might need to require electronic reporting as the only way to keep track of what is going on; is that the case?

DR. CROSSON: Well, actually I was going to say if you have an ITQ or catch share system, individual fishermen could be held accountable for their overages, and usually there is some sort of system for penalizing a fisherman that goes over the amount of quota share that he has been allocated, and usually it is a graduated penalty.

If you go over 10 percent, then you lose 20 percent of your quota for the following year or something like that. Virginia does this for its striped bass catch share program and they don't do any electronic reporting for that. It is just if a fisherman goes over, he knows what the penalties are going to be and the whole system can just sort of take care of itself.

Under this condition where you don't have individual vessel allocations where everybody – it is a competing system. It is a collective action problem basically; so without fishermen being able to individually held accountable, then you do need to have something very accurate so you can shut down the fishery.

DR. BOREMAN: Yes, that is all fine and good, but we are not talking about ITQs here. We are talking about a system that is broken. What is happening is because the system is not working the fishermen are being denied the ability to catch fish. We have to be extra cautious, we, the council has to be extra cautious here. It is the council that is suffering because of this inability of the monitoring system to track landings.

Maybe we can recommend that the council chair write a letter to the agency or something like that saying we would like an evaluation and determination maybe of ways that this system can be approved so we are no longer keeping fish in the water that we could be catching because the system is broken.

MR. WAUGH: There is an alternative in Snapper Grouper Amendment 18A that would address this issue and you may want to come back and look at that. Under that alternative, the council could select as their preferred to implement the ACCSP reporting requirements. That would require 100 percent electronic dealer reporting. That is an alternative. If the council selects that as their preferred – and it is currently not their preferred – if they were to select it as a preferred and the agency was to approve that amendment, then they would have to do it.

MR. COLLIER: I can't remember the ACCSP requirements, but if it is to get your landings done within a two-week period, and then it takes another two weeks to shut down a fishery, you could potentially be a month late on and that could explain some of the overages as well. Do you know the requirements within that, Gregg?

MR. WAUGH: I think we have got it in 18A, but there are two sets, the regular normal reporting, but then the quota monitoring program I believe can be up to daily. I think the requirement can be that those reports come in daily. I know the system for North Carolina and north for summer flounder; my understanding is that those reports go in daily. You can daily get a report generated electronically by the system and sent out to people who have clearance to see that data to let you know daily where the quota is.

DR. BELCHER: Other comments? I guess moving on unless you want to look at the language that Gregg recommended. I don't know if you would find that helpful or not helpful. If folks just want to continue on the course, we will just continue to the next action item. Okay, next action item, which is Item Number 9, establish trip limits for fishermen who do not receive a golden tilefish hook-and-line endorsement. Comments, recommendations?

MR. COLLIER: I have a question on Comment 1 where it says we don't even limit it to other federal snapper grouper permit holders. If they can't sell the fish, that is technically not a commercial trip, right? If their intent when they went out to catch it was not to sell it, are they commercial or recreational?

MS. BROUWER: I don't know; I am going to ask Gregg to try that one.

MR. WAUGH: Chip, what you are saying is in order to sell snapper grouper you have to have the federal snapper grouper permit and so we would be limiting it to them? I am not quite sure what your question is.

MR. COLLIER: Well, you do have to have to have a – to sell snapper grouper you have to have a snapper grouper permit, so the statement that it is not limited to federal, I am confused by that. In North Carolina the way we define a commercial fisherman is the intent to sell your catch.

MR. WAUGH: I think Chip is right. We put this together for our council to look at in September. I think Chip is right. In fact in order to exceed the bag limit for tilefish you would – and if you were intending to sell the catch, you would have to have a snapper grouper permit. But other commercial fishermen could retain them; they just couldn't sell them. Now whether they would do that or not, I guess it would be better than throwing them back dead.

MR. CARMICHAEL: They couldn't retain more than the bag limit, right? Don't you have to have the snapper grouper permit to retain more than the bag limit of any snapper grouper species?

MR. WAUGH: That is correct, yes..

MR. CARMICHAEL: I am just confused, Myra, because these sort of follow what you do on here depends on what you do on like 1, because in 1 their preferred is only an endorsement for longline, and then initial eligibility for tilefish in Action 2 is preferred; do not establish initial eligibility for tilefish hook and line. It sounds like the preferred is there wouldn't even be a hook-and-line endorsement.

MS. BROUWER: Exactly, and that is why I prefaced this whole discussion by saying that the council hasn't really had a chance to flesh this out. They only got through Actions 1, 2, and 3 at the September meeting. It is likely that some of these other actions are no longer going to be included in the amendment.

DR. BELCHER: Then under what Chip was saying, this poundage wouldn't make any sense because they would be held to the recreational limit, right?

MR. CARMICHAEL: It sounds like there are a lot of technical things the council needs to work out. If you get into a hook and line and a longline allocation, if you don't deal with the hook-and-line endorsement than any active snapper grouper fisherman could go after that share of golden tilefish that is being given to hook-and-line guys.

That is what they need to decide if there is intent. Is that their intent; because if it isn't their intent, then they have got to do the other stuff, they have got to do the endorsement and they have got to figure out trip limits and all that stuff if they so choose.

MR. COLLIER: One thing that might help us with each one of these actions is actually have the goal of the action, why it is being done. Then we can evaluate if it is truly meeting those actions and if the science is being used in the correct way.

DR. REICHERT: I agree with that; because unless I am the only one, I am feeling that we are spinning our wheels because we don't really know what the data is behind it nor do we have analyses. Also, as Myra just said, a lot of this has not been discussed at length in the council. I realize that this is the last time we see it, so we are kind of in this Catch-22.

MR. CARMICHAEL: How do you feel about that?

DR. REICHERT: Like spinning our wheels.

DR. BELCHER: I think that was disappointing about the agenda as a whole. We had about three or four items that this is our first and last view. When I did the assignments, that was the dilemma I hit with everybody. In the past what I have done is when we get ready to finish up an amendment, I put everybody's eyes on it to make sure that the group as a whole is happy with it.

Basically you guys would have had everything on the agenda as items, because of the number of things that this is first and last view, which to me that bothered me quite a bit.

DR. CROSSON: What is the mortality rate for tilefish that are pulled up from the bottom? I mean if you released them, do they –

DR. GRIMES: They are pretty much all toast. Their gas bladder and everything expands in that last 33 feet doubling of the gas volume.

DR. CROSSON: Then the council should consider that given how often they are caught again. I don't have the data in front of me, but hopefully the council will have that in there and it will be something to consider.

MR. CARMICHAEL: The Data Workshop recommended a discard mortality rate of tilefish of 100 percent from the SEDAR report. Overall bycatch and discards are low, so it is good they are not discarding a large number of fish, but the mortality is pretty high.

DR. BELCHER: That is under the current fishery, and what are these limits going to cause relative to –

DR. CROSSON: Right, that is my point, if that is a 100 percent fishing mortality rate for discards, I would then recommend that the council seriously consider allowing some bycatch of tilefish for snapper grouper fishermen who may otherwise encounter them; just because I hate to see dead fish floating away from the boat, as do the fishermen.

MR. CARMICHAEL: Especially if there is given a really good year class that might occur occasionally and they might spread out some and people might otherwise encounter them, then you might consider seeing an increase in that hook-and-line encounter rate that you have seen in the last couple years.

DR. REICHERT: I was asking Ben, so I have missed the last couple of minutes of the discussion,, but it is my understanding that the tilefish are pretty much tilefish trips in terms of the bycatch. I am not sure if you guys just mentioned that.

DR. CROSSON: Yes, but for the ones that are not we need to make sure – well, the council should consider that if they are occasionally pulled up by other fishermen and there is a 100 percent mortality rate, then there should be some bycatch allowance for fishermen that don't receive endorsements, which would be hook and line, and I don't know how small that number would be. If it fits under the bag limit, then that is fine, but it is just something to consider. Obviously, the fishermen, what is the bag limit, two, did you say? Yes, so the fisherman who pulls up more than two, then maybe he should move his hooks someplace else.

DR. BELCHER: Additional comments? Before we move on to Action 10, just so everybody has time to reset, let's take a ten-minute break.

DR. BELCHER: Okay, so Action Item 10, unless folks have any other further comments relative to the trip limit. Okay, Action 10, establish trip limits for fishermen who receive a golden tilefish hook-and-line endorsement. Further comments?

DR. CROSSON: I guess this is echoing what we stated yesterday. The council is considering trip limits for any fishery; to a large part the profitability of that fishery is dependent on the price of fuel and the price of the species that is being sold. Don't assume that those current conditions are going to maintain themselves in the future.

Given economic instability, it is very likely that the price of fuel may jump up, you don't know. The council really should consider that very carefully because if conditions were to change suddenly, then you would have an entire fleet that would be unable to go out and make a profitable trip.

DR. WHITEHEAD: In general, trip limits give an incentive to increase effort in improper ways, so people who are constrained on the number of fish to catch on one trip will just try to go back out.

DR. BELCHER: Additional comments? Okay, so Action 11 is update the MSA parameters. On Page 17 of your briefing book, basically it is planning to pull the numbers from SEDAR 25. We all supported that; so unless anybody has any other comments they would like to add to that, we can kind of check it and move forward. Action 12, revise annual catch limit and optimum yield for golden tilefish.

MR. CARMICHAEL: Just to clarify this a little bit on the language, there is an ACL in place now for golden tilefish. I asked Myra to figure out what it is, whether it equals OY equals ABC or is it one of the percentages. I don't recall. But given that, does anybody on the SSC have an opinion of what it should be or a recommendation or points to ponder?

DR. BARBIERI: Well, given the management uncertainty that we have been discussing for the last hour, hour and a half that is associated with this fishery, I would strongly recommend that the council consider setting an ACL not equal to ABC for golden tilefish, and that it set their buffer between ABC and ACL proportional to the amount of management uncertainty that has been identified for this fishery.

DR. CROSSON: I probably have this somewhere in the document, but the previous few years when the fishery has been getting closed relatively early, were there overages in those years; and if so, do we know by what margin the overages were occurring? I was just thinking like what we do with John's suggestion with black sea bass yesterday, that that was useful information that the council could consider.

Then, of course, there are so many changes in this that are being added into it that you would think that the buffer would need to be even larger to account for problems with monitoring and problems with the fact that we are changing so many conditions under which fishermen would be able to fish that it would again going to be very difficult to use past behavior to predict future fishing behavior.

DR. BARBIERI: I wonder if it would be instructive for the council to get some recommendations from the socio-economic members of the committee regarding the costs that could be associated with overfishing, with them actually putting the stock in the situation where AMs will kick in, so they can have an idea, like a better evaluation of the consequences of actually not managing this fishery in a more proactive way.

MR. CARMICHAEL: I thought this was on the website, and it is, the history of quota management is on the SERO Website, South Atlantic Snapper Grouper. Now back in 2009 it was 100.5 percent; 2008, 98 percent; 100 percent, 0.41 in '07. They have done a pretty good job of keeping it within that in golden tilefish in the past.

In 2010 it says it was 113 percent, so still under 25 percent at least. Now I guess part of the problems is that in 2010 it closed pretty fast. They were caught quickly. It was open January, February, and March. I guess that is probably part of the problem with, say, in 2011, knowing when they got to the 75 percent, as it sounds like the catch rates have gone up and they are catching them pretty quick, well, not surprising that is what the assessment has shown.

By comparison, say, in 2009 when they landed right at 100 percent, it was open until August and there was a little bit in December. In earlier years it has gone on. It has just I guess started in 2010 where it happened pretty hard and fast.

DR. CROSSON: Well, according to what Gregg just gave me, for 2011 it was 128 percent. The numbers are going up significantly, so that indicates a – I forget what the ratio that John was proposing yesterday but you would expect to drop it down, drop the ACL significantly below the ABC, in the 10's of percents in order to account for that. Again, considering you have to add in the predictions about future fishing behavior when you are changing this many variables at once are probably going to be a significant margin of error there.

DR. BELCHER: I kind of want to ask a point of clarification from the group, because this is something that has perplexed me with going to the council meeting. When you look at the alternatives and we have ACL as equal to OY which is equal to ABC, our ABC is based on a P-star approach.

But yet when we look at the table, OY is calculated at yield at FOY where FOY is defined as 65 percent, 75 percent, and 85 percent of FMSY. I am kind of missing how OY is following into this equality of ABC, ACL. I am curious from the group; am I missing something? I mean this is something that to me when they talk about this, OY to me is coming from a different calculation and I am not bridging where that equality is coming from.

MS. BROUWER: I know the answer. I think this may be a leftover from the Comprehensive ACL where we were dealing with unassessed species and the council had to set a level for OY; and so they chose to set it at the same level as the ACL to make sure that landings would not be going above the OY. This is probably inappropriate for species that have a stock assessment, and it should be worded differently.

DR. CADRIN: Yes, the first draft of National Standard 1 Guidelines attempted to tie in OY with the annual catch target, but that was removed; because if you look at the Act, optimum yield is defined as maximum sustainable yield reduced by certain factors. Maximum sustainable yield is a long-term concept.

For any given stock condition, MSY may be irrelevant unless you are above the stock size that produces MSY. It may be that OY is a long-term concept that for any given year, it is academic to talk about OY. In the National Standard 1 Guidelines they could not tie in any of the OFL, ABC, ACL, and ACT to OY.

Similar to the way our OFL is not directly related to MSY; it is based on FMSY but the stock size is a transient condition. MSY is a long-term concept; OFL is a short-term concept. I agree that it is a bit of a mismatch to try to tie in the ABC, the ACL to OY. I think most of the rest of the country is having problems doing that and having that same confusion that you are having.

DR. WHITEHEAD: In response to Luiz's suggestion about the SEP, I think we are like the SSC we are not supposed to do the analysis but review the analysis. In this case and I think black sea bass as well the numbers were not before us.

MR. CARMICHAEL: Myra, I think getting to what Steve mentioned is the council needs to understand that OY is long-term equilibrium type stuff, it is not the short-term transient things that ABC and OFL recommend, so saying OY equals ABC is a bit of a problem.

DR. BELCHER: Well, again, just because you are pulling it out of that table, if we provide the numbers that are in that table, there is going to be a mismatch. OY is probably not going to be equivalent to ABC.

MR. CARMICHAEL: Right, and the point is that OY should not be set equal to ABC.

DR. BOREMAN: Yes, on both texts there I would say that uncertainty be management uncertainty because ABC already accounts for scientific uncertainty.

DR. CADRIN: Yes, I don't know if it belongs in this action or the next one, but accountability is for exceeding the ACL, which in some systems supports Alternative 2, that you want to have accountability for exceeding the ABC. That is the OFL with scientific uncertainty. If the ACL is then lower than the ABC and the fishery exceeds the Alternative 4 ACL, there would then be accountability for that.

To me, either in this action or the accountability action in the next one, it needs to be clarified whether accountability is for exceeding ABC or exceeding ACL. In the guidelines it is for exceeding ACL, which would support Alternative 2, is that there should only be accountability for exceeding the ABC, not for exceeding some buffered ABC. As we talked about yesterday, I think John had mentioned it, if you want to take into account management uncertainty, it would be an annual catch target that is below the ABC rather than an ACL that is below the ABC.

MS. LANGE: Well, that is an option. The initial intent was that the ACL would account for the management uncertainty. That went back and forth on whether or not to include the targets or not. The ACL is the primary.

DR. CADRIN: But the detail is that if you have implementation such as trip limits kicking in when 75 percent is reached, that should be done on the target. If there is a target that is 80 percent of ABC, that target is what should be used for triggering things like trip limits, and so that the target is not just a paper number. It actually has meaning to it, that if it is approached there are reactions to that so that the ACL is not exceeded.

MR. CARMICHAEL: The breakdown is at the point that causes action that keeps you from going over the limit; and the point that causes you consequences; they are both being set at the exact same point. Setting ACL as equal to ABC, as Steve said, could be fine as long as you have the mechanism, as John mentioned, that keeps you from getting there year after year. So really ACL and ACT have to be linked as part of the system just as we have dealt with at the SSC where OFL and ABC have to be linked and have a relation to each other.

DR. BARBIERI: Steve, that was part of my comment earlier regarding this, so as we look integratively about the ABC – I mean, your OFL, ABC, ACL and ACT as a whole system and it needs to be looked at holistically because there are those interrelationships there. And you are right, unless you associate triggers of actions that are associated with the ACTs, it is really meaningless. What John was mentioning yesterday, John Boreman, about ACT and Mid-Atlantic is they have associated those triggers and the system is responding positively to that. Something else that we should I think recommend to the council.

DR. BELCHER: Back in line with what we were talking about a little while ago, then Alternative 2 for this particular fishery wouldn't be a good thing because they can't guarantee that they can even tell you when they are at 75 percent of the catch.

DR. CADRIN: That I completely support is that it seems like there is a great deal of management uncertainty here, and I think that was Scott's first point. How that is implemented I think is what – there are many different flavors of how to implement that. I think a strict reading of the guidelines is that should go into an annual catch target with associated triggers, not an ACL, but is really just how it is packaged. I agree with the first point is that monitoring the fishery has major problems.

MR. WAUGH: I think the council understands this particularly with respect to the ACT on the recreational side and the public as well because we have explained to them the formula using the PSE accounts for the variability in the recreational catch. As that varies on the up end, you do not want it going above your recreational ACL. Where we are falling down is getting the realization that then you have to adjust your management measures to achieve that target. That is where the rub is on the recreational side.

On the commercial side they talked about setting an ACT lower, but the council's feeling is that the requirements are in place such as it should be able to be tracked so that you don't need to penalize the fishermen by lowering it. From my perspective so I get in trouble with both sides,

you have got a lack of accountability on the council's side for setting the appropriate bag limit for management to achieve the target, and you have got a lack of accountability on the agency side from tracking the quota.

MR. HARTIG: The real problem we have had in the commercial fisheries is that there isn't any flexibility if you keep the fishery lower than catch to allow more catch in the ACL for the next year. That is the problem. The council is caught trying to allow the commercial fishery to catch as much as close to the ACL as they can, preferably without going over, but if they go over then they get penalized.

They had extra catch but they wouldn't be able to do it. If the system is going to work, there has to be some flexibility for the commercial fisheries to be able to stay below their ACL and then have that added to the next year with some kind of way to look at it. Is the stock going up, going down, you have to look at those things, but for one year it probably doesn't make that much difference. That is the problem that I see.

DR. BELCHER: Other comments? Okay, ready to move on? Action 13 is specifying a commercial sector ACT. We have kind of already commented on this, I think. I think we can refer back in the same thing relative to 14 as well for specifying the recreational. Does anybody have anything specific they would like to add? Like I said, we can just pretty much rest on what we have already recommended I think or suggested with this. Action 15.

MR. COLLIER: Actually, I have a comment for 14. I was looking at the recreational landings for the South Atlantic and we are 488 percent over, and that was just caught in one month. I don't know, the recreational quota is 1,578, and how that translates in MRIP intercepts and different things like that, that is really questionable. Is it three fish that have ended up being 7,500 pounds, somewhere around there, 7,700 pounds? That is something to be considered with the recreational numbers.

MS. BROUWER: The recreational quota is actually numbers of fish and not pounds.

MR. COLLIER: Either way.

MS. BROUWER: Yes, either way, and also keep in mind that the PSEs for such a small number are going to be really big, and the council's current preferred or at least what they have picked in other amendments is to include the PSE in the calculation of the ACT.

DR. BELCHER: Additional comments? Okay, so Action 15, again revise accountability measures for golden tilefish. Folk's thoughts on that; any comment to the double jeopardy aspect that the fishermen have discussed?

MS. BROUWER: Up on the screen are the current AMs, so currently the council would use this three-year running average to compare the landings to the ACL. That is one thing that they have wanted to revisit because it doesn't seem the best way to do things. What they chose to do with the Comprehensive ACL Amendment is to just look at annual landings and compare that to the ACL. That is one of the things they would like to change.

MR. CARMICHAEL: A comment on the wording, Myra, because in this like Alternative 1 there it uses the word quotas, and I guess as we get into ACLs and ACTs it is not clear what quota means. It should either be defined as quota equals something and that we should use when the ACL or ACT or whatever it ultimately ends up being, just to keep it straight.

MR. COLLIER: Looking at the landings data, typically after the season has ended there are still landings that are being reported. When it says that there is no possession and retention, how are those being reported and where are they coming in? Also, some of the wording there is when the quota is projected to be met. Usually it is always projected to be met at some point and that is why we put either a season on it or something like that, so just rewording that a little bit might be helpful. I am not certain how to do it.

MS. BROUWER: Well, this is what is currently in the regulations. Yes, I agree, though.

DR. BELCHER: With some of the language here, where it says it is being proposed in the Comprehensive ACL, the Comprehensive ACL has been adopted, correct?

MS. BROUWER: No, it is in the process of being submitted to the secretary.

DR. BELCHER: But relative to those alternatives that are there on Page 19 of the roadmap, what are the preferreds because I don't see the preferreds?

MS. BROUWER: The preferreds in the Comprehensive ACL are to not specify an in-season AM, so that would be Subalternative 3A; and for post-season 4D, monitor the following year or shorten the season as necessary; and if the ACL is exceeded, then landings would be monitored in season. For persistence in increased landings, the RA would publish a notice to reduce the length of the fishing season as necessary.

DR. BELCHER: What about relative to where it says adopt new commercial AMs and new recreational AMs?

MS. BROUWER: Right, so this an action that the council would have to approve for inclusion in the amendment; and then if they just don't want to adopt any new AMs, then they would choose Alternatives 2 and 3 as their preferred and not even look at any other alternatives.

DR. BELCHER: Then to the next point of the commercial and recreational AMs being proposed in the Comprehensive ACL as follows, that is Alternative 2 with the subalternatives; which of those is preferred?

MS. BROUWER: 2B.

DR. BELCHER: Comments from folks?

MR. CARMICHAEL: I think everyone has kind of said what can be said about this. There needs to be an overall comprehensive program and taking these things bit by bit doesn't really accomplish anything. We need to have sort of a system that achieves the goals of the plan.

DR. CADRIN: Yes, I guess I would build on that and that has been said several times. I entirely support it, and really what we need is what John mentioned yesterday is a management strategy evaluation that has all of these mechanisms in it; the overfishing definition, the scientific uncertainty, the ACL and accountability measures, the trip limits all in it to see how it all performs together, because they all interact with each other.

I agree that it needs to be considered as a whole, but it also needs to be quantitatively evaluated as a whole. That is a lot of work. I think for all of these they eventually need to be done if we are to really inform these recommendations. I think we can give general qualitative recommendations, but until we have those evaluations it is difficult to know how these all interact.

DR. BELCHER: Does anyone else want to add to that? That was the last recommendation so any overall comments? This is generally that catchall that we have provided with a lot of others and that is are there any general comments?.

MS. BROUWER: Also, if you care to comment on the motions that the Snapper Grouper AP has offered, those are up on your screen.

DR. CROSSON: What is the current split between sectors?

MS. BROUWER: Yes, let me quickly pull up that table. That table shows the percent landed by the two different gears by year.

DR. CROSSON: No, the AP recommendation was – I am sorry, did I misread it? I thought it was a commercial/recreational sector split, that they were proposing reallocating at 90/10, I was wondering what is it currently?

MS. BROUWER: Yes, you're correct.

DR. CROSSON: What is the sector allocation currently between recreational and commercial?

MS. BROUWER: 97 and 3; 97 commercial and 3 percent recreational.

MR. COLLIER: Current allocation went through a typical process of allocating it through a defined time period and things that were – when they were doing these or –

MS. BROUWER: You know, I can't recall. This was done I think in Amendment 17B, so by then the council had already adopted their Boyles' Law. They look at 50 percent of the allocation using catch history from 1986 through 2008 average landings and then the other 50 percent 2006 through 2008. Gregg can correct me if I am wrong; I think that is how that allocation was arrived at.

DR. BELCHER: I kind of think the hard part with at least making comments to the motions, those two bottom motions, for us I don't know that we can necessarily – I mean, say you are going to raise the ACL based on the latest assessment; I can't say what ACL looked like

previously to now off the top of my head, but there is no guarantee it is going to go up just because of the assessment.

In theory it could go down depending on what the stock looked like. Then the increase for the ACL by 100,000 pounds based on the latest assessment, we still have got the problem where reporting that whole accountability thing for the management uncertainty is high enough that I don't know that you could recommend that either.

DR. BOREMAN: Yes, I had similar comments. In terms of raising the ACL, if they want to set the ACL equal to the ABC, then the ACL will depend on the stock biomass. It is an F-based calculation. Just arbitrarily raising the ACL means it is not linked to their recommendations from the SSC. They are delinking it. Increasing the ACL again by 100,000 pounds based on the latest assessment, it is the same comment. They need to adjust the ACL according to the recommended fishing mortality rate.

MR. HARTIG: Yes, John, I think of the context of what they saw out of the assessment when it came out at 634,000 pounds that is looking at MSY; I mean, basically they took a more proactive approach by looking at it not allowing that entire – I mean it is going to come out a different number but they are just looking at basically at 634,000 pounds.

They are looking at just increase it 100,000 being proactive and not knowing the uncertainty in the assessment, not knowing what is going to happen, and not taking the entire jump to 634,000. Basically I think they understand that it is going to be calculated, but if it did come out that much higher, that they would rather see it progress at a slower rate, any increases.

DR. BELCHER: But part of that problem is the ABC. Until the SSC applies the control rule, you don't know what the ABC is going to be set at.

MR. HARTIG: No, and I understand that.

DR. BELCHER: Other comments to add to these specific motions or comments in general relative to the amendment? At that point we will go ahead and be ready to move into wreckfish. We are going to break for lunch, but Ben has something he would like to say relative to golden tile before we completely close it out.

MR. HARTIG: Yes, when I was watching you go through the P-start analysis yesterday and I was thinking about tilefish and then looking through the ORCS report, there is a section from the workgroup approach under Section 2, Guidance for Assessing Stock Status, and in one of the categories there was a presence of natural or managed refugia.

In golden tilefish there are a number of areas which the longliners are no longer able to fish in since we have put in that longline closed area in Central Florida all the way to the council's jurisdiction boundary west of Key West. There is an area down there west of Key West where they used to have significant catches. Most of the fishery has been occurring right in that Central Florida area since the quota has been lowered.

They haven't fished the Georgia mud. South Carolina is lightly fished. There is another area, the Oculina Closed Area on the offshore boundary. There is an area that reaches out into the tilefish habitat. What I was wondering, if we put together a chart for you – and I think you have done some similar things sort of with golden crab when you looked at the amount of area that was closed by the deepwater coral systems or reef systems offshore.

If we put together for you a chart of these areas, do you think you could evaluate some kind of a susceptibility analysis or maybe you could get a plus in somewhere in your P-star analysis based on the amount of area that is no longer fished for golden tile; is that a possibility that you would be interested in looking at?

DR. BELCHER: What do folks think? I know obviously currently the way that the P-star is done, we have kind of made that framework pretty – I say rigid, it is well defined as to how that incorporation in there. I don't know; is that something that would come up at a management level? I don't know how you would quantify that in. I am looking to the rest of the group to help me struggle through those discussions on how would we figure in for those types of things?

DR. BARBIERI: I think that the thought process of having refugia out there where you have whatever estimated portion of the population that is not really susceptible to the fishing gear or can be used as some standing biomass there that would help refresh and repopulate some of the fishing areas, to me that would be incorporated into how you interpret your PSA, to some extent.

You would use susceptibility of the species to the level of fishing and how much habitat is out there. This was the thought process in the working group of having that as being one of the criteria, because, of course, when you have that knowledge you know you have somewhat of a population buffer already there.

Now yesterday we discussed the PSA for golden tile and came to the conclusion that it is highly vulnerable; the vulnerability assessment came up as highly vulnerable. I am not sure how we will be able to integrate this given the decision we just made, but I don't see it as out of the question as something that we can incorporate into our thinking as we look at this into the future.

DR. CROSSON: I have a question for Luiz. Is it a change in the PSA score that you are considering or a change in the application of the PSA score? I tend to think of the PSA as being relatively stable; variable and not dependent on management actions, but I might be wrong on this.

DR. BARBIERI: The short answer is I don't know. We will have to look into this in more detail to know how that would figure into the picture. The PSA is really a semi-quantitative evaluation, and those things are taking into account in a qualitative way as you make your judgment calls on coming up – where you put the low, medium and high levels to your susceptibility of the species. I think it would matter if we had that information. This is the issue is having that information for it in front of us to make that judgment call.

DR. BELCHER: Again I just pulled up the MRAG approach to that with the susceptibility. The thing that would be different, I would assume, would be the encounterability and looking at

habitat and bathymetry. Where right now habitat is considered high, maybe that is something that as far as the folks that did this approach – I don't know how much it would change.

I don't necessarily know that your overall risk would change by a lot, but that would be where that rank would come into play is to see if they actually did account for that when they discussed that encounterability and habitat to see if that would actually be lower or medium in those kinds of things. That is the only one portion of that PSA that would account for that.

MR. COLLIER: Something that is missing for golden tilefish is their movements and migrations, so if we do have these protected areas are they truly protecting the population. It is written in the data workshop as we don't know that for golden tilefish. We don't know the spawning areas. These protected areas, we are not certain exactly what they are doing for the populations. They could definitely be incorporated; we just need a lot of information.

DR. BELCHER: All right, at this point we will go ahead and break for lunch, and we will pick up with the wreckfish analysis that Andy Strelcheck has for us. We are recessed until one.

The Scientific and Statistical Committee of the South Atlantic Fishery Management Council reconvened in the Hampton Inn West Ashley, Charleston, South Carolina, Wednesday afternoon, November 9, 2011, and was called to order at 1:00 o'clock p.m. by Chairman Carolyn Belcher.

DR. BELCHER: Let's get started. Andy Strelcheck is here to give us a presentation or discussion on his Wreckfish Analysis, so, Andy, I will turn it over to you.

DR. STRELCHECK: This work was put together based on recommendations that you made at a previous SSC meeting and we wanted to bring it forth for consideration. This motion is directly from the August 2010 SSC minutes. If you recall, you set acceptable biological catch based on average landings from 1997 forward.

Unfortunately, due to confidentiality of the data you couldn't actually see some of the landings so you were basing it essentially on the landings data that you could see. Your last motion essentially said or recommended conducting a Depletion Corrected Average Catch or DBSRA analysis in the coming year to compare with this current catch-only recommendation.

I have focused on Depletion Corrected Average Catch and summarized obviously the results herein. As a refresher this was developed by MacCall. In 2009 he published a paper in the Journal of Marine Science. The Depletion Corrected Average Catch estimates sustainable yield for data-poor long-lived species, so wreckfish is really an ideal candidate for this type of analysis.

It divides the catch into a sustainable yield component and then a windfall component so you have to be able to estimate the one-time reduction in stock biomass that occurred, and that also fits well for wreckfish because the fishery developed in the late 1980s and biomass is expected to probably be largely unexploited up until that point, and we saw a huge ramp up of effort and a drop in the landings occurring shortly thereafter.

The model itself is part of the NOAA toolbox and estimates can be simulated through Monte Carlo simulation so that the distribution of sustainable catches is based on the input parameters specified. There are four required inputs for the model. We have a landings time series and the number of years is part of that landing series; the relative change in biomass that occurred, that windfall reduction; a natural mortality rate and an assumed ratio of FMSY to natural mortality; and that is just applied as a ratio to evaluate sustainable yield.

In terms of the model itself, fairly simple in its implementation; essentially the potential yield is the sum of the tuning adjustments, that ratio of FMSY to M times natural mortality times the unfished biomass level times the fixed factor 0.4, which is based on obviously a long-term historical input in information regarding what is an appropriate level for specifying potential yield. The decline in abundance you can see at the bottom of the screen.

Those are parameters that you would typically evaluate from a full-blown stock assessment. We don't have the luxury of those parameters here, but we can estimate them through other means. If you take those and calculate the windfall ratio, essentially you can get the windfall ratio as the change in unexploited biomass over the potential yield.

Conveniently the unexploited biomass cancels out, so you essentially need to estimate the parameters of the change in biomass, that FMSY to M ratio and the natural mortality rate in order to calculate the windfall ratio. Then ultimately to calculate the sustainable yield, you take the sum of the catches divided by the number of years in the catch time series plus that windfall ratio.

From that you get an average sustainable yield with Monte Carlo estimates. You obviously get a distribution around that yield estimate. Probably the most important in terms of trying to calculate this parameter was the change in biomass. We have wreckfish logbook data from 1992 forward, and so we were able to utilize that data to calculate a catch-per-unit effort index based on wreckfish logbook landings.

From that we were able to look at that index and determine, well, what was the estimated reduction in CPUE that occurred, and that was used as an estimate of that windfall biomass reduction. The index was standardized using a linear model. Only the top three vessels were selected.

This is a very small fishery and the reason the top three vessels are selected is because those were the only vessels with continuous landings during the entire time series. They represented about 30 percent of the landings in the earliest years and upwards of 70 to 90 percent of the landings in many of the later years.

They do represent a bulk of the catch especially in more recent years. The dependent variable was pounds per day and we did a square root transformation to satisfy fit diagnostics for the model. This was a comment that we received from the Science Center. We looked at other effort metrics; pounds per hook hours, pounds per hooks fished, numbers per day. With hook hours that was – well, with hook hours and hooks fished there were two reasons they were not explored. One is that graphs of catch-per-unit effort versus effort were showing decreasing

catchability over time. You want to obviously have no relationship between the two. You want it to be stable over time.

Indication from fishermen is that the more hooks that are put in the water, the actual reduced catch rates occurred. That is why they have shifted to using less hooks in more recent years. The other reason is that the 2001 assessment by Vaughan et al indicated that during advisory panel meetings in the late 1990s and early 2000 that hook hours was not likely a reliable effort metric. Those were avoided. Instead we focused on pounds per day to calculate that biomass reduction.

We also excluded trips with wreckfish landings that in total were less than 90 percent of the total landings for the catch. This was done essentially to prevent trips from being included that might have fished some days for reef fish or other species and then other days for wreckfish, therefore, biasing the catch-per-unit effort results.

That eliminated about 40 trips out of 700 but largely didn't affect the index overall. Factors were added to the model in a stepwise procedure and we considered fishing year, vessel ID, total hooks, season nested within fishing year, area fished and depth fished. The blue line represents the nominal index.

The red lie with confidence limits around it represents the standardized index. You can see they match each other fairly well. They are both on a relative scale, but you can see the falloff in the catch rate from about '92 to '97. It then stabilizes for about a ten-year period and then in more recent years it has shown a fairly substantial increase from a low in 2006/2007.

This model did not include area fished or depth fished. Those were not significant factors in the model. The other parameters that were considered were significant factors and explained about 57 percent of the variability. The bottom line is if you look at that earliest data point, compare it to either the low point in the time series or the last data point in the time series, you are looking at about a 35 to 60 percent falloff in biomass or catch-per-unit effort during the time series.

That was used to parameterize the DCAC model in terms of the change in biomass. I also had input from one of the fishermen that represents a majority of the catch. This was done independent of any information presented here; and based on his observations he indicated that there had been a 50 percent reduction in CPUE over the time series from the beginning of the fishery to now.

That seemed to match well and consistent with the results that were generated with this index. These are just the diagnostics. As you can see, vessel ID and fishing year were the primary factors explaining most of the variability with season and total hooks explaining just a small portion of overall variability, and the fits themselves were really good based on the square root transformation.

In terms of natural mortality, I explored four natural mortality rates. This was another recommendation by the Science Center when they reviewed it. Originally I had just explored the

0.05 and 0.1 natural mortality rate. The 0.025 and 0.075 rates were also added, just to bracket the range.

Age and growth data is available from a couple of sources. The most recent is off of Brazil from 2004 and they reported a maximum age of 76 years. Based on Hewitt and Hoenig, a natural mortality rate of 0.04 to 0.06 would be appropriate for that longevity. For the 2001 wreckfish stock assessment by Vaughan et al, they reported a maximum age of 39 years, so nearly half as old as the other study I just mentioned.

In that assessment they used Pauly and Hoenig to estimate M. M ranged from 0.05 to 0.15 with the value of 0.1 recommended as the preferred estimate. There is no new aging growth information from the South Atlantic that I am aware of that would indicate that there has been older wreckfish aged from the South Atlantic than the one that was 39 years old.

This is the study from Brazil so you can see based on the age and length of wreckfish, both males and females, that there was a good number of wreckfish that were older than 39 years that were sampled as part of their study. You see the tail end of the relationship for males and there is only that one fish that is 76 years old and one that looks about 70 years old, but certainly there is a lot of fish that are being aged between about 40 and 60 years of age.

For the ratio of FMSY to M, looked at 0.8 and 1.0 in the model; Restrepo 1998 said the natural mortality rate was considered to be a conservative estimate of FMSY. That has been rethought by Walters and Martel who indicate that, well, maybe 0.75 to 0.8 might be more appropriate for data-poor species. There is really a lack of consensus there.

What I wanted to look at was what were the FMSY or FMSY proxy estimates relative to M for recent Gulf and South Atlantic assessments. This certainly isn't a comprehensive list or a full blown meta-analysis. It doesn't include all of the assessments that have occurred, but I did look at least at recent snapper grouper species that have been assessed.

Although the life history varies and habitat varies and depth fish varies, all of them essentially were consistent in estimating an F to M ratio that was greater than 1. That to me doesn't necessarily support anything that is said above. but it does at least give some indication that l maybe FMSY set equal to M would be appropriate in terms of this analysis given this information.

Yellowedge grouper is probably the closest in terms of the longevity and that is a very recent assessment done in 2011 and that one also estimated FMSY to be greater than the natural mortality rate. Putting this all together in terms of the model input parameters, the catch time series, which I haven't discussed, that is total sum of catch at the top over either a 22- or 24-year time period.

The 22-year time period essentially crops off the first two years of landings because those were considerably lower than when the landings peaked in 1990 and then fell off from there. I wanted to look at the sensitivity of the model to two different landings time series. I mentioned the natural mortality rates.

I will point out here that with a 0.025 natural mortality rate you are looking at a longevity of greater than 120 years, so that is probably not realistic but was explored mostly for sensitivity purposes. As I discussed, the changes in biomass are based on the CPUE index as well as expert opinion from one of the commercial fishermen that is involved in the fishery; the range of FMSY to M ratios that I just mentioned, and then the rest of the parameters there are essentially inputs for variability surrounding those estimates when calculating results based on Monte Carlo simulations.

I did 18 runs of the model. I haven't specified a base run. Essentially these are all plausible model runs given the parameters that are input. Model runs 1 through 3 were fixed at a natural mortality rate of 0.05 FMSY to M of 1; the longest time series of landings and looked at three different changes in biomass.

Then all of the runs thereafter essentially are the same as model runs 1 through 3 except vary one of the input parameters, so 4 through 6 varies the landings. Runs 7 through 15 vary the natural mortality rate. Runs 16 through 18 vary the ratio of FMSY to M. This is essentially the sustainable yield estimates that were generated from all 18 of those runs.

The red line is your recommendation for ABC that has been approved. Just going through the runs, this one essentially is that long time series with the natural mortality rate at 0.05. The second series of runs, the only difference is the landings time series that is being input, and you can see the landings time series makes virtually no difference. They generate about the same estimates as sustainable yield.

For the third series of runs, this is the low natural mortality rate. If natural mortality is very low, then the ABC recommendation that you have set would be actually higher than what would be estimated based on these runs. Then the next two series of runs essentially look at a natural mortality rate that would be higher than the 0.05; and obviously the higher natural mortality would be the more productive the stock is estimated to be and therefore yields would be higher then what has been recommend currently.

The last series of runs essentially modifies that ratio of FMSY to M so that it is equal to 0.08, so M essentially is set higher than FMSY. I will go back to the runs in my conclusions to show you the actual values. The other information that I reviewed was length data from the trip interview program. We had nearly 17,000 wreckfish measured between 1988 and 2010. Most lengths were collected prior to 2,000.

In fact about 2,000 had been collected since 2001. Mean lengths through just a general linear modeling approach did differ by time period state landed and the interaction of time period by state. However, the differences were small, less than one inch for differences between time periods and less than a half an inch for differences between states of landing.

I think a lot of the results were driven here more by sample sizes than anything else given the differences in sample size across the time periods. Plotting the length frequencies on a graph you can see that there is essentially no shift in the size distribution over time even though sample sizes have greatly changed.

The mean lengths are shown in that table to the left by state and they have largely hovered around 38 to 39 inches in all timeframes. There has been a consistent trend in lengths throughout the entire time series of data that we have available to us. What can we conclude from this? This might be a useful alternative for setting ABC per your recommendations. It obviously gives you additional information to evaluate your current average landings ABC recommendation. Obviously, the results are sensitive to the changes in biomass, natural mortality, and the ratio of FMSY to M. That really is contingent upon what you believe based on scientific information are reasonable estimates for those parameters as to where you could potentially set ABC. The index and expert opinion indicate reductions on the order of 35 to 60 percent.

CPUE, after it fell in the early 1990s, has largely been stable and increased in more recent years. As just discussed, lengths have been stable over time. Given the maximum age of 76 years, natural mortality of 0.05 appears appropriate, although as mentioned earlier we do not have any wreckfish that have been aged greater than 39 years currently from the South Atlantic, so that is certainly something that is not well known for South Atlantic wreckfish.

Review of recent stock assessments indicates the ratio of FMSY to M may be appropriate, although lower values have been suggested in data-poor situations. This is essentially just another way of plotting that graphic I showed you earlier. The red is the highest estimates, the light yellow is the lowest estimates, so it gives you a sense of based on the model runs that were completed and what parameters were modified as to how the sustainable yield estimate is affected by those estimates.

Largest yields were based on higher natural mortality rates. Of the 18 model runs explored, 14 were higher than the ABC. The four runs that were lower than the ABC largely related to a low natural mortality rate or that FMSY value that was less than M. I want to I guess emphasize that these yields don't equate to maximum sustainable yield.

They are essentially sustainable yields, Sedberry et al back in '96 determined that wreckfish constitutes a single genetic stock across the North Atlantic, so certainly fishing mortality in other areas of the North Atlantic could affect wreckfish caught in the south Atlantic Ocean off the United States.

The magnitude of mixing is obviously well understood. It is recommended, based on this information, that if you are going to use this approach that wreckfish be managed based on a target level of depletion, that change in biomass in particular, thus avoiding local overfishing. This approach could be utilized in the future to continue to monitor trends in CPUE as well as fish length to insure ABC and the catch limits are not resulting in stock depletion.

I will add this as the last graphic. I do not know how reliable this landings data is. When we pulled it from FAO statistics, I did have U.S. landings of wreckfish; however, the U.S. landings did not closely match any of the data that we had. I did not have any confidence in the U.S. landings.

Obviously, I am not familiar enough with how landings are reported from these other countries, but this does at least give you an indication of the magnitude potentially of the fishery in other

areas with the caveat that these landings might not be fully representative of all that could be reported from those areas.

What was of I guess most interest to me is the Portugal and to a lesser extent Spain fishery, which is the bulk of the landings, had a falloff in landings corresponding closely to that early 1990s falloff of the wreckfish fishery in the U.S. South Atlantic. There seemed to be some agreement at least in terms of drops in landings that changes were occurring and exploitation was ramping up during that time period, but in terms of the regulatory restrictions and how much cross-Atlantic movement there is of wreckfish, very little is really known or understood. What limited information we know is that wreckfish are caught with hooks that are not used by U.S. fishermen so we know they are moving across the North Atlantic from the Eastern Atlantic. With that, I will take any questions.

DR. CADRIN: I guess I am trying to interpret run 7 to 9. Those were the ones that had sustainable yield less than the ABC. Those were based on the M of 0.025, if I remember, but when you were presenting that it seemed like the maximum age, 120 or so associated with that; is that a reasonable maximum age or natural mortality and how should we interpret those runs 7 to 9. Are they just sensitivity runs or are they just as reasonable as the other 18 or the other runs?

DR. STRELCHECK: When I talked to the Science Center, what they were recommending is I drop the run that was 0.1 and do sensitivity around the 0.05 run. Given that we had only a maximum age of 39 years, I felt like 0.1 was appropriate, so instead I elected to choose the 0.025 and 0.075 runs to just kind of fill in what was looked at. I would say that it is not a realistic run given the longevity of the species. Something closer to 0.05 might be more realistic. Given that the maximum age of 76 years, the 0.05 run seems to match well with that longevity.

DR. CADRIN: I guess one of the conclusions that we could draw from this with all reasonable assumptions are ABC is less than the sustainable yields coming from this. That type of conclusion would have to exclude that run 7 to 9 that had the M of 0.025, assuming that may not be realistic.

DR. STRELCHECK: Yes, the last run, Run 18, which does assume FMSY is less than M, would also have a lower sustainable yield.

DR. BUCKEL: I just have a question on that timing. I was looking in the age-and-growth paper, the timing of those biological samples relative to how long the fishery had been operating, because at 76 years, if that is the maximum age after the fishery has been operating for a while, there is the chance that those older fish have been removed. I don't know, 120 years, if the fishery had been operating for 15 years already and it had removed a lot of those older fish, then there is a potential that it could be older, and just if you could speak to that.

DR. STRELCHECK: Yes, I would have to look at the paper. I have it with me, so I can get back to you with regard to when those samples were collected. It seems like at least in the North Atlantic the fisheries really began exploitation in the '70s and '80s. Off the U.S. South Atlantic 1987 was the first year. But in terms of Brazil and the South Atlantic Ocean, I am not sure exactly when exploitation began.

DR. REICHERT: Relative to the maximum age, Carolyn just forwarded a message from George in which he says that although the aging has not been redone, and I would say not redone completely, there is some re-aging done of the wreckfish in the South Atlantic. George says that I think that Manooch and Potts would admit that they seriously underaged wreckfish.

I had a conversation with Jennifer who aged some wreckfish from the South Atlantic, and her re-aging she said was closer to the ages that they reported for the Brazilian Study. There are some indications that indeed the current ages in this region were underestimated. I tried to look up her data but I can't get hold of them.

MR. COLLIER: The windfall comes from '91 or'92 season as opposed to '87/'88 when the peak of the landings occurred. Was there any concern about not going beyond the 60 percent, which might be a minimum estimate or a lower estimate of it?

DR. STRELCHECK: Yes, and I recognized that. That is actually why the 35 to 60 percent range is there. I meant to bring that up. The peak was in the '90/'91 season. The data begins in the '92/'93 season, so there is I guess a year time lag, two-year time lag. If you take the reduction in CPUE from the first year of the time series CPUE until the end, it is 35 percent. However, it is likely to be higher than that because CPUE would have expected to be higher prior to that first year that we actually have logbook data. It matches well, as I said, with the commercial fishermen's input on the reduction in biomass of 50 percent.

DR. GRIMES: I forwarded around that message that Alec MacCall had sent me about having not seen your CPUE index when he did his original analysis on wreckfish. I gather from what you just presented you had essentially done what Alec was recommending, I guess. That actually included that CPUE index in calculating the Delta. You must not have had it to begin with?

DR. STRELCHECK: Alec and I actually corresponded a few months ago because he was working on the depletion-based stock reduction analysis. He I think used an earlier version of the index that has been refined slightly, but he was taking that into account. The results of that are not presented here but they were largely in line, maybe even a little bit more optimistic than what mine are showing.

DR. BELCHER: Other questions for Andy? Okay, thank you. Relative to the analysis, we have been asked to review the analysis and consider if ABC modifications are needed and then provide a recommendation.

DR. BERKSON: I am wondering how this analysis fits in with the SEDAR process and with the processes that have been accepted by the Science Center and the council. This is an outside stock assessment, and obviously any changes have to be certified by the Science Center as well as going through the SSC, so I am just not sure where this fits into the big puzzle.

MR. CARMICHAEL: This hasn't been done through SEDAR, but it has been agreed in the region that SEDAR doesn't have to be the only source of stock assessments, so that is fine. The

one question I guess is the Science Center opinion, and our understanding is the Science Center did review it.

We haven't received any information from the Science Center. I think they communicated straight with Andy, but we asked about that because at your last meeting you made it clear that you wanted to know if the Science Center has reviewed something, what their opinions were. Andy may want to comment on what he got from the Science Center Review.

DR. STRELCHECK: I didn't get any written comments from the Science Center on the analysis. They provided verbal comments, but I think I have mentioned several of them already; the natural mortality rate of 0.05 and wanting to have that bracketed by other sensitivity runs; catch-per-unit effort, looking at finer effort metrics than days fished, and I discussed that in the presentation about why evaluating hook hours and hooks fished and why that wasn't appropriate for calculating CPUE.

In the document itself I could not address this in terms of the analysis, but discussion was added regarding hyper-depletion and hyper-stabilization of catch rates and the potential for that to occur, especially since we were evaluating a small number of vessels that target wreckfish. That is discussed in the paper but is not anything that we could address.

Then the last was the FMSY to M ratio, there was no changes made to that. The discussion really focused on whether 1 was appropriate, metric or not. I explored the 0.8; I put in the mini meta-analysis for recent assessments and felt like that was appropriate and conclusive for the information that was needed. I will mention that if you wanted to look at the sensitivity of the results to any number of other changes, it is easy enough to run the model here and bring back results to you.

MR. CADRIN: Yes, I guess first of all to follow up on Jim, the Draft National Standard 2 Guidelines now allow that the SSC can be the peer review process. However, in other regions when we try to do that, it is probably best done if it is advertised as a peer review and that SSC members approach it as a peer review.

I am not sure we have done that. I'm not sure we really need to either. I guess what I would propose coming out of this is that the DCAC analysis generally supports the ABC recommendation. There was only one sensitivity analysis, Run 9, that has an unrealistic natural mortality assumption that had estimates of sustainable yield that were significantly less than the ABC.

Again from previous experience, what we have tried to do when we have an existing recommendation and information comes in and we have a request to reconsider the recommendation, in New England we approach that as a hypothesis-testing mode is that if the new information is sufficient to reconsider the advice, then we will consider reconsidering the advice.

Again in this one, if we treat it as a hypothesis test, there really isn't information to suggest that the ABC needs revision because none of these estimates are significantly lower. The way DCAC

works is that it estimates a sustainable yield and it is not illogical that there are sustainable yields above that estimate of sustainable yields. Where Run 9 is the only one that is significantly lower, I don't feel that there is sufficient evidence here to revise the ABC. That is just putting that forward for discussion and a proposal.

DR. BERKSON: Well, I think the work is important work and I think it is a good contribution. obviously. I think it does have to go through a peer review process; and as Steve said, I am not sure that is what we are doing now. I am not sure if we are doing it to that extent. I also think that the issue of what do we do with non-SEDAR assessments is a bigger issue than the SSC.

It is sort of a SEDAR Steering Committee type issue. Maybe that has been resolved and maybe it hasn't. I don't go to those meetings, but I haven't heard the ultimate word on how those things are going to be handled. I feel like that needs to be addressed before we are asked to change ABCs based on a non-SEDAR assessment. As I said, if that has been addressed and agreed upon, that is fine, but I don't know if we are there yet.

MR. CARMICHAEL: The discussions have indicated that the SSC should be the first line of review and have an assessment that comes forth from other sources, that you should consider if it has merit; and if so, you could request that the Science Center do further review of it and more intricate review.

I think in terms of something like this, it is an assessment analysis. I don't think you'd call it an assessment in the same sense that you call black sea bass and golden tilefish an assessment. It certainly doesn't need the level of review. It doesn't have the type of information. DCAC and DBSRA are both within the tiers of the control rule, so I guess it comes to you guys whether or not you think you are more comfortable with an ABC based on this and supported by this as opposed to the average landings that you got out of Tier 4.

If you think that an analysis like this has some potential, the question then becomes do you believe that this analysis is adequate at this time or would you like further review and evaluation and are there other things that should be considered and explored. It comes down to how do you handle it? Do you think this stands enough to support your ABC, consider a change in the ABC or you think this is not really a good approach and they should look at something entirely different? I think how you view it will determine where we go.

DR. BELCHER: Isn't one of the caveats with this particular species though is if it is going to be selected, who is going to be able to look at this data because of the confidentiality factor of that. It is going to fall to a different group than just an outside source getting the data to do a DCAC approach.

I don't know if that throws a monkey wrench in that aspect of it or not, but that was one of the things that we indicated is that we were looking at that, that it could be calculated but because it is confidential we can't comment beyond other than how we would approach it going through our tiers?

MS. LANGE: Well, I think Steve hit it; it is not contradictory to what we have already set as an ABC. It sort of supports what we have done. I am just curious; what was the impetus to do this analysis? Was that a request from us to apply the DCAC? That is what I thought; we had asked that you do this since the agency is the only one who has access to the data. Basically you have provided us with additional information that we requested and it supports our previous ABC estimate.

DR. BOREMAN: Andy, one of your first slides said that the ABC recommendation at 250,000 pounds or whatever was based on our examination of data that only included vessels for which confidentiality was not an issue. Can you go back to that slide?

DR. STRELCHECK: No, what you essentially had before you were annual landings that were non confidential, and you based your ABC recommendation based on those annual landings and not select vessels. Certain years of landings are confidential because of either the number of dealers reporting or the number of vessels reporting.

DR. BOREMAN: Okay, so there were certain years that were not part of the time series and not the question that we were looking at a minimal landings. Okay, then never mind.

DR. REICHERT: Refresh my memory, I think those were recent years that we did not have data on, correct? That was the issue that we discussed at length that we had some landings data from years back, but we did not have any information for the last I think at least 8 years or something, 5 to 8 years, correct?

MR. CARMICHAEL: You did have older data; it was the more recent data that had the issues. Your discussions are in the overview that summarized what you said. It is correct, you did not have the exact landings so you ended up on 250 and were told that was consistent and in the ballpark of the average landings. It doesn't mean that the specific value isn't 225 or maybe 275. We don't exactly know what the specific average landings are if you were to choose a similar period that you have used in those other ABCs.

DR. BARBIERI: Well, I will switch the discussion a little bit to the other side of the coin and stimulate discussion here. In a way I think that I see myself in a little bit of a philosophical crossroads here because there are some issues that are unusual about how this was addressed or put together.

Yes, it is I think a confirmation that our pre-established ABC is pretty much in the same ballpark; it was not completely unreasonable. But at the same time there are two issues that I think that we need to think about. One is the fact that we had recommended the landings-based ABC as an interim value until better information was provided. We explicitly made a motion or a very direct statement requesting the agency to provide that information.

Well, the agency addressed our request and here we are looking at our control rule. We have an ABC that had been provided basically I think at Tier 4. Now we have the information in front of us to kick that up to Tier 3, right? I don't disagree at all with the points that have already been made, but in terms of review the fact that this was conducted following all the standard

methodology that involves an uncertainty evaluation, all of this was reviewed by the Science Center.

The Science Center actually was consulted. Isn't that correct, there was a review that was provided by the Science Center. I definitely feel that we as an SSC have the joint expertise here to provide the ultimate or final review on this in terms of whether it is an acceptable analysis that represents an improvement to what we had on the table.

I bring this up because during this transition that we are facing in implementing our control rule, we are providing a number of ABC recommendations where we explicitly point out our interim until we have better analysis or more detailed analysis provided. I feel a little bit uncomfortable completely ignoring this, which I see as a responsiveness from the agency in providing the information that we specifically requested.

DR. BELCHER: And we did specifically ask – the recommendation from us that came out was conduct a DCAC or DBSRA analysis in the next year to compare with the current catch-only recommendation, so we got what we asked for.

DR. JOHNSON: I just sort of have a question. Assuming that the analysis is fine and it has been vetted and it works well; are there any one of these 18 scenarios that would be considered a base run or are they all sort of equally plausible and is there something you could actually –

DR. STRELCHECK: That is where I tried to go through and at least look at the input parameters that were being specified and do some validation. In terms of the catch time series, that doesn't matter, you use the longest timeframe. The other three parameters is where it becomes most important. Natural mortality we have talked about.

Marcel indicated that wreckfish are likely older than what they have been aged. I had said in my conclusions 0.05 is probably most realistic. In terms of the change in biomass based on input from fishermen, based on Chip's comment about the fact that the time series does not extend all the way back to the peak in landings, 35 percent is probably not the most appropriate; it is probably closer to 50 percent.

Then the FMSY to M ratio, well, that is something that obviously there is disagreement in terms of the scientific information. There is advice being given both ways. One did not appear unreasonable for that ratio. With all that said, I would argue that probably the most appropriate for a base run would probably be that first series of model runs 1 through 3.

MR. COLLIER: One consideration for the F to FMSY would be what is the proxy in the FMP? I believe that is the 30 percent, is that right, Gregg, for wreckfish?

MR. CARMICHAEL: I think on these long-lived ones it is 40 percent, isn't it, for MSY? It has been a while since we have looked at any of this. That is SPR, though, so I don't know how we would relate that back to M.

DR. CADRIN: I think Eric's question was right on, is there a preferred run, because we could take the confidence limits within each single run, but then really it is the model uncertainty and the multiple runs. There are some that are much more optimistic than our ABC recommendation and one that is significantly more pessimistic than our ABC recommendation.

Runs 1 to 3 I think support our existing ABC recommendation. Run 3 is spot on. I understand that this is very responsive to an SSC request. The work was done and we can I think give a positive view of that, and it is not a negative view to say that there isn't – that this is supportive of our previous recommendation; and that if we choose not to revise that recommendation, it is not that this wasn't informative.

This is very informative and reassuring that our ABC recommendation is supported by these. Where if we look at 1 to 3, 1 is a bit more optimistic, but 2 and 3 are right within what we had recommended. Again, I don't want to dismiss the analysis or give any kind of negative feedback. I think it is very positive that it supports our recommendation.

DR. BARBIERI: Well, I just wanted to reinforce what Steve just said. Basically that is my take as well. This is very reassuring. I think it is good that we got the analysis done and now we can look at our previous recommendations and say, yes, we were very close to, if not spot on, in the ballpark of where we should be.

Now we have analysis to support that recommendation and we have a stronger recommendation in place. That would be my suggestion is that when we document in our report, our comments here that we present them as accepting really this analysis as a way to support our previous recommendation.

DR. BELCHER: So knowing that our 250 was more of a – and I hate using the term spitball, but it was because we didn't really know the landings; how far off are we from what the actual average is? Obviously, we can't look in the envelope but what is the potential difference? We have got a range of, what, 190 to 19,000 additional pounds, right, from the high to the low?

DR. BUCKEL: But, specifically, Andy, you mentioned 2, which is a 50 percent reduction, right, if I follow correctly?

DR. STRELCHECK: Yes, obviously there is uncertainty around that estimate. We are not talking massive amounts of pounds; but given it is a 250,000 pound quota 20,000 pounds or 50,000 pounds, that is a significant chunk of quota for commercial participants. Although the estimates are spot on, I would disagree in the sense that they are really true spot on. They do deviate from your recommendation slightly.

DR. REICHERT: Remind me, Andy, Run 2 would amount to what ABC?

DR. STRELCHECK: Slightly less than 300,000 pounds.

MR. CARMICHAEL: 298 for Run 2, which is the 50 percent; 269 for Run 3 which is the 60 percent as the reduction in biomass.

DR. BELCHER: I agree with Steve's comments about being within the hypothesis test and that is significant, but again we get into those arguments back and to about practical significance and statistical significance; and granted there is not a statistical difference in the eyes of a fisherman, that poundage is significant. Just to throw it out as a conversation point.

MR. CARMICHAEL: Just a procedural thought as we think about trying to move into more of these types of analyses for more of our unassessed stocks and council staff has put some on the table in the past, and so I think it sort of begs the question if we agree this moves it up in a tier and we support the analysis, if we pick either a run or an average of some runs or something, some way of taking the value out of this analysis so it is supported by this as opposed to the average landings in Tier 4, then we are possibly on a more defensible position and we have got an analysis that represents the best data.

I think it would help us know, as we bring in more of these in the future, what kind of information is necessary and what do we need to help the SSC make a decision so that they then go and base their estimate on, say, a table such as this type that lays out the key uncertainties.

DR. CADRIN: Yes, I guess I was trying to capture Jim's comment about peer review and whether this is a full peer review, that it seems like we have information that supports our previous recommendation and I think the burden of proof is on revising that. I don't see strong evidence here to revise it.

If we were to today recommend changing our ABC, I would want to have more discussion on whether the reduction in a CPUE is an adequate measure of depletion since the unfished stocks – since the time of an unfished stock. There are a lot of proxies being used for the theoretical needs of the model, and I think it would need more peer review than a discussion at the SSC among many other different actions.

DR. BERKSON: I think this is a really important precedent because this is an external assessment, not a BAM model, but it is an assessment nonetheless that will lead to an ABC potentially. We have a lot of people at this table here that have served on SEDAR peer reviews and at other steps in the SEDAR process, and I am wondering if anyone at this table can say that they have looked at this at the same level of detail and are as comfortable with this at the same level of detail in terms of the data being used, the model being used, the results how it is being interpreted, as they have been at previous SEDARs that they have been involved in.

If not, I think we are setting a really dangerous precedent by saying we want to change the tier how the control rule is applied with this analysis. That is not taking away from the analysis; that is not at all taking away from the analysis.

It is merely saying that we really have a standard that we have to stick to; and for these external assessments, if we are moving forward with using them, which is not mine to decide, we need to decide how we are going to review them and at what scope. Once again, I don't feel with this analysis as comfortable with it as I have on other SEDARs that I have participated in.

DR. BARBIERI: Good point and I don't disagree, but drawing from something that Steve mentioned earlier regarding his level of comfort would go up if he had the time and the opportunity to look into this in more detail and actually perhaps require some revisions to the analysis, I don't think we should take that off the table.

I think that is a very good suggestion. Perhaps instead of getting this resolved right here right now, we take a step that if we have revisions that we feel are necessary to address some of the uncertainties or some of the issues here, we can make that suggestion. I am just trying in this issue of being realistic; I am trying to be realistic about our analytical capacity capability within the Science Center.

The fact that we have sent letters to the Science Center requesting that this analysis be done and we were officially told that they just cannot handle this at this point given other responsibilities, primarily analytical responsibilities of SEDAR process, that it couldn't deliver; and the fact that we structured our control rule to have somewhat this analysis for data-poor species, is there a way for us to reconcile here some of the realistic needs that we have with Southeast Region in getting the analysis that we need to provide scientific input into the management process with, yes, holding the bar as high as we can.

I think that Steve's suggestion that perhaps we provide some comments, as a body we could provide some comments back to Andy for some revisions or some suggested runs or whatever is needed to address it, and maybe we will look at this again the next time. Would that be a possibility?

DR. STRELCHECK: Well, I guess first of all does anybody want to directly respond to Luiz, because I don't have a direct response for Luiz. It seems like you were asking the group a question.

DR. BARBIERI: No, I was just asking would it be possible if we provide you with a number of recommendations or suggestions for revisions of the analysis, it would be possible for the Center or for you to accommodate those and provide revised analysis.

DR. STRELCHECK: Yes, that is certainly fine. I am hearing Jim loud and clear. I wrestled with this discussion often with working with the Science Center on this type of work. I don't consider this an assessment. You might, but I don't. The only thing in here that I think would be raised potentially to the level of SEDAR scrutiny is the Catch-Per-Unit-Effort Index.

Certainly, in house we have a lot of expertise which I have used and consulted in developing that index. Everything else is essentially from the literature, from information that could be obtained through other sources and documents, and the model itself has already been built through a toolbox.

I am not programming a model here. I am inputting data and evaluating the sensitivity of it. I don't think this raises itself to the level of SEDAR. What it raises itself to I am not certain. Maybe we need to work that process out more so with the SSC and with the Science Center. Certainly, if you want to provide some advice, that is up to you. I am not sure how much will be

gained by it. There is only so many ways you can slice a catch-per-unit-effort index and I think we have scrutinized it pretty heavily, so I will leave it at that.

DR. CROSSON: A few thoughts, the first of which is that I agree wholeheartedly with Jim, and I think this feeds into on one of the things that he said which is that we need to have some sort of standard that we work out with the council for the conditions under which we will consider a remand for an ABC recommendation and types of data that we would be willing to look at.

I don't believe – looking at the SEDAR Plan Schedule Document, it is in our briefing book, and I don't see wreckfish written on there, and I am not sure if wreckfish is even in the list of potential SEDARs. I would guess that it is probably not considering it is a relatively small fishery. Because of that, I would suggest that we should be wary of anchoring on to an earlier number that we came up with it just because we came up with it.

I am not a stock assessment scientist so I don't have the expertise that Steve and some of the folks at this table do. Because people are very prone to anchoring on numbers, whether it is a house price that you bought or anything else, my recommendation would be to avoid that. If this data is of value, this presentation that Andy gave to you is of value, you should probably forget the earlier number that we came up with, look at this and think what would be a good ABC recommendation based off of the level of information that you have from this document. That is just a suggestion for moving forward.

DR. REICHERT: That was exactly the point I was going to make, and I was going to say I think we should especially consider the amount of information we had when we said 250,000 pounds. Currently we have a little more information. My question is when does our recommendation go into effect; and would we as an SSC be comfortable looking at this analysis and looking at what the consequences would be for – and my recommendation would be looking at Run 2. I completely agree with what you just said, Scott.

DR. CROSSON: I'm sorry, especially considering as Carolyn brought up there are real consequences for people that are involved in this fishery, so I think it is worth considering just on its own merits without the earlier numbers that we came up with.

MS. LANGE: I may be misremembering, but I thought a couple of years ago we went through over and over levels of peer review that we would accept. SEDAR obviously is the goal for everything, but John commented earlier that we did agree that in some instances a full SEDAR assessment review was not necessary and that the SSC had the ability, the responsibility, and capability to provide peer review or there were other means. I am just wondering; I can't remember the specifics of our previous decisions on this.

MR. CARMICHAEL: Well, I think that was more or less it, that the SSC can provide the peer review. As Steve mentioned, the law allows for that. I think the steering committee and the councils both recognize that. I think it gets into knowing that there is a sharing of work between the SSC and the Science Center, and there are different levels of expertise over who can do what.

We understand that there were oral comments from the Science Center. I think maybe people would feel more comfortable if there was a bit more formal review from the Science Center to help support this. But I think it is sort of in an area as to what the SSC believes they need and what they will accept and then maybe we work toward establishing some more rigorous standards especially as pertains to the analyses that are in the different tiers of the control rule. I think that would be the most important place to start.

DR. CADRIN: Yes, going through what was done, certainly this is a published method. It is one that has been endorsed nationally and regionally. It is based on reasonable decisions, but the difference between an SSC discussion of the one that we have had and an SSC peer review would be we would answer Eric's question, we would determine what is the preferred run among these. I respect that Run 2 may be the best.

I don't think that we have gone through each of the decisions about what landing series, what natural mortality, what ratio of M to FMSY, what depletion, which is most reasonable; and if we can't find consensus on the best run, do we need to start lending runs and considering inter-run variability. I don't think we have done that.

I guess the most I would feel comfortable with is reporting back to the council that these analyses generally support our ABC recommendation and with more formal peer review might be able to be used to revise it, to fine tune our ABC. Because really we are talking – and I realize that these differences in catch are meaningful to the fishery. When it comes to the statistical estimation, these are really the same estimate. We might be able to refine our ABC but I would need more formal peer review to do that. I don't think we have done that peer review here today.

DR. BARBIERI: Steve, trying to draw from your experience in the northeast, because I know the Northeast SSC or the council there conducted DCAC analysis, I guess. Alec did some of that himself for the red crab. How did you guys handle it? Maybe there is a lesson learned. I am trying to get something here that maybe as part of our recommendation we can start setting up some of these processes in place so we can get some of this analysis done in the way that would be appropriate.

DR. CADRIN: Yes, the red crab example was that Alec MacCall had worked with both our Data-Poor Workshop and our Plan Development Team to develop a DCAC approach that was initially used as the OFL but through simulation was found the same results that are reported here, that the DCAC will give an underestimate of MSY, so really it is a sustainable yield estimate; and so that sustainable yield estimate, the best estimate of DCAC was used as our ABC recommendation.

You may remember the early drafts of DCAC had it estimating as the OFL using the uncertainty in DCAC to have the ABC. That approach was abandoned. There are sustainable yields that are greater than the DCAC estimate. If there is any lesson, that may be it and that is why I don't think there is a smoking gun that our ABC is too high.

It might be that if we were to select a preferred run, there could be some room for increase in our ABC, but that is what I don't see having done. I don't know that I could join a consensus statement that Run 2 is the preferred run without going through all of the details of each decision that went into Run 2.

DR. CROSSON: My question I guess is for Steve, and I am not trying to sway you to one thing or another, if you had been presented with this document last August, would you have included this document into the consideration for the ABC or would you have said that because you don't have enough information about the sensitivity runs, we are better off using some kind of average catch value; is that what I was going to say?

DR. CADRIN: Yes, people around here who have chaired peer reviews know that there is a process to a peer review; that getting the documents ahead of time is one of the things, but then going through each of the decisions, does the group agree with this? Are there alternatives to consider? You work towards a consensus model that we simply haven't done that here. I am not saying that it is wrong. We may come up with the same answer here, but that process hasn't been gone through here today. I am willing to do it, but I don't think we have done that.

DR. BOREMAN: Listening to this discussion, I have a few points. Number one, we need to separate out the arguments here today. There are two questions we are asking. Number one, do we accept the analysis that was done; yes or no? Obviously there are issues with that. If we do accept the analysis, then do we change the ABC?

Let's focus on the first argument; do we accept the analysis? In the Mid-Atlantic the model that we use, and this just happened this past year because the SSC rejected a peer review FMSY estimate for spiny dogfish, because we looked at the projections and determined that the FMSY would cause the stock to decline after 20 years so it couldn't be FMSY.

We asked the Northeast Center to go back and revise their FMSY estimate, which they did, and presented it to a subgroup of the SSC, which are principally stock assessment types. Yan was one of them, Doug Vaughan, a few others, and that happened about four weeks prior to the SSC meeting.

We did a peer review of the revised methodology for estimating FMSY before the meeting so when we went into the SSC meeting we had the endorsement of the subgroup, which was about six individuals from the SSC that said, yes, this makes sense, so we wouldn't be getting into this argument because we would have gone through the process that Steve is recommending.

I think in future that is what we need to do here. If there is going to be an analysis presented to the SSC at the meeting, we can't sit here and do a peer review at the meeting. Probably a subgroup should be formed ahead of the meeting to do the work and then report at the meeting to the full SSC their reasons for accepting or rejecting it, and then the SSC can make their judgment based on the reasons. Given that, I don't know where we stand.

I am kind of in the tent of people who are saying that our first run at this was kind of a swag value in a way. We looked at the landings and said, all right, this is the best we can do, all right.

Now we are holding that up as the gold standard saying are we going to come up with something that is going to be comparable to that or better than that. I agree with Scott's point that, well, here we have a more sophisticated analysis then eyeballing a chart. Are we better off?

I am also agreeing with Steve saying that I don't think this is the forum for doing the peer review of that. We should probably form a subgroup to do a more in-depth frisk of that and then come back to the SSC with a recommendation, do we accept the analysis or don't we; and then if we do accept the analysis, then we go to stage two saying, all right, now we have all decided on what the base run should be or whatever; now does that cause us to change our mind? I don't think we are in a position right now to do that. If people think we are, then I am willing to offer an alternative, but I am not going to be doing that now.

DR. BELCHER: I still think there is one problem that again I don't know how we get around this. We have been dancing with this issue; John has tried for a number of times to get us access to confidential data. We are still going to have the problem even as a subgroup that we are not going to be able to see the data. Are we going to get any closer to being able to pull cogs out, tweak them, put more teeth on them, and take fewer teeth off of them; whatever it takes to get something that we can finesse if we are not allowed to see any of what is going into the process.

DR. BOREMAN: I think it is more than just seeing the data. I think it is the methodology that is being used. I have some basic questions about DCAC I would like to answer. To me I always thought that the DCAC assumed that it was a decline in the CPUE over the entire time series. Here it kind of dropped down the first few years and then has been flat for the past decade or so.

To me that is a little contrary to fishing down the stock, because I am used to sturgeon. I have used depletion estimates to estimate what the virgin size of Atlantic sturgeon was, but that was because it has been depleted continually for a hundred years so you can kind of do that and they have a very low natural mortality rate.

In this case it dropped quickly and then leveled off. I would like to do a little more thought exploration on what the implications of that are as opposed to seeing a time series where the depletion has occurred more or less on a continual basis over the time series. That is one example, so that goes beyond just access to data. We can assume that whoever has access to data is doing all the right things with it and move on from there. It is a trust thing, but there are other issues that Steve brought up that we still need to address.

DR. CADRIN: Just a semi-random question; does anyone here know when the wreckfish fishery started and if that series of CPUE is an adequate form of depletion? Have we considered all of the decisions that go into a DCAC? Ideally we have monitoring since the beginning of the fishery to evaluate that Delta.

That is a naïve question. I don't know if our CPUE captures that. Right, someone in the audience may know that but we need to be the arbitrators of this decision. I just don't think that – I have got the Vaughan et al paper in front of me; that starts in 1998 but it doesn't say when the fishery started.

DR. STRELCHECK: Yes, landings were very minimal. In 1987/1988 they started increasing, 1990 was the peak of the fishery and the highest landings on record. The time series of CPUE which Chip and I were discussing with his question starts a couple years after that, and therefore that really is where that range of 35 to 60 percent comes in.

I don't think 35 percent is probably reasonable given that it doesn't capture those two years between the peak of the fishery and 1992. Unfortunately, we will never have that information. We do have catch rate information for '91, but it doesn't have vessel IDs associated with it so we can't tease it apart to actually evaluate it.

DR. REICHERT: Can someone remind me what the timeline is of the decision we are making today in terms of ABC?

MR. CARMICHAEL: You have made a recommendation for ABC and I believe that is in the Comp ACL or one of the other amendments. That is on its way out the door and being reviewed. But if you make a recommendation to change an ABC on a stock, then the council will take that into account in whatever way it best can.

In a lot of cases I believe it is set up so that ABC changes can be handled through framework actions; and if you make a change, you can expect that then the council can implement that change through framework actions, and they are able to do that and through specification procedures because it isn't ABC. It is expected to be something that is fairly short term as we talked about earlier today, so they have flexibility to implement these changes as information becomes available. I don't think the timeline is really an impediment.

DR. REICHERT: I am not thinking about an impediment; I am thinking about the process in terms of how long it would take for us or an external panel to review this so we can rethink our recommendations and what that would do to the timeline until that new recommendation could come into place because that has obviously consequences for the fishery.

DR. BARBIERI: Well, I would like to formally request that a more formal review process be put in place for this DCAC analysis either through a subcommittee of the SSC or through a formal request to the Science Center, so that at our next meeting we can have a reevaluation of this analysis.

I think that it would be a positive goal for us to be able to raise our ABC recommendation from a Tier 4 to a Tier 3. I think it was in the spirit of our tiered approach that whenever new information, new analysis, right, would be provided, we would try to raise that and get more sophisticated analysis. I think this is a step in the right direction. I commend the agency for being responsive to our request and for providing this analysis.

I understand all the caveats, all the issues and discussion points that have been brought up, which have been excellent. I really think that having a formal revision, the same way that we think about this, about the more complex stock assessment. If we have a surplus production model type assessment on the table and all of a sudden we realize that we have age information and we

can actually use an age-based analysis that can take more stock dynamics into account, we do that because we see that is more informative.

I think that this is more informative than what we did the last time around, and I think that having a formal analysis in place would be the right way to get that started. If we go with the SSC subcommittee meeting, I will volunteer to be a part of that review subcommittee.

DR. CADRIN: Yes, I think we are entirely on the same page here. I was saying the DCAC provides more information than we previously considered for the ABC recommendation, but the analysis requires more formal peer review before the ABC can be reconsidered. I think we are getting close to a consensus to recommend that a peer review be conducted before the next SSC meeting and management cycle. I would join Luiz on that subcommittee if it were formed.

DR. BUCKEL: Do we need to get something on the books for these Tier 2 and Tier 3 calculations that the SSC wants to – anytime those are used we want to have a committee meet before the SSC meeting to be able to provide more time for SSC review.

DR. JIAO: I would be happy to serve on that subcommittee if we will have one.

DR. BERKSON: Yes, I think it is as much related to analyses that haven't gone through the formal peer review that we have agreed to at SEDAR as much as it is Tier 2 or 3. How are we going to go about as a group saying that these are acceptable to the SSC if it hasn't gone through that process? I wouldn't necessary limit it to DCAC or DBSRA.

One thing I wanted to suggest – actually Gregg mentioned this in a discussion I was having with him outside I think yesterday – if this is going to be an analysis brought to the SSC, one of the best things I think that could possibly be done is include SSC members from the beginning of the analysis as you would a SEDAR so that you get their oversight and input from beginning to end rather than after the whole analysis is done.

I think that way the SSC members get to see the process, get to see the decisions being made. I mean, it has all the benefits of having SSC members involved every step along the SEDAR process. Especially for a more complicated analysis, I would recommend that. We can't require that necessarily, but I think it is in the best interest of the analyst who wants to get it accepted by the SSC to do that.

DR. BELCHER: I still think this falls back to what John was saying, John Boreman, and the fact that they gave us what we have asked for. The question is do we agree with what has been done or not; and if we don't, why don't we agree with it or what recommendations can we make relative – because DCAC, as Andy has said, is part of the NOAA toolbox. I mean, it is an assessment tool that has been made available. It has been vetted. Do you not trust the folks that have put these tools into the toolbox? I am asking that rhetorically, I am not asking that as a –

DR. BERKSON: There are input decisions that go into what you put into the method that is in the toolbox.

DR. BELCHER: And I get that, and that is what I am saying though is that at this point Andy has presented to us a run. He has assumptions on time series, natural mortality, and the things that are going into it, and at this point why are we not giving him the, yes, we agree with the methodology. I understand the whole not picking the base run idea yet, but giving him more input.

If we are not ready and don't feel that there has been adequate things addressed, why do we not have the ability to give him that information and say that we are not ready to assess it at this point because we don't feel X, Y, and Z have been addressed. We have done that in the past with other analyses that have come to us.

They go back, they do some of those changes, it comes back to the SSC and the SSC agrees or disagrees with what has been put forward. I just kind of feel like we are almost stopping the process. We have got an act of good faith in front of us and I feel like that we are just kind of, I don't know, not so much that we are dismissing it, but I just don't think we are giving the credit where credit is due for the act that has been in there.

If we have serious reservations or things that have not been addressed, I think it behooves us at this point to provide that level of review to Andy for it to be worked on as opposed to – we need to work a process as well, but I still think that we shouldn't stop what is in front of us just because we don't have a front-end review.

We should have thought about that as we were asking for this, because we did get it. We got it within a year. This would have been a problem if they presented it to us three months from now, because we still don't have the review process, and we didn't realize that it was an issue until the data comes in front of us. I am kind of – I don't know, I wrestle and I hear everybody's comments, but I really feel like we are kind of just pushing it away from the table at this point.

DR. BARBIERI: Madame Chair, I think I understand your point. What I heard here today is really more a process-oriented type of concern than anything else. It is the fact that we are going through this growing pains of sorts that we are switching or demonstrating a willingness to switch from perhaps a little more ad hoc type of approach on how we look at this analysis to having more of a formalized process in place.

Where we say, listen, we are going to set this up as part of our review process that we are going to have this subcommittee of the SSC review every single analysis that comes before us that doesn't really meet the standards that we have been accustomed to basically through the SEDAR process; either that or the Science Center provides a formal review for us with a little review report or whatever.

That is what I am hearing from the committee, and I am not opposed to that. I think that this could be positive is provide structured type of process for review of these types of analysis. Hopefully, there will be many more coming our way, because it is something that we need to best inform our recommendations.

DR. STRELCHECK: In regard to the peer review, I guess one of the things I would suggest you think about is whether you want to be involved in every one of these peer reviews or you want the Science Center to be providing formal comments input on a particular analysis that has been completed for you to review at that point.

I could see this becoming very cumbersome with a lot of subcommittees being developed over time, and just be careful what you wish for potentially. I think that is where we might have dropped the ball on this one in that we didn't have written comments to deliver to you. Certainly, we did have internal review ongoing and input was received and addressed, but we don't have that in front of you to take a look at and for you to feel a little more confident that we have done our homework and been able to dot our i's and cross our t's along the way. Keep that in mind.

DR. REICHERT: I agree with everything that was said about the peer review; so for the sake of discussion I would like to suggest that the SSC, until that peer review is complete, adjust the ABC to 298,000 pounds, and then we can discuss that, since I still feel that the 250,000 that we based our previous discussion on was actually based on less information than we have now. I think that goes back to the point Scott made earlier, so for the sake of discussion I just want to bring that to the table.

DR. BUCKEL: Yes, I am comfortable with that for the reason that Andy just mentioned. When we first started talking about Tier 2 and Tier 3, I thought that was something that we were going to do here on a spreadsheet, so the fact that the Science Center did this and did such a thorough job and got input from the Southeast Fishery Science Center, I think is great, and so I am happy to agree with Marcel to go with the 298,000 from Run 2 which Andy has mentioned and you supported probably the base run.

DR. STRELCHECK: I would just say based on the parameterization of the model, those seemed to be the most realistic parameters given all the information being taken into account.

DR. BARBIERI: Marcel, I ask you to reconsider that suggestion because that might put us in a procedural sort of tight spot here, because what is going to happen is if we are going to have this peer review and we make a recommendation for the council now to change the ABC, but then we come back in April and because the analysis may be revised slightly, that number may be different than the 298. It would create a complication there.

I think that if we agree – I mean obviously we all agree that this analysis was well done and sound. It is just a matter of having the time – and I take Steve's points seriously – having the time to really look at this carefully and evaluate all the decisions that went into this carefully. If that is the case, that is all we need to do basically, and we are looking at this analysis for the April meeting. I think it would be easier to then postpone that decision to April than to have it done this way.

DR. BERKSON: I couldn't support that because of the precedent that is involved. Once again, I keep thinking of other scenarios, and I am thinking, for instance, what if a faculty member from another university has done an analysis like this, comes in, and says I have done everything right,

we have no reason to doubt them, we haven't conducted the peer review, but their best case scenario, their base run that they are suggesting comes up with a higher number.

Would we in all cases, whether it is the faculty member, grad student, undergrad, whatever, would we say we are going to go with the higher number? I am not quite sure where we draw the line which is why the peer review is necessary.

DR. BELCHER: I am going to ask an extremely rhetorical question and it still focuses back to John Boreman. At what point at this table are we not performing peer review? At what point at any of us sitting around this table, as we get scientific information coming across in front of us, when are we not providing peer review and when are we and how do you determine that?

DR. BARBIERI: Madame Chair, to that very point, I agree with you, but I think some points that Steve and Jim made I think are spot on. Is the fact that if this had been through a SEDAR type, a pre or like John Boreman mentioned for the Mid-Atlantic Council, had been through a process previous to this meeting, they could have made some suggestions or evaluated.

Like any other SEDAR review, you ask for additional runs, you look at additional sensitivities, you suggest different ranges in parameter choices so you can change there how the model configuration is set. There are several things that can be done and I think what he is saying is this, yes, we got a document, and we got a presentation. Obviously this was very well done; there is no doubt about it. I am not putting that in question in any way.

But it is to formally – because there is a formal process where we would be given the choice of discussing all of those details about the windfall biomass reduction, which one of those is the best, is there a best one, or does that represent an envelope or all plausible. Andy, during his presentation, he made a point of saying that all the 18 runs he felt were plausible runs. I think didn't you make that point?

DR. STRELCHECK: Well, I did. but then I guess I responded to Steve's comment about the lower natural mortality run that was unrealistic.

DR. BELCHER: So again, formal procedure; we are in a formal operation right now. What is stopping us from providing him with the feedback that you are saying that right now we seem to not have the process to be able to do that?

DR. BARBIERI: Nothing, and we have done that. I don't disagree with you, and you as the Chair I think would have the discretion to lead the group in that direction if you see fit. For example, we formed last August, I believe, or maybe it was last April, but we formed like a little subgroup of the SSC.

They stayed after hours with Kyle, right, and we actually looked at all the model diagnostics that came out of the red snapper and we narrowed down the range of plausible runs that we felt these are the plausible runs. We discussed the headboat index time series and how that could have influenced the outcome of the assessment, and we made that recommendation to the council, but

that was done after hours, remember. Yes, if you would like to see that done here, Madame Chair, let us know.

DR. BELCHER: I am just trying to get the group involved in this process because I feel like, again, just going back a couple years to the arguments of this SSC as the second level of review for these assessments and the debates back and forth about what is the SSC's process relative to the review of the review. Now it is almost like we are asking for that removal again from this process, and I am just making sure that as a group this is where everybody wants to go.

I am just saying that to me I feel like there is a formal process here. We are setting up the arena, just like you are saying, okay, subgroup today. Andy says he can run this right now. If you give him enough information, it is a sidebar that he could go and run this. I am throwing it to the group. I don't want to drive the bus, but I just want to help us all get to the common goal and make sure that we are not inappropriately pushing something away that we have within our abilities right now to address that issue. That is all I am seeing is a thing. I just feel like we are kind of pushing ourselves and trying to remove ourselves another level from the review.

DR. CADRIN: Yes, going for that, if we are going toward where this is a peer review, I have got a few questions. On Page 11 of the DCAC report, the conclusion here is that it appears that ABC for wreckfish could be increased by 19,000 to 109,000 pounds given a windfall biomass. What this report comes in short of is a recommendation.

What we would need to do is choose among these runs to see how much it could be increased between 19,000 or 109,000, and we would need to come up with those determinations. More detailed, what I have is I noticed that the CPUE analysis in the Vaughan et al report that is based on the top five vessels has actually a slightly different perception of the depletion that you would get from that.

How is the GOM better than that? We had heard that the GOM and the CPUE analysis might be something that we need to look at that Andy had suggested. Can we see the details of the catch standardization? What proportion variance did it explain? If we are going to use that CPUE depletion as a proxy for the depletion of the population, we need to discuss that. I am wide open to having that peer review here today, but those are the kind of details that we are going to need to get into.

MS. LANGE: I think that is a good approach. Going around the whole table, Jeff made a comment a little while ago, and I forgot that. We did talk about going through the Tier 2 and Tier 3 at the table here as a group; and for the actual analyses to have been conducted for us, it should be fairly straightforward for us as a committee to say, okay, check the boxes. You applied the methodology appropriately.

To be able to have a small subset of members meet with Andy and go through to confirm that they agree with the methodology that he used and the adjustments; if we can get that done tonight or overnight or for tomorrow, that would be wonderful. I think it is not like setting a new precedent; it is addressing how we planned on going along right from the start.

It is just that some of the background work has been done for us. I don't see that – again it is not a full-blown assessment that needs a full SEDAR review. A subset of the committee should be able to spend the time to just look through and make sure that the appropriate steps and questions have been answered and then report back to the full committee. We have volunteers who are capable and seem willing to do that.

MR. CARMICHAEL: I think that would be a spectacular plan, and there has been a lot of talk about the SSC's role in terms of these outside assessments. As I mentioned, the steering committee looked at it and because it seems to be some of these gray areas seem to be occupying a lot of our attention, I want to see what they said in particular. I think the track that we are on is completely consistent.

It says non-SEDAR assessments should be presented to the SSC, which we have done. The SSC will evaluate their merits and recommend for in-depth review if appropriate. The idea was, as I said earlier, the SSC provides essentially the first line. It was discussed at the steering committee with the regional office and the council members and the Science Center director there saying that that might mean that the SSC says we want the Science Center to be involved in this and review this and check the data.

It really comes down to what the source is. If it were from an outside source such as a university and you didn't know that Science Center staff was involved in providing the data, you didn't have that stamp of approval to make sure your data were complete and accurate, then that would require a different type of review than something where agency people are involved and you take with faith that they have the right data, especially when it is confidentiality concerned, as you know John mentioned that earlier.

I think by doing this and talking about how you are going to handle this analysis, you are completely on track with what is expected, and that also lays out that it is intended to be kind of a two-step process. It would be great if we can handle the two steps within one SSC meeting. That may not always be the case.

I had taken notes earlier in the discussion today that I think in April we need to have a discussion about how you guys want to handle it and who wants to sort of be in charge of saying, wow, this is going to be involved, let's convene a subcommittee before the meeting if there is time to try and get it. It puts alert out to people doing analysis that if you want to submit something for SSC peer review and it is pretty involved, you are going to have to do more than the two-week lead time, because, it may require that they get some people together and chew it up and meet with you.

In some cases it might require two months if you want to put an analysis like this and have it get the final stamp of approval at a meeting. I think let's look ahead to talking about that stuff in April; and if a group of people can get together this evening and chew on this a little bit and maybe come to a conclusion, that would be great.

DR. BELCHER: Any other discussion at this point relative to the wreckfish analysis.

MR. CARMICHAEL: Is the committee going to try to meet today?

DR. BELCHER: Do you all want to try to form this? I mean, obviously there are a few of you that have already agreed to volunteer. Is everybody willing to get with Andy? Are you here? We might want to find that out first; he might be running from the building. Is everybody that has volunteered willing to sit down?

DR. CADRIN: How will that be conducted; should those of us who volunteered go through these documents between now and tonight? We will get together, ask questions, do we have a room?

DR. STRELCHECK: To the extent that you are within the agency or a state partner, I think we could look at confidential data at that point as well, so think about who is on the committee for that reason and you could see more information than what necessarily would be provided on a screen.

DR. CADRIN: I may have to step back then.

DR. BELCHER: I was going to say but your points to the biomass depletion and that, there is definitely – and that may just be at this point the best we can do, because I don't know how many of us have confidential access for all states involved in that, and I really don't even know what my level is anymore.

MR. CARMICHAEL: You need it for the Science Center. If you have clearance through the Science Center, you are fine for this thing.

DR. BELCHER: So obviously Jim would be okay.

DR. BERKSON: I would be happy to serve. If we get the committee too big, they won't be as functional especially if we are trying to do something quick.

DR. BELCHER: I guess more pertinent to the point is who all has Science Center authorization for confidential data?

MR. CARMICHAEL: Luiz, do you?

DR. BARBIERI: I don't know, to tell the truth. I should.

DR. BOREMAN: What is the rush? Why are we trying to compress all this work into a few hours? It sounds like we need to take a breath and step back and now revisit the documents with the idea in mind we are going to do a thorough risk peer review of the documents. I suggest as an alternative we stick with our current SSC ABC recommendation and have this working group meet between now and April and come back in April with their recommendation.

DR. BARBIERI: Which had been my recommendation exactly, John. I agree with that because I think it would be more conducive to the types of analysis and less ad hoc type of a process.

DR. BERKSON: Well, the other option is having a conference call and not having to wait until April. I think I bring this up every meeting that I have been to, which is our agendas seem to be so long and they are getting more and more complex, and I am still wondering how we are going to do everything we need to do with two meetings a year.

If we start reviewing these kinds of analyses on top of it, it is going to get even more cumbersome. I have to make my every meeting comment that I don't think we are meeting enough, which is always popular. I don't see why we couldn't have a conference call in four weeks or something like that or whenever the subcommittee could get their work done.

DR. STRELCHECK: The question was asked, well, what is the hurry. I don't think there is necessarily a hurry, but in the other aspect I am not sure why delay for five months for a peer review. I get back to my point earlier, which is with the exception of the CPUE index, I just don't see a lot here to discuss.

I just really don't. I mean, there are some fundamental decisions that have to be made and one of the points that you raised, Steve, is well there is not a base run recommendation. Well, that was purposeful. The analyst and the Science Center, we're not in the position to where we wanted to make a recommended run.

We wanted to give you the information to help guide the SSC in making that decision. With that said, certainly it is up to you to wait until April and have a more thorough peer review, but I think that peer review will ultimately entail primarily the analysis of CPUE and whether that is appropriate for gauging the biomass reduction.

DR. BARBIERI: Well, based on what Jim brought up, let me correct that recommendation of April. I was just thinking about the times that we meet in person. Since this is the last meeting for the year, our next meeting is going to be in April. That is why April came up as the next time that we would look at this. Jim made an excellent point; there is no reason whatsoever why we couldn't give ourselves a month or so, a few weeks to look at this. We could have a conference call and get this resolved. That follows the process and if Madame Chair is agreeable with that plan.

DR. BELCHER: Like I said, I am just trying to try to see what process we can do this. Just like I said for every argument we have gotten, I am still failing to segue how this group doesn't act as a peer review. But, again, it is all in what the group feels is the best way. I agree that there needs to be some degree of how we are going to approach this in the future, and again hindsight is always 20/20 and we go ahead and we push this forward and in good faith we have a step forward, and now we are taking a step back again.

I am just trying to make sure the group is looking at it from formal process sits in this room, and if there are a lot of questions then I agree that we can bump back and say that at this point it is not reviewable for us. We have other things that we think you need to address.

As Andy was saying, there may not be as much to really ruminate on in the next three to four weeks other than is that CPUE depletion a good proxy for your biomass depletion. Like I said, I

am neutral ground on this. I was just trying to make sure everybody was thinking about the process the same way that I kind of view it, which could be wrong and you all can correct me and dress me down.

DR. BOREMAN: Well in light of what Andy says, and I have no reason to argue with what he brought up, why doesn't this group give it the old college try and see how far they can get. They can come back tomorrow and say we are happy, then we can move forward. Then we can focus on my second question is, all right, given the analysis, should we revise our ABC?

DR. BELCHER: With that, we will kind of table this until the group can get together with Andy and talk about the alterations, if any, that will be made. At this point I am going to go ahead and recommend a ten-minute break and then we will come back and talk about Amendment 20A.

DR. BELCHER: Before we get started on 20, Steve Cadrin has requested that the folks who are willing to subgroup and meet with Andy about the analysis – first off, who is going to participate, can I see hands? I've got Jim; I have got Steve, Luiz, Yan. I am asking for a volunteer for someone to kind of act as the lead just to kind of help keep things on track.

MR. CARMICHAEL: How about the ranking SSC member, the Vice-Chair?

DR. BARBIERI: Be glad to, Madam Chair.

DR. BELCHER: Then Luiz will help funnel everyone in a direction. Okay John, did you still have something?

DR. BOREMAN: Yes, related to our previous discussion, maybe under other business tomorrow I am going to propose that the SSC adopt a recommendation to go to the council on procedures for remands of ABCs back to the SSC. I am going to propose that as a starting point for discussion that we use the Mid-Atlantic's standard operating procedures, which have been approved by our council.

DR. BELCHER: I think that is easy enough to accommodate.

DR. CROSSON: Because I have not been on the Mid-Atlantic SSC for over a year now, John, is part of the standard operating procedure for that SSC dealing with its council deal with the difference between something that comes from NOAA in terms of –

DR. BOREMAN: It just says that the SSC can act as a peer review body.

DR. BELCHER: Okay, any other comments? All right, Kari, the computer is yours.

DR. MacLAUCHLIN: This is the Wreckfish Amendment. This was Amendment 20 probably the last time you saw it, but the council split it into A and B so that they could put these four actions in A. Then everything else will go in the 20B. This all is about the Wreckfish ITQ Program and updating it and making some changes and bringing it into compliance with the Reauthorized MSA.

In 20A there are four actions and the first one is to define and revert inactive shares. Then the second one is redistribute the shares like a reallocation, and the third one is a share cap, and then the fourth is an appeals process. This is something that the council wanted to do because of the change in the ACL from that 2 million pound TAC that the ITQ program was a part of.

The first action defines and reverts inactive shares. There are three alternatives There is a no action alternative and then Alternative 2 defines inactive shares as those belonging to a shareholder who has not reported wreckfish landings in the past two fishing seasons. Alternative 3, which the council selected as the preferred at the last meeting, defines inactive shares as those belonging to a shareholder who has not reported wreckfish landings in the last five years. There have been a few transfers.

I recently got the new information from it, so Alternative 2 would leave six shareholders and revoke shares from fourteen shareholders, and this would put 41.4 percent of the shares back into like a redistribution pot. Then Alternative 3, the preferred one, would leave seven shareholders. There would be thirteen shareholders who would have their shares revoked, and it would make available 28.2 percent of the current shares to be redistributed.

DR. BELCHER: Since there are four instead of fifteen, we can hit them one at a time. I know the SEP had this as one of their agenda items, so John will be giving us an overview from their perspective on that, so we are going to start there.

DR. WHITEHEAD: The SEP recognizes that the desire to revert and redistribute shares is intended to facilitate the continuation of current fishermen at their recent levels of activity in a fishery that does not appear to have any biological issues. This is a goal with significant merit. There are lessons to be learned about the importance of biological data on setting quota, but this problem should not be solved by changing the existing catch share program.

The SEP does not support defining and reverting inactive shares in situations where shares are transferable as this would likely undermine the property-right nature of catch shares, increasing uncertainty in the fishery. Existing and future share owners may be less likely to invest or maintain investment in the fishery if the security of share ownership is uncertain to this fishery and others where the council chooses to implement catch shares.

Share owners may choose not to exercise their right to fish for a period of time for a variety of reasons, including illness, temporary cost increases, for example, fuel cost, or temporarily depressed dockside prices. Inactive share owners should not be penalized for foregoing their right to fish in situations where fishing may not be profitable for them.

The SEP supports council actions to facilitate transactions between willing share buyers and sellers such as reducing transactions cost; for example, helping buyers and sellers find one another and negotiate share prices. If shares are transferrable and have value, there is an incentive for inactive shareholders to sell their shares to active shareholders or new entrants into the fishery.

Potential new entrants into the fishery from the commercial snapper grouper fishery may value the wreckfish shares more than the current shareholders who would receive redistributed shares without having to purchase them. The redistribution of shares as suggested by the council would lessen economic rather than increase it. As you all can tell, I was reading from the report that was e-mailed around earlier today. I might add that we feel very strongly about the redistribution of catch shares in this way. We feel very strongly negative about that.

DR. BARBIERI: I don't have anything to add to what John just brought up. I just want to make a general comment in terms of the process of SSC operations here functioning. I think this is the first meeting that we have had the SEP meeting adjacent to the meeting of the SSC, and I have to say so far it has been great the input that – you know, having that pre-meeting where you guys get together and discuss more specifically what the socio-economic issues are and then bring that input to the committee as a whole. I think it has been a phenomenal improvement in the process, so I want to thank the SEP members for going through the extra step. It has really added to the process.

DR. MacLAUCHLIN: One thing about the shareholders that are going to be defined as inactive – and Andy just mentioned this to me – is that some are deceased and I don't believe there are any rules specifically about what happens to shares and everything, and then some haven't been contacted, but I think this could also be a part of facilitating a market that John was talking about.

DR. BELCHER: Any other comments or points folks would like to make relative to Action 1? Okay, seeing none, Action 2.

DR. MacLAUCHLIN: Okay, Action 2 is redistributing these reverted shares to remaining shareholders. At the SEP meeting we kind of debated even discussing this because they had just made a recommendation to not revert the shares at all, but we did talk about it a little bit. There are four alternatives for this one.

Alternative 1, no action; Alternative 2 uses a formula of 50 percent equal allocation and 50 percent landings history. This is the same formula that was used originally for allocation of wreckfish shares. Then there are two options, which is to use landings history for the past two years or landings history for the past five years.

Alternative 3, which the council selected as the preferred alternative in September, redistribute shares based only on landings history either for the past two years in Option A or the preferred Option B, which is using landings history in the past five years. Then Alternative 4 would redistribute the reverted shares based on the proportion of remaining shares held by each remaining shareholder after inactive shares have been reverted.

I know this language is maybe a little confusing, but basically it is going to be instead of your landings history, just how many shares you held; so if after shares are reverted from inactive folks, then if you had 20 percent, then you would get 20 percent of that pot.

DR. BELCHER: Comments relative to Action Item Number 2? John, did you guys have anything specific for that?

DR. WHITEHEAD: Nothing is included in our report, but the different alternatives there has very little effect on economic efficiency and it is mostly an issue of fairness.

DR. BELCHER: Does anyone else have any comments that they would like to add to that?

MR. COLLIER: I am just curious on the time series, why that short time series was selected as opposed to a longer time series. Are you just trying to make sure the inactive people are not considered in this? Is that a time period when a lot of people dropped out? What happened and what are the reasons for selecting these times?

DR. MacLAUCHLIN: Well, we did have a ten-year option in there, but there really was no difference between people who had not fished in ten years than in five years. Then using that two-year period was because we have new entrants that have just started fishing in the past two years. It was to consider an alternative that kind of put everybody in the past two years on the same playing field, I guess.

DR. BELCHER: Is everyone okay with that explanation? I guess so. Anyone else, comments, questions? Okay, Action Item Number 3.

DR. MacLAUCHLIN: Action 3 establishes a share cap. This is a requirement for any limited access privilege program in the Reauthorized MSA. There are six alternatives; a no action alternative and then a 15 percent share cap; a 25 percent; a 49 percent, which is the preferred; a 65 percent or defining the share cap as the percentage of the total shares held by the largest shareholder after the shares get redistributed.

Right now under one of the alternatives, there would only be six – Alternative 2 as of now is not going to be a viable alternative because it does not add up to 100 percent. This is an issue with the share cap. When it was considered, there were more people who are going to be still in the fishery and still holding wreckfish shares.

Then also there was some talk about the 49 percent, and actually one shareholder who under the preferred alternatives would receive a little more than 49 percent, but after there has been some redistribution from some transfers, recent transfers of shares, there is no one over the share cap anymore.

DR. WHITEHEAD: Reading from our report; the SEP does not support establishment of a share cap because there are many substitutes for wreckfish available in the market; for example, grouper species. The SEP does not think that aggregation of shares would lead to market power and the ability to manipulate wreckfish prices on either buyer or seller side.

Another potential concern for concentrated ownership is disproportionate influence and future management decisions. If the main concern is to prevent majority shareholders from having a

majority of votes in quota base referenda and a one-share, one-vote rule, then the SEP recommends that rules of engagement be established for that purpose.

DR. BELCHER: Additional comments from the group?

DR. CROSSON: I guess it is a procedural question. I don't have an opinion on this one way or another, but the last time that the SEP met back in February the SSC as a whole endorsed the recommendations of the SEP and forwarded them to the council. Is that something that the SSC wants to do with these recommendations since there has not been a lot of discussion from the SSC?

DR. BELCHER: Yes, I guess I will kind of fall to the group. I think some of that absence of that adding or taking away from it pretty much concedes to that comment standing for the group as a whole. I am assuming again, throwing it to the group, that if someone were to not agree with that statement, that would come to the floor and there would be a discussion about that. If I am wrong on that feel free to again set it straight. But that is kind of unfortunately how this is going. It seems like in absence of any other comment it –

DR. BARBIERI: No, I was just going to agree with that. I think this is a model that whenever we have the ability to follow, I prefer having John or someone else from the SEP actually read out loud and put their recommendations formally before the full committee. If we have a point of disagreement or whatever, we can voice our concerns right there and then they get captured by our meeting notes and recommendations. I think this is an efficient way of evaluating the SEP recommendations.

MS. LANGE: These are really allocation issues and management issues and not really biological issues. It is not related to the status of the stock or impacting the stock. It is strictly the industry. I think personally I would defer to the economists for advisement from us.

DR. BELCHER: Is everyone pretty much in agreement with that? If anybody thinks that is the wrong way to proceed procedurally, please speak up.

DR. WHITEHEAD: A quick correction, there are economists and other social scientists on the SEP.

DR. BELCHER: Okay, so any other further comments or points of discussion?

MR. COLLIER: I guess the only thing I have about this is it doesn't match the golden crab that is going under a LAP Program as far as how you are going to divvy up the shares. It is just nice to be consistent among programs if that is truly what you want to do.

DR. BELCHER: Other input from folks on that?

DR. STRELCHECK: We are developing a golden crab program; whereas this one is already in place. There would be inherent differences in terms of how the allocation would be distributed or the shares would distributed, because one reverts shares while the other distributes it entirely.

DR. BUCKEL: I was just curious on the reason for this share cap, because in the paragraph that you guys wrote up you basically have two different potential reasons that the share cap might be being considered. One is the voting ability and then the other one is actually the market. I am just curious what the council was thinking there.

DR. MacLAUCHLIN: Well, a share cap is required by law. They have to define excessive shares, and they can do that. They can make it as high as they want; there just has to be a justification for it. In some cases it is an economic reason where you don't want market control and then sometimes it is a management objective, which is why we have some that are over where you can own more than half.

DR. BELCHER: Additional comments or discussions? Okay, Action Number 4.

DR. MacLAUCHLIN: Action Number 4 is an appeals process and this is with similar language as what is in the golden crab amendment that you will see, but then also with the black sea bass endorsements and everything you always want to have some way in case there is an issue or incorrect information. Basically it has a no action alternative. Alternative 2 is the preferred alternative, which allows the Regional Administrator to render the decisions. And then we have three subalternatives that specify a set-aside that will be used for appeals.

The council selected 5 percent of the wreckfish shares will be set aside to address any appeals that come up. Alternative 3 is similar except that a board will be put together and they review and evaluate any appeals and then they make recommendations, but the Regional Administrator will render the final decision. That alternative also has the three subalternatives for set-aside as 3, 5 and 10 percent.

DR. BELCHER: Comments on that? Okay, so any input on overall?

DR. MacLAUCHLIN: Just to let everybody know the timing for this one, we are going to public hearing next week and then the council will hear all the recommendations and public comment and everything, and they plan to submit for secretary approval in December. This one is intended to be implemented at some point in 2012 in the spring, so this will be the last time that you see this.

DR. BELCHER: Any general comments folks have relative to Amendment 20A? SEP have anything relative to the amendment as a whole, John? All right, thank you, Kari. When Myra comes back, we will do Snapper Grouper Amendment 24.

DR. WHITEHEAD: Can I say one thing? This wasn't in our report, but actually I talked – the rest of the folks may not agree, but if the council is going to take shares away from people who have not been fishing, then it would be preferred to auction those off to existing shareholders and redistribute the money to those who had their shares taken away from them. That wasn't one of the alternatives so we didn't include that in a report.

DR. BELCHER: I appreciate that added comment. Myra is going to present the Amendment 24 action items. Do you want to do one by one? We are going to go one by one and address these.

MS. BROUWER: Okay, Amendment 24 establishes a rebuilding program for red grouper. This has to be implemented by June 2012 to be in compliance with the regulations. I believe you have already seen this amendment in November of last year, and so the timing is this already went out for a short round of public hearings.

We never got to Florida because we had to cancel them because of the hurricane. There is going to be another round of public hearings scheduled for next week. We will finish the public hearings on this amendment then. The council will then review those comments at the December meeting, make whatever changes are needed to the amendment, and then approve it for submission to the secretary.

I am just going to walk you through the actions. This is the public hearing summary that I am projecting. The first action is to establish MSY. There are just two alternatives, and the preferred is to set MSY equal to the yield produced by FMSY or the FMSY proxy, and those are recommended by the most recent SEDAR or the SSC. There is a mistake on this page. The current FMSY should be 0.189, so I need to correct that. I don't know if you guys have anything to say about this action.

MR. CARMICHAEL: I expect you have already commented on this. You have recommended the MSYs and stuff when you talked about the assessment, which is some time ago, so I say at this point it would be – you know, looking at how everything is presented, do you have anything else to add to that. We don't have to have you go through them if we are going t o say, yes, that is our MSY and we agree with it.

DR. BOREMAN: Let's see if I am interpreting this. This recommendation is not to set the FMSY equal to 0.221. It is set it at whatever the recommendation is from the SSC. Okay, so having the numbers up there, it may be misleading.

MR. CARMICHAEL: Right, the numbers are showing what it is now, but the action would be the FMSY as estimated by the most recent; yes.

MS. BROUWER: The reason for that is just so that the council doesn't have to go through a plan amendment to change those parameters after each assessment, so it is just a formality to make it easier administratively. The second action is MSST, and their preferred is to set it equal to 75 percent of SSBMSY. Any comments on that one?

MR. CARMICHAEL: The SSC commented on MSST for red grouper at an earlier meeting, and this is one of the ones where there was some discussion at looking at some type of alternative that tied it back to times to rebuild and things of that, but it wasn't fully fleshed out and didn't have all the analyses relating strictly to the assessment for red grouper. I think that is why it is not reflected in this action either, but as I recall the SSC has talked about MSST for this stock, like last April, maybe.

MS. BROUWER: Action 3 is a rebuilding schedule and the preferred is to have the maximum period allowed to rebuild Tmax, which is 10 years, with the rebuilding time period ending in 2020 and 2011 being year one.

MS. BELCHER: Comments from the group on that?

DR. BARBIERI: Which my interpretation according to what John had just mentioned, if we don't have any comments, we agree with our previous recommendation. We don't have anything to add.

MR. CARMICHAEL: Right.

MS. BROUWER: Action 4 is to establish a rebuilding strategy and ABC. At 75 percent of FMSY, on your screen are the ABCs that the council is considering and they are looking at setting those levels just based on landings as opposed to landings and discards. Those are the ABCs for years 2011 through 2014 that would be put into place through this action.

The question we had here is something that I had brought up yesterday as well, and I think it also came up during black sea bass, is the whole double jeopardy thing; are these increases in the ABC and the ACL, should they take place if there are overages or should they not, or does the SSC want to recommend to the council that they follow a specific course of action when it comes to that.

DR. BARBIERI: I was just thinking here for the rebuilding strategy, this would take longer than 10 years to rebuild?

MR. CARMICHAEL: The F rebuild would be consistent with what you all said. You had a 70 percent chance of recovery, and that is F rebuild, which is 0.18, and 75 percent FMSY is slightly lower in terms of the exploitation rates, so it should rebuild with higher probability by 2014. I suspect part of that is the long-term strategy would be to manage it OY of 75 percent of MSY is perhaps why they ended up at that level.

MS. BROUWER: The next action deals with allocations, and again the council is choosing to use Boyles' Law to establish the allocation between the commercial and the recreational sectors. Their preferred is to have commercial be 44 percent and recreational be 56 percent. In your roadmap I had just inquired as to whether the SSC would want to comment on the use of Boyles' Law.

Allocations are something that has sort of been fresh in the council's mind. It is something that they will likely have to revisit once the new MRIP numbers come out. I don't know, this might be a good opportunity for the SSC to weigh in on that if you think that is appropriate.

DR. BELCHER: I was going to say I think for some point of clarification can we get kind of the meat and potatoes of what Boyles' Law is. For some of us, we know a different Boyles' Law than what you are referring to, but just for clarification purposes.

MS. BROUWER: I will try to give you some background on that even though I wasn't paying attention to those issues back then. There was an allocation committee that was formed in 2008, so council members of this committee got together and tried to flesh out a way that the council

could come up with a formula basically to establish allocations that would be fair and equitable and would be transparent and everybody would be happy with.

They wanted to use historical catch and recent catch and balance things out. They came up with this Boyles' Law and the reason it is called that is because it was suggested by Robert Boyles, who is the representative from South Carolina, and has been henceforth known as Boyles' Law. That is pretty much the background that I know about it.

DR. BARBIERI: Well, since this has to do with allocation, I think in terms of SSC input really would be the length of the time series used in establishing the historical landings for each one of the sectors and the years chosen.

MS. BROUWER: I guess the concern has been; some council members have expressed some concern about the years that are being used. Because there has been a shift toward more recreational landings in the last few years, the way that this formula works tends to favor the recreational sector more so than the commercial. Some council members would like to revisit Boyles' Law at some point for that reason.

DR. WHITEHEAD: The SEP would like to have Boyles' Law put on our agenda in the future.

DR. BELCHER: John Boreman, do you have a question?

DR. BOREMAN: I just weighed myself and I want to revisit Newton's Law, too. Yes, we had a similar type allocation in the Mid-Atlantic with fluke, and the science side of it is the population center may – because of the history of the fishery, the population center may shift and the availability to the different states may have shifted or different user groups may have shifted over time.

I guess what Boyles' Law is doing is accounting for the historic but saying that in recent years we may have seen a shift in the availability of the stock, so take that into account, too, and weight that into the formula. Other than that, I don't think the SSC can – other than the scientific basis, I don't think we can really comment on the allocation. It is a political answer, I guess.

MS. BROUWER: The next action is establishing ACLs and OY. Here again I understood what you mentioned this morning when we were talking about golden tile that perhaps you would like to recommend that the council not set OY at the same level as ABC for species that have a stock assessment. Do I recollect that correctly?

DR. BELCHER: The problem is that quantitatively they are not the same number. I mean, they are independently calculated and therefore one is not a function of the other. You either override the ABC Control Rule by using OY as the equivalent for ACL and ABC, or ABC would override the calculation of OY from the assessment based on what the ACL equal OY equal ABC statement is.

MS. BROUWER: The guidance we received from the council in September – and here I go again bringing up the same issue – is to include language in these alternatives that would specify

that ACLs in 2013 and 2014 would not increase automatically in the subsequent year if present year projected catch has exceeded the total ACL. Again, we were given guidance to add this language. The fishermen are not happy with that and we would like to know what the SSC thinks about that.

MR. CARMICHAEL: Part of that might depend on what automatically means. Does it mean that they would not absolutely or would it mean there would be some process by which someone would evaluate the overage and decide if there should be an increase; and then if so, somewhere along the way this process needs to be derived. There is no process so it means they will not increase, period?

MS. BROUWER: I believe that is the guidance that we have received from the council. If they go over by 5 pounds, like you were saying yesterday, then they don't get the increase in the ACL for the next year.

DR. ERRIGO: Also there are paybacks in this fishery since it is rebuilding. That is where the double jeopardy comes in. Not only do you not get your increase but you also have to pay back the overage that year.

DR. BOREMAN: I am a little lost here. Aren't we talking about an accountability measure then? If we exceed the ACL, there is a penalty; you get your wrist slapped and you can't catch more than that the following year. But again, I agree with John, the automatic increase – ACL is a function of the ABC. And if the ABC is calculated as F times some spawning stock size, then it is very likely that the ACL would not increase anyway automatically in the following year. It depends on stock biomass and its relationship – whatever is being used to calculate the ABC. I am lost, too, on this one.

MS. BROUWER: All right, so up on the screen there are the ABCs and consequently the ACLs that the council would adopt. If in 2012 landings are 680,000 pounds, they would then not get their 718,000 in 2013 and they would also have to pay the overage from 2012. That is what it is referring to.

DR. BOREMAN: So these are already calculated out based on some projections from the stock assessment. Okay.

MR. CARMICHAEL: The overage would come from – under this scenario since there is no increase, the 80,000 pounds overage that you referenced, say, from 647 in 2012 would then be taken away from the landings that you actually had in 2012, so they would go down to like 60 in 2013.

Then if they went over 560 in 2013, when they could have been fishing at 718 given that F, which seems pretty likely given what we have seen in things like the fixed harvest scenario, how well that has worked for black sea bass, you would probably end up now in this downward spiral and you would never get over 647.

MS. LANGE: The reason that the overage occurs is primarily because of the inaccurate, untimely data? Is this punitive?

DR. BARBIERI: This is also the nature of an open access recreational fishery, a large recreational sector for this species that is hard for you to really have that information on a timely basis. I don't know how we would resolve that in the short term, but I wonder if this would be an opportunity here at this point to make the same type of recommendations that we made I guess for golden tilefish earlier today; specifying the expected degree of management uncertainty that we have here considering the nature of these fisheries for red grouper and that having ACL equal to ABC is very likely to cause overages, to have the fishery actually blow their ACL.

Again, another opportunity to make a suggestion that instead of having this punitive system where people are being penalized, they set up an ACT with a trigger that would better manage the stock and give some forewarning to fishers that they are approaching the levels that they shouldn't be going over. Isn't that basically the nature of what we recommended earlier for golden tile? I think this is consistent to me with this thinking that we applied earlier today for golden tile.

DR. BELCHER: Other comments from folks. Okay, Myra.

MS. BROUWER: Okay, this same action would also eliminate what is currently on the books for the aggregate ACL that includes black grouper, red grouper, and gag. The Comprehensive ACL Amendment, when approved, will establish an individual ACL for black grouper. There is already one for gag, and so this amendment will take care of establishing the individual ACL for red grouper and then do away with that aggregate and the corresponding accountability measures.

This table here shows the red grouper ACL at 647,000 pounds. Based on their preferred allocations, the commercial sector would get 284,000 pounds and the recreational sector 362,000 pounds. Again, the commercial sector would not get an ACT. The council is being consistent with that, so their preferred is no action. I will just keep going since all these are tied together. The ACT for the recreational sector would be specified using the same formula that they have chosen to use for other amendments.

DR. BOREMAN: Just a word of caution again, and I guess this applies to all the recreational ACTs that are based on 1 minus PSE; PSE is probably going to go up for all species under MRIP, so it is not as rosy a picture as you might think if you are looking at the current PSEs.

MS. BROUWER: Those are the preferred ACTs for 2012, 2013 and 2014 based on all the other preferred alternatives. Then the commercial accountability measures would be to prohibit purchase and sale of red grouper if the commercial ACL is met or predicted to be met and limiting possession to the bag limit; and if the ACL is exceeded, then the RA would publish a notice to reduce the ACL in the following year by the amount of the overage.

Since red grouper is overfished, there is a payback. Based on 2010 landings, we are looking at a possible closure of the commercial sector in 2012 based on those landings. The commercial catch in 2010 was 327,000 pounds and the proposed commercial ACL is 284,000 pounds.

DR. BELCHER: I guess we don't have any estimates of overages because this hasn't been implemented yet, right? Is there any indication that overages could be as high as they are for something like golden tilefish? I guess that is kind of, again, that kind of floated out there; is there any reason to believe that you would be more on target with that species than you would black sea bass or golden tile or whatever?

DR. BARBIERI: Myra, back to the ACT alternatives or action, what is the purpose of the ACT? Why is the council actually specifying – Action 8 is to specify recreational annual catch target, and Action 7 is specify a commercial annual catch target. What is the council trying to accomplish with this action?

MS. BROUWER: What I understand from their discussions is the council is using the ACT and they are calling it a soft target, so basically it is a red flag that puts them on alert that maybe they should be thinking about management measures if the landings are fluctuating too much above the ACT. But there are no accountability measures that are tied to the ACT; they are choosing not to tie any management actions to the ACT.

DR. BOREMAN: Just another comment looking at these numbers; being that we are the SSC, I think we should advise the council to avoid giving a false sense of precision to their management here. I mean, we are down to an ACT down to the nearest pound. Dealing with the uncertainties that we have, that is pretty good if they can have that little management uncertainty given the scientific uncertainty. Well, the ACLs are to the nearest 10 pounds it looks like. I think some statement should go forward about giving a false sense of precision to their numbers unless they want to manage to the nearest pound. I don't think that is their purpose.

DR. BELCHER: I still think without knowing what the overages are, even to say 85 percent of your ACL says that you would expect overages not to be that great because you are giving yourself a 15 percent buffer, and yet some of the other ones we are talking about a much larger buffer. It just kind of – I know in absence, but I would think you would want to be a little bit more risk averse.

DR. JOHNSON: Yes, I would agree particularly if they stay with this sort of double jeopardy situation. You could be one pound over and all of a sudden send yourself into a downward spiral. The next year you are down not only that – I mean, you are down 110,000 pounds or something for the next year and you are almost assuredly going to potentially go over again.

MS. LANGE: With black sea bass we were talking about overages of 150 to 200 percent. I believe we are talking about the same data collection programs. Why are we so sure that these numbers – I mean, there was no ACT for black sea bass because they couldn't monitor it that closely. Is this stock so much different that we are monitoring it differently and therefore we feel comfortable or the council feels comfortable setting an ACT? It seems as though it is contradictory.

MR. CARMICHAEL: I think you have the situation that was mentioned earlier, too. The ACT is just a number on paper. If you look at the later accountability measures, the accountability measures are all tied to the ACL and then potential closure I guess if the ACL is projected to be met.

There is nothing n this amendment that proposes bag or size limit changes that are intended to achieve the ACT. It is simply that you go on fishing under the current bag, size, and seasons and if it looks like you are going to reach the ACL they will take action to close the fishery.

MS. BROUWER: But the council is looking at landings in 2010. The recreational landings have been so far below the proposed ACL that they didn't want to consider any management measures. It seems like the measures that went in with Amendment 16 were enough to constrain the landings to keep them well below that ACL.

Now for commercial is a different story, but the council has been consistent in assuming that in the commercial sector the existing quota monitoring system is better than on the recreational sector, so therefore there is less management uncertainty and therefore they don't need to set an ACT; whereas for the recreational sector they have been consistent in choosing to set an ACT for all the fisheries.

DR. REICHERT: But then they set an ACT, but when the ACT is reached there is no consequences, so why an ACT, unless I am missing something?

DR. BARBIERI: I guess I will go as far as adding that to our recommendation to the council that they attach some level of management action to the ACTs that would promote a slowdown or reduction in landings and help prevent the fishery to actually go above what the ACL is.

DR. BOREMAN: In answer to Marcel's question, setting an ACT with no consequence is just a way, to me at least to help develop regulations like minimum size limits, bag limits and so on. That is your target. You are going to adjust your minimum size limit, your creel limit, your seasons, to achieve the ACT. That is why they call it I think a soft target.

MR. WAUGH: That is exactly what the council did here. They looked at the recreational catches compared to the recreational ACL and the existing management measures are sufficient to keep the catches below the recreational ACL, so there is no need to change the management.

DR. BARBIERI: But, Gregg, that doesn't seem to be the case with the commercial sector, the expectation.

MR. WAUGH: Right, on the commercial sector the expectations we have been repeatedly – the council has been repeatedly assured that the Center will have these monitoring system in place, electronic, such that these overages will not continue in the future. I think that is the rationale the council has used in not establishing an ACT on the commercial side.

DR. BELCHER: Does that mean there are estimates of the overage?

MR. WAUGH: For which species?

DR. BELCHER: For red grouper.

MR. WAUGH: Well, right now all we have in place is the aggregate quota, so this is what is being proposed now. What we have done is look at the way the accountability measure is specified is you compare the prior year's catches. We have the prior year's catches. We have the 2010 catches for red grouper. We don't have current year catches for red grouper, so we are using the 2010. It would be nice to know where we are right now, but there is no tracking of a quota until one is put in place, and there isn't one in place yet for red grouper.

DR. BELCHER: Well, I guess that was just when the statement was made about the Center assuring that the overages wouldn't continue with an electronic, to me that says there is an inference that there is an overage going on, but yet nobody has documented it.

MR. WAUGH: I'm sorry, maybe that was how I said it. I was applying that broadly across all our ACTs, and that is why across the board on the commercial side the council hasn't set ACTs for the commercial. They think having all fishermen permitted, having all dealers permitted, and the assurance from the Center that they are about to have fully implemented electronic reporting, that should prevent overages. If it doesn't in the future, then we will have to come back and look at something else.

DR. BELCHER: Other comments, recommendations?

DR. BARBIERI: I think we have made some recommendations already that Mike captured.

DR. BELCHER: That is all of it. Okay, so any general comments relative to the amendment that folks want captured? Brian, are you available to do golden crab? Spiny has got two, doesn't it?

DR. MacLAUCHLIN: To remind everybody and just kind of go over this one, it is Attachment 14. In 2009 there was a biological opinion published by NMFS on the spiny lobster trap fishery, and in there it had some requirements that would reduce the adverse impact on staghorn and elkhorn corals and then also sea turtles and sawfish.

The analysis in the biological opinion, they concluded that continued trap fishing would not jeopardize the continued existence of these endangered and threatened species of coral and sea turtles and sawfish, but that there were some adverse impacts from the fishery. There were some terms and conditions in the biological opinion to help reduce these adverse impacts.

Two of those were these two actions in Amendment 11, and one is to expand or create new closed areas to protect staghorn and elkhorn coral, and the other is to require a color for a gear marking requirement for their trap lines, so some kind of a color or marking of a specific color on the ropes that are on their traps, so that if there is an interaction, specifically with staghorn and elkhorn coral, that it can be attributed to the spiny lobster fishery and they can better fit and

it will improve monitoring and they can be a little more accurate on the impact of the trap fishery on the coral.

Well, these were in Amendment 10, and Amendment 10 had spiny lobster ACL and some other actions in there, but at the June council meeting – it was a joint meeting in Key West – the fishermen came out and they spoke about these closed areas and then the gear marking requirements.

For the closed areas they really had more concern with the process of how these areas were developed and identified, and I guess there were some problems with the data. The councils decided to take no action for Amendment 10 and get Protected Resources Division from the Regional Office to go back and work with the fishermen and other stakeholders from the Marine Sanctuary and Nature Conservancy and kind of redevelop the closed area options.

This is what Action 1 is. In July Protective Resources staff went down to Marathon and met with the fishermen and they showed them these maps and they came up with some new areas. These are in this attachment, and I won't go into the maps and everything. Alternative 1 is no action. Alternative 2 will close all known hard bottom in the EEZ off Florida in depths less than 30 meters.

Then there are two options under there. One is only spiny lobster trap fishing would be prohibited, and then Option B is that all spiny lobster fishing would be prohibited, so recreational and commercial diving. Alternative 3, there are some areas that were identified as these hotspots for elkhorn and staghorn coral, and it takes these areas and puts like a straight line boundary around them.

You can see those on the maps where it is more like boxes and polygons that they used. Then we also have those two options under there; Option A in which all spiny lobster trap fishing prohibited, and then B all spiny lobster fishing prohibited. Then Alternative 4, those closed areas that were identified as these hotspots just have like a 500 foot buffer around them; then those same two options, just trapping and then or all fishing.

At the recent Gulf Council meeting, they were the first ones to see the amendment in its present state here, and they selected Alternative 3, Option A as the preferred. I am not positive on that option, I am sorry, but they did select the straight line boundaries because this is easier to enforce, and there are some enforcement issues with this. Alternative 2, all the hard bottom, that would close about 73 square miles, and then Alternative 3 and 4 close about 7 square miles.

I can talk on and on about this because the Coral AP met recently and the Coral AP is made up – we have a couple folks from – we have one fisherman, marine life collector, no, two marine life collectors, but mostly it is coral scientists that are on there. They were concerned with these proposed closed areas, not because they didn't think that would be helpful in protecting the coral.

These corals are like antlers, so the rope gets all wrapped up in there, and then when traps move around through storms and stuff like that, but they were concerned about enforceability of this.

They were concerned about groundtruthing the sites that had been identified, so they have submitted some recommendations that the council will hear as well about these closed areas.

They were really coming from the point of view of what would be the best for the coral and is this really going to be effective in protecting the coral. That is kind of I think -- you know, part of this biological opinion is a legal requirement. The FMP will be out of compliance if there are not some new areas in some way created.

However, the councils do have some discretion about how to go about that. That is the process of how these were developed, and Protective Resources is putting together I think and adding some more information about exactly how the areas were identified, the baseline data that they used to even start from, and then how the information from the fishermen was incorporated and things like that. So that is all with Action 1. This one is going to public hearing in January and will be reviewed again by the council in March, but maybe will be submitted for final approval in March as well. This may be the last time that you see this one.

DR. BELCHER: Okay, so comments from the group relative to these two actions or comments on it overall.

DR. REICHERT: You mentioned a little while ago the enforcement issue and that was difficult or there were some concerns; have those been discussed? I am looking at some of the maps, and you have a lot of little areas that supposedly are going to be closed.

DR. MacLAUCHLIN: Well, enforcement has expressed that they prefer straight line boundaries because those would be easier than the buffers. But these are not – the fishermen have asked are you going to mark these or whatnot, so they will not be marked or buoyed right now.

DR. BARBIERI: Kari, you said that the council has not selected a preferred alternative for this one?

DR. MacLAUCHLIN: The South Atlantic Council has not seen these new alternatives, and December will be the first time they have seen those, but the Gulf Council did select Alternative 3 and I think just Option A. Okay, Action 2 is gear marking requirement. This one, the reason why it got – it was in Amendment 10 as well, and the council chose to take no action and move it to Amendment 11.

One thing is that the biological opinion had a compliance date of 2014, and so that was revised and it had to go through some procedure to have it actually revised and changed it to 2017. Now there is a five year phase-in, and so the fishermen have said that black would be their color preference; and then they have said that if it has to be anything, I guess white would be okay, but in general they have really wanted black because that is the color they use now.

Then Alternative 2 is just like a marking on there. It can be a tracer or it can be tape or something like that. I am sorry, Alternative 2 is either a tracer or an all white rope, and Alternative 3 is that you can have just a four-inch mark every 15 feet. I guess the point of this

requirement is so that they can improve monitoring and they can be able to pinpoint it to spiny lobster.

Some of the concerns that have come up is one is the economic cost of having to replace a white rope instead of a black rope. Really, I think nobody knows what happens to a non-black rope in the Florida Keys water in the sun and everything, and so probably it is just going to have to see how this goes.

And as far as I have seen, there are not a lot of references to how well this is going to hold up. Now this is something that they use in New England with the Atlantic Large Whale Take Reduction Plan. They have different colors and everything, and that is kind of what they are basing some of these on, but it is a very different environment and this is something that the fishermen have brought up.

DR. CROSSON: I guess I am having problems understanding what the purpose of this is. This is like the Coast Guard is requesting this as tools for enforcement or are there ESA concerns with right whales near lobster traps?

DR. MacLAUCHLIN: No, this is a biological opinion term and condition, and it is specifically to be able to better monitor interactions with the elkhorn and staghorn. Basically, if they find a white rope or whatever that is entangled in there, then they can count it towards spiny lobster fishery. If it is another color – there are no other color requirements for any of the trap fisheries in the Keys at this time.

DR. BELCHER: Does that assume that white isn't used by anyone else, because I think about like our anchor lines on our small boats are white lines.

DR. MacLAUCHLIN: This is something that has been coming up is why is black not even an alternative.

DR. JOHNSON: I was just going to say that I think most of these guys are using polypropylene and not sort of typical – depending what your anchor line is. I am not sure what it is, but distinguish it from some of the other typically used lines in recreational boating.

MS. LANGE: I am just wondering if the issue is trying to say that this was done by spiny lobstermen, then anybody that uses whatever color they set up is going to wind up being blamed on the spiny lobstermen as opposed to just using the buoys, the actual markers that those actually identify them. If a trap has identification on it that this is a – obviously the traps are probably different, but it just seems strange that if they find a piece of rope that happens to be white, they are going to say it is a spiny lobster trap and blame that fishery, and then you wind up with an ESA –

DR. MacLAUCHLIN: I think the plan is that – and this is something that I have asked the Regional Office to expand upon in the next draft of this is how they monitor or how they plan on monitoring and then kind of incorporating this into their monitoring and how they are going to be able to differentiate with the colors.

The fishermen say, you know, if there is a heavy rope on the floor or in the coral, then it is lobster and you can just go ahead and call it lobster and count them that way. This one has just been kind of tricky because – I guess it is the way someone put it is definite economic cost. We know for a fact that this is going to affect them in some way, maybe not as much as they thought beforehand like an immediate – you know, you have to change immediately.

Now you have a five-year phase in, but the biological benefits are very unsure and is it actually going to help improve monitoring and be able to pinpoint where an issue is with it. They do have buoys that are attached to their vertical lines that have their number, and you can find the vessel with that. I don't know, I am trying to get some more information from Protective Resources about how this is going to help and how it is going to go into their program that they are using now.

DR. CROSSON: Again, this is a monitoring and enforcement question, it is not a biological question. The coral doesn't care what color the rope is that gets tangled in it. There are going to be economic costs for the fishermen; so if there is a monitoring issue, then that is going to have to be the justification.

They are going to have to find a way of providing some type of rope that is not used by anybody else who happens to be out in the water and is from a limited provider who is only going to be providing that to the lobster guys. I don't see any other way that legally you are going to be able to attach a particular type of rope to one fishery.

DR. GRIMES: I am going to ask a question about the previous one. Does that effectively – if you stop the traps but not diving – prohibits commercial fishing. I mean is there any commercial harvest of lobster by divers?

DR. MacLAUCHLIN: Yes, and it actually – a minority of it, 90 percent or so is from traps but the commercial dive sector is growing.

DR. YANDLE: Just building on what Scott was saying, someone mentioned earlier that these are the only guys who are using the really heavy rope, is that correct or was I imagining that? Because if that is true, then why do we even need this? You have got your identification built in without them having to go to all this extra expense.

DR. MacLAUCHLIN: I think that is an accurate statement, that you can tell when it is a lobster rope by where it is and the type of rope that they all use. As far as identifying lobster rope, I don't think that you need a specific color or marking on it. I think this is what the councils are kind of battling with here.

The Gulf Council actually made a motion to move this whole action into considered but rejected. That was advised against because there are some legal issues from ESA in the biological opinion, so now they just have their preferred as no action. I don't know what is going to happen with that – Andy, maybe you know – what happens if the councils again choose no action, then they are out of compliance or the FMP is out of compliance, but nobody quite knows the answer to

that? I mean, once it was in the biological opinion it became a legal requirement, but you can identify them another way, yes.

DR. YANDLE: But then couldn't you just have the alternative be rope of whatever gauge weight, however it is measured will be assumed to be associated with the lobster fishery and this will be our means of identification, and note presumably because it will reduce a lot of expense to those folks.

They will be willing to sort of stipulate and agree that part of the regulation is rope of this gauge will always – and again I apologize if that is the wrong word, but rope of that gauge will always be associated with them. It is in the rule and it is in the management plan, then that is sort of the simplest way out of this.

DR. CROSSON: I think that is a preferable alternative to stipulating a color of a rope that may deteriorate in the strong South Florida sun, depending on the color.

DR. BELCHER: Other comments, recommendations? All right, so we are at 4:36; John, do you have information and updates. Yes, golden crab has got 15 actions. Brian wants to wait until tomorrow. The last thing that we have to cover that is large is the Golden Crab Amendment 6, which we will do in the morning and then the informational updates.

For folks with the notes, I am going to be building off of Mike's comments as he is capturing them; so if you want you can either all send your notes to one person if you so choose or as far as I am concerned you can send them to me and I can assimilate them, it doesn't matter. It actually in some ways it is more helpful for me if I at least kind of get to handle and see everybody's comments.

Because when I go forward to the council and try to explain it, I am not always sure what someone's intent was in their paragraph, and I get a little bit – when someone asks me, well, what was that statement meant, and it's like I can't really say because I didn't write it. I can at least put my own paraphrase on it, make sure I am sure with it and you can say, yes, that is exactly what we meant or it is not.

Then we can edit it accordingly and then I will be a little more comfortable with the presentation, if you all are fine with that. Present your notes to me how best you feel – I know Luiz has taken on for one or two to send them to him. If he is one of your note takers he is willing to assimilate that.

Are there any comments or questions for me before we break? Tomorrow we will start at nine, unless you all want to start earlier. I will throw it out there. I am looking at John's reaction, if you want earlier or not. The other option you have is we can be in the room at eight, people can decide if they want to collate their comments together, work from eight to nine on comment collation and then we can start the meeting at nine.

DR. BERKSON: Can we handle any other business items now since we have a little bit of time or do you want to save all of that for tomorrow?

The Scientific and Statistical Committee of the South Atlantic Fishery Management Council reconvened in the Hampton Inn West Ashley, Charleston, South Carolina, Thursday morning, November 10, 2011, and was called to order at 9:00 o'clock a.m. by Chairman Carolyn Belcher.

DR. BELCHER: Let's start out with the results from the subcommittees get-together last night to look at the wreckfish analyses and offer their inputs. Andy has done some additional runs, so we are going to go ahead and start with that presentation.

DR. STRELCHECK: Luiz, do you want to open this up at all with any comments about the subcommittee first?

DR. BARBIERI: Just briefly I just want to thank the folks that participated last night. Of course, Andy was super staying late and getting the discussion going here with us, and then staying late after dinner to do the additional – not just the run that we requested, but having additional thought process put into this and running additional model runs there that gives us an even broader perspective on the revised analysis.

The subcommittee members, Jim Berkson, Steve Cadrin, Yan Jiao, Marcel – even though he had not officially volunteered, was here pretty much for the whole time and participated. John Boreman couldn't resist. He couldn't really stay away. He dropped in to contribute to some of the discussion while he could.

It was really a very nice meeting, very collegial setting, and very productive discussion. Special thanks really to Steve Cadrin for providing the initial thoughts and outline to guide our discussion, and not just that but actually volunteering to serve as the rapporteur in structuring a report that I am sure all of you are going to think is very well done. With that I think we are ready, Andy.

DR. STRELCHECK: Before I get into the model runs that were done, I did talk to the group about adding one additional data point to the Catch per Unit Effort Time Series. One of the challenges we face is estimating the unfished biomass, and so trying to extend that time series as far back in time as possible would benefit, obviously, in learning more in terms about catch rates, especially during the peak of the fishery.

I added 1991-92. I was able to do this based on permit number. I could not link it to vessel, but each vessel ID after '91, '92 actually had a permit number, and prior to then the permit numbers didn't have an associated vessel ID. The presumption is that the permit number didn't change over time.

You can see here that 1991-92 data point is lower than the '92/'93 data point, and consistent with the information that is reported in Vaughan et al; although it looks like a little bit of a steeper decrease or increase. Model diagnostics are virtually the same. I was just adding one data point. The R square dropped slightly, but the fits are all good and the permit number fishing year was the major explanatory variables for variability in the model.

One of the things we discussed last night was what is an appropriate way of estimating B-naught and reevaluating the delta depletion estimate? We discussed just scaling up by a fixed percentage based on the drop between 1992 and 1993. Then I had also suggested just doing a linear aggression. The linear aggression ultimately provides a very good fit for the data points.

I excluded that '91 to '92 and based on that you would estimate a relative CPUE for '90/'91 of about 1.84, so essentially filling in a data point for that peak year landings that we don't have. I will talk about the implications of this in a minute. The group discussed the input parameters for the model. We went through each input parameter and the associated standard deviations for each.

It was recommended that a natural mortality rate of 0.06 be used based on the Hewitt and Hoenig Method and the standard deviation was set at 0.05, and that was consistent with previous runs provided. For the landings time series, it was recommended to constrain the landings to only the timeframe in which we had actual CPUE estimates or at least from the peak of CPUE estimates down to the lowest point in the CPUE series which corresponded to 2006/2007.

That totaled 6.8 million pounds. The coefficient and variation was set at 0.1 consistent with previous analyses. Then Step 3 here is where you see the difference between how I was previously calculating the delta depletion versus how it is now being calculated. Previously the estimate would have used the 1.55 value for the CPUE at B-naught, and so therefore you would estimate actual greater delta depletion.

In this instance we are using that extended data point for B-naught which goes back to 1990/'91 as the denominator. If you subtract 0.74 from 1.55 divided by 1.84, you get the 44 percent delta depletion Then we discussed where to set FMSY relative to M. There was really no strong reason one way or another to set it below M.

I don't know in terms of any other rationale that we could have provided as to where an appropriate setting was. Obviously there is literature out there that indicates that it could be set lower. It could be set equal to 1, but the group agreed just to go ahead and specify it as 1. These were additional runs that the group didn't request; but after thinking about it felt were important to at least consider. One of the big questions we have is regarding over what timeframe do you calculate the delta depletion.

I am hoping Alec MacCall gets in early today so we can call him and talk to him about this. By only including the '06/'07 data you don't capture any change in biomass that may have occurred after that time. The difference between this run and the previous run is that this one extends the time series for an additional four years, so it incorporates more landings.

The delta depletion changes because the CPUE data point for 2010/2011 is being used rather than the '06/'07 CPUE data point. Then model runs 21 and 22 are essentially the same as model runs 19 and 20. The difference is the starting point is shifted back to that catch-per-unit effort in 1990/'91, essentially the highest point that we interpolated based on that regression I showed earlier.

In doing that it affects the delta depletion, it affects the landings time series in terms of total quantity of landings. The same would be true here except I extend the time series four additional years. Now one thing that I realized this morning was that 1990/'91 really isn't the peak in the fishery – excuse me, it is the peak in the fishery but the fishery had already begun to develop prior to that time and there was about 2 million pounds of landings in 1989/1990.

B-naught is probably an underestimate at this point rather than an overestimate given the fact that the fishery already had started exploitation and probably had been fished down. With that said, all the results I guess in my opinion, given the B-naught that is specified would be at least on the conservative end, given that I haven't factored in extending B-naught farther back in time.

A similar graphic to what I had showed yesterday. This is a plot of the four runs, so essentially they are centered right around your 250,000 pound ABC recommendation. If you use the longer time series with more catch data, the ABC would be higher. You use the shorter time series starting in '92/'93, the ABC would be lower or equal to what you have recommended at this point.

This gives all of the inputs. There is a correction that has been made that isn't shown here. The assumed M was 0.06, and I validated that in the model and it still specifies 0.05. But you can get an idea down at the bottom of the variability in estimates from the Monte Carlo simulation and the point estimates obviously from those results. That is it.

MR. CARMICHAEL: Question for Andy about the landings. You said like 2 million pounds in '91. When I was looking at the Vaughan assessment, they actually even show '89 had 4 million pounds. Did you guys talk about that and you didn't mention that as being the peak, but from that assessment that certainly looks like the peak. I was just wondering if there was some more information about those landings in '89 that perhaps we shouldn't have as much confidence in that point.

DR. STRELCHECK: The landings have been revised or updated since the Vaughan et al assessment. The peak was in 1990, the landings in '89 are estimated a little over 2 million pounds at this point. Prior to 1989 landings were I think 300,000 pounds in 1988 and virtually zero in 1987; so unexploited I would say in beginning of 1987, and 1988 a small amount of exploitation and then it really ramped up after that.

MR. CARMICHAEL: Would it be possible to include in your report maybe as the next stages the revised landings since the only reference we have now it the Vaughan, and I am presuming that those are not confidential from that time.

That would certainly help clarify if others were to look at this Vaughan assessment and wonder about the overall landings trend. If maybe you could include a table in your report of revised landings, it would help the council I think down the road.

DR STRELCHECK: Yes, I can at least include the non-confidential landings, yes.

DR. BERKSON: I think it is really important to point out here that we have a stock that has an entire time series of catch data as well as catch-per-effort data. In theory a production model could be attempted with this stock. If that wasn't informative, we could potentially do a DBSRA since we have the entire time series of catch.

We are really looking at a Tier 1 stock that we are using a Tier 3 method on. DCAC is a method of last resort and that is what is being used here. Once again you can attempt multiple methods and this should be attempted. This gives us a sustainable yield but not maximum sustainable yield. I certainly would suggest attempting the other two, especially a production model to see if we can actually learn about the dynamics of the stock, which you don't get out of a DCAC.

DR. CADRIN: I will just quickly echo Luiz's comments that Andy was fantastic during the meeting and after the meeting at really doing back flips to do the things we had asked for. Thanks for that, Andy. What we had requested was Run 19, and there was one basic input that we felt was important was to use the consistent period of landings as we do for the depletion.

All four of these runs use a consistent depletion period and landings period. The process equations of this model I think require that. Going back to Alec's source paper, the 2009 paper, he does the same thing there. Really, now it is a matter of choosing which period to capture the depletion.

I think as shown in both the Vaughan CPUE and the updated CPUE back to 1991, in 1991 the CPUE is lower and climbed up to 1992, which often happens during an exploratory phase of a fishery. There is learning in the fishery, there is a spatial expansion perhaps that is going on. I don't think it would be realistic to use the 1991 to start the depletion.

The depletion probably more reliably starts in 1992. That would be Run 19 and Run 20. Then it gets to the choice of do we do the entire time series or do we do just the period of depletion? Alec's formula says the first year and the last year, but that is really the first year of depletion and last year of depletion.

I think he gives us a good precedent in his 2009 paper. He applies the method to two stocks. One is truly a data-poor stock, widow rockfish, where they don't have an analytical assessment. But then to compare it to a more data-rich assessment, he applies it to Gulf of Maine redfish, which has a full statistical catch at age.

He used information from the 2008 assessment, but I think it is very instructive that he only chose the years from the beginning to the year of the minimum stock size to get the depletion, 1934 to 1988. The assessment he had went up to 2008. I think he made a consistent decision as we did with Run 19 is just choosing the years of this depletion to calculate the windfall, because in redfish there was rebuilding after 1988 and you will get a better estimate of depletion and windfall if you just limit the series to the peak to the bottom. That is what Run 19 suggests. Looking back at Alec's, I think it does support the Run 19 approach to this.

DR. STRELCHECK: Just one clarification; the Run 21 and 22 don't use the '91 to '92 data point, which was lower than '92/93. They actually use that interpolated data point that goes

back to – it is essentially something we don't have. It was interpolated from that linear regression. I just wanted to make that clear in terms of where that point came from. It is higher than the '92/'93 data point.

DR. CADRIN: I will ask Jim's question. What I would like to propose is what we did last night, is that we start the depletion estimate with the peak value in '93/94. If we go back to the CPUE series, I think one slide earlier, that the depletion should start in '92/'93.

DR. STRELCHECK: That is Run 19.

DR. CADRIN: That is Run 19, right.

MR. COLLIER: For the surplus production, shouldn't we make sure we are covering the entire stock for that stock assessment? I mean there is evidence that it goes all the way to the Mediterranean. They are not sure about the connection with down in Brazil. This would be a nightmare to go forward with the surplus production, but Jim might be able to answer that better, and he wants to.

DR. BERKSON: Well, I think you have a problem with any of these analyses or assessments given that. Yes, you would also have the same problem with DBSRA and DCAC since it is not the entire population.

MR. CARMICHAEL: Some background; wreckfish has been discussed a lot both at the council and at the steering committee with regards to getting it assessed. It was on the schedule as, and in past iterations that it would have been done in 2010, 2011. It has been pushed back quite a few times. The latest I guess activity on it was the steering committee discussed it and the Science Center indicated the concerns over the stock as Chip mentioned.

That was one of the reasons the analysts at the Science Center were hesitant to say take the data that we have and craft a catch at age model or a production model because of the – you know, we do have stock ID issues with many species, but in this case the feeling was that we see such a small portion of the stock, they were less likely to have confidence in the results.

That is one of the reasons they have raised issues with the earlier assessment from 2001. That led to then the Science Center considering to work with Alec MacCall as someone with expertise in dealing with these types of things and trying to get some national perspective on how other regions have dealt with stocks where they only see a portion of the landings.

Another avenue that was pursued was running it through ICEs and trying to do a real stock-wide assessment. Our understanding and what we heard back at the steering committee was that didn't get a lot of traction at that venue. They were not really interested in pursuing it. I think like many others they have so many other priorities, much bigger stocks that they are interested in; and with one small portion of the stock clamoring for an assessment, apparently that didn't go anywhere.

Then that led I guess working with Alec, which has now come around full circle to back to our region with Andy doing this. My understanding of where it still stands at the Science Center is concern over the small portion of the stock that we see, and that seems to be their hesitancy in trying to pursue something like a production model. When the analysts give a very low probability of success of an assessment in getting it through peer review at the SEDAR level, then the steering committee is really hesitant to put the resources into that given we have so many other species which have assessments that are getting old or which we know have enough data and we cover the whole stock to do the assessment. It hasn't been because of a lack of interest or a lack of consideration; it seems to be ability to overcome some of these problems.

DR. BELCHER: If you reference the e-mail from George Sedberry that I have forwarded to the group yesterday, George does indicate that as far as management elsewhere, the longline fishery was closed in Bermuda in 1994 and the entire fishery closed in Brazil in 2002. At least there are two areas adjacent to what we are looking at that at least we kind of know what has happened with their fishery. Further discussion; what does the group think? We can go back to John Boreman's original two questions yesterday if the group would like to pursue that.

DR. CADRIN: Since we haven't seen Runs 20 to 22 as a subgroup, I just wanted to confirm that the people in the subcommittee requested Run 19, and that was our preferred run. In my opinion that is still the preferred run. I want to make sure that the rest of the subcommittee endorses that. I think Alec's application to redfish supports the different decisions in this table.

DR. BERKSON: Well, I have got a call in to Alec now. I would like to confirm that, although it does appear that that is what he did and that case that is published. I also would like to ask him about the implications of doing DCAC when you have only a small portion of the population available. Because like I said, that is the problem with all of these methods. I am hoping that I will hear back from him this morning. He is on the west coast and there is a three-hour time difference.

I don't know if he is in the office today or anything else. I have got the phone here. I am still a little bit reluctant to know how to apply this until I hear back from him on that. But based on everything I have read and our discussions last night, I would think that at this point in time Model 19 would be the preferred.

DR. BARBIERI: Yes, I agree. I think that we discussed quite a bit last night the length of the time series for the CPUE and the landings, and I stepped out of here feeling very comfortable. OF course, hearing back from Alec would be ideal, because then we can get confirmation of our interpretation of his method. I still feel comfortable with the choice of Run 19 as the most realistic scenario for the DCAC.

DR. GRIMES: Well, at least I can help you with the probability of getting hold of Alec. He comes in about seven o'clock in the morning, so give him a little bit and you will probably hear from him. I don't think he is going anywhere. I can't remember anything that was going on.

DR. BERKSON: I talked to him a day or two ago, so I know he is in this week. He wasn't on vacation or anything.

DR. JIAO: First, I want to make sure that M is actually 0.06, right, because in the table it is 0.05, so I want to make sure the result is based on 0.06, yes. Yes, I agree with Luiz that Run 19 is consistent with the suggestion from yesterday night's conclusion. I also want to explain my concern about the results and how it can be interpreted for the management purposes. As Chip asked, if the catch is really from very localized special locations, then the explanation of the results needs to be more conservative.

DR. BELCHER: Okay, so how does the group want to proceed? Do we want to again kind of table it until you guys get confirmation from Alec on it?

DR. BARBIERI: Since we have a little bit of time and we have some other agenda items to take care of – well, one agenda item with several topics plus I have heard a few things about open agenda discussions that people brought up. I think the safest approach here for us would be to wait to hear back from Alec and get that confirmation before we make a final decision.

DR. BELCHER: Is everyone okay with that? All right, thank you, Andy. Moving on, we are going to discuss Golden Crab Amendment 6. Brian, whenever you are ready.

DR. CHEUVRONT: You have a document in the briefing book that you had; it is Attachment 13. What we have here is the Golden Crab Plan Amendment 6. This one is not in the same rush situation that some of the other plans were in that this is not the last time the council is going to see it.

They are not going to vote on sending this amendment to the secretary, and I think at this point it is not ready yet. But, they may decide to do that at their March meeting, so you may not have another chance to see this amendment after this meeting before the council deals with it. Just to give you a rough idea of what is going on here and refresh your memory about the golden crab fishery, this is a fishery that right now there is about five or six active participants in the fishery.

It takes place off the coast of Florida in fairly deep water. Now, there are also 11 permits in this fishery, five of which are not – five or six of them are not actively being used. Now this is a pretty difficult fishery to participate in. A lot of these guys who are actively participating in the fishery historically had participated in the fish pot fishery, which they got pushed out of that.

They moved into this fishery, and then in CE-BA 1, when the Coral HAPCs and all that were set up, these fishermen worked very closely with fisheries managers and with environmentalists to set up areas where it would be allowable for them to deploy their gear. What they have now are three fishing zones, a northern, middle, and a southern zone, that are all fairly narrow.

Most of these guys are home ported in the Fort Lauderdale, West Palm Beach, southern end of Florida, but some of these zones extend pretty far away from where they're home ported. The fishermen themselves do like the zones partially because it helps deal with gear conflict problems.

There is so few of them they know when each other is going out and where they are deploying their gear. The way that they retrieve their gear basically is by dragging a grappling hook that

catches the line for the trawl of these traps and they pull them in. If they don't know where each other has laid their gear, they could actually – and this has happened before, they would get entangled up with each other's gear and they would be pulling in each other's pots and it is a mess. They are very much in favor of keeping this zone system, but through this amendment they would like to try to do some modifications of it.

But the major point of this amendment is to establish a catch shares program. Now some of the things about this is that first the fishermen came to the council and asked the council to establish catch shares. Part of the thing is that they wanted a catch share program because this is a very difficult fishery to participate in and it is a costly fishery to participate in.

The gear to participate in this fishery is rather expensive. Namely, the thing is that the vessels need to have a seawater refrigeration system on board to preserve the product when they bring it up, and that is a very, very costly proposition for them to do. But they are also very concerned about safety issues; is that for somebody to participate in this fishery they really need to have some experience.

Their hope is that through this catch share program and the way that the program is designed to allow new entrants in is that they will encourage, if somebody wants to sell permits or endorsements or something, that they will only really be able to be sold to people who won't be a detriment to the fishery or to themselves in terms of safety and things.

All that said, you can look at this as being really a protectionist sort of a plan, that they are trying to protect their own interests in there, but there are additional reasons as well, like safety and concern for how the fishery will develop and what is going to happen to those five or six latent permits that are out there that are not currently being actively fished.

Now that said, what I would like to do is I put together a bunch of questions that I specifically had for you. But what happened was when I wrote these questions for the overview, I did not realize that after the September meeting I had accidently dropped one of the actions out of the plan.

When I wrote this, it was with the actions are misnumbered in your overview by one; so instead of Action 4 it is actually Action 5. I did not catch that until the other day. Bear with me on that. I am going to walk you through the management plan. This is Attachment 13, and I am on PDF Page 22 if you want to follow along just going through Chapter 2.

I don't have questions about all of these actions. What I will do is stop on those actions where I do have specific questions. I see that John Whitehead is not here so is somebody taking over for John? Okay, Scott, great. Where we had talked about the ones on Monday, then if it is okay with you, Madam Chairman we will just stop there, but if anybody else wants me to stop after any action to discuss something, I would be glad to. Otherwise, I will just sort of keep on going.

Because like I said, there are about 14 actions in this amendment and I don't want to stop and belabor the process if there is really no need to. Okay, Action 1 is to establish eligibility criteria for the Golden Crab Catch Share Program. The first alternative is not to establish an eligibility

criteria. Alternative 2 is you had to have at least 1 pound or more between 2001 and 2010; or Alternative 3 is at least 1 pound between 2005 and 2010.

The council's currently preferred alternative, restrict eligibility to valid commercial golden crab permit holders. Eligibility for participation in this catch share program is defined as having a golden crab permit as of the control date, December 7, 2010, plus being allowed 6 months to renew that permit, which is part of the standard procedure for the permits. Does anybody have any comments they want to make about that one?

DR. REICHERT: Just a clarification; in terms of the participants, is there a difference between Alternatives 2, 3, and 4 since there are so few participants? Were there people that dropped out of the fishery?

DR. CHEUVRONT: Yes, there were some people who dropped out of the fishery who had participated earlier on, and we can get into some of that. Some of the issues with the southern zone were set up to protect some smaller vessels that were participating in the fishery earlier on, who are not participating currently.

By moving it down and choosing the council's preferred with the control date, everybody was put on notice then that they had to be participating in the fishery to continue it. Seeing nothing else, I will just drive on. Action 2 is to establish vessel catch history for initial allocation, and we have several alternatives here.

As you can see, we don't have a preferred alternative yet. Part of this has to do with percent and catch history plus equal allocation. Now, remember, in this fishery I want to point out as well is that their ABC that you all set is about 2 million pounds. They have never caught 2 million pounds in this fishery.

They have never got – well, they have gotten close to around a million pounds. Yes, in a couple of years, but most years they have been well under a million pounds. However, this allocation falls out, most everybody who gets an initial allocation it is going to be significantly more than what they have been fishing up to this point.

Do you have anything that you want to say about perhaps how this allocation ought to occur? If not, you may just think that is a management issue. In this case Action 3 is establishing a criterion structure for an appeals process. Basically it follows the appeals process that has been used in other plans of this type.

I believe plans from the Gulf Council were also consulted. The council's current preferred is to go ahead and set aside 3 percent of golden crab shares to deal with appeals. This is just for the initial allocation. It was felt that this would be adequate to deal with any errors that might come up. Notice that there is no – it is basically based on the RA is going to make the decisions, it is going to be based on logbooks, if at all possible, or state landings if the logbooks are not available, and they are not going to entertain hardship requests.

Right now it is 3 percent. The choice is either not to have an appeals process or change the percentage level. You might consider that to be a management issue as well. Action 4 has to establish criteria for transferability. You will see we have Alternative 1, Alternative 3 and a second Alternative 3, so recommending that they fix the first Alternative 3 to Alternative 2, but we caught that.

What is going to be Alternative 2 is the shares or annual pounds can be transferred only to golden crab permit holders. The real Alternative 3 is shares or annual pounds can only be transferred to golden crab permit holders during the first five years of the catch share program and then to all U.S. citizens and permanent resident aliens thereafter. The council has not chosen a preferred here yet. The idea behind the real Alternative 3 is simply to allow the market to settle out and let the guys in the first five years figure out how they want to have the shares distributed among themselves before it is allowed to be opened up to anybody who wants to get in.

Some of the concern here again, of course, is that if anybody wants to come into this fishery they really need to have some experience. There is some concern at least among the fishermen among Alternative 3. Does anybody want to jump in there on that one? Okay, moving right along, Action 5, this is one where we are going to define quota ownership caps.

Right now the council does not have a stated preferred. One is no action. There is Alternative 2 that the cap would be whatever the initial allocation would be, and so in other words whoever has the highest initial allocation, that becomes the cap, or 25 percent of the quota or 35 percent or up to 49 percent of the quota can be owned by any one entity.

Now the question that we have for this is the highest value is set at 49 percent as the council is reluctant to allow a single shareholder to have the majority of the shares. Is this a well-founded concern? If the alternative of 49 percent is chosen, one current fishery participant has over 49 percent of the historical landings and therefore would not be able to realize shares commensurate with past fisheries participation. However, even if that 49 percent was chosen, that person would still – because of the increase in the ABC would still have an allocation that would be higher than he has ever caught in any given year. Now, I believe the SEP had some comments about that.

DR. CROSSON: This is from the SEP report. Action 5 defines alternatives for quota share caps including a maximum cap of 49 percent. The SEP discussed a general concern of the effect of high caps on the market price. In particular the concentration of harvesting and marketing functions among large shareholders, i.e. vertical integration, can put downward pressure on price to the disadvantage of smaller operators.

Also, market power on the sellers side can result in high prices for consumers as the product is unique with few substitutes. However, these scenarios do not appear to be the case for golden crab because there is no evidence of vertical integration in this fishery, and golden crab competes economically with other crab species such as dungeness and snow crab.

Another potential concern for concentrated ownership is disproportionate influence in future management decisions. If the main concern is to prevent majority shareholders from having a

majority of votes in a quota-based referenda under a one-share one-vote rule, then the SEP recommends that the rules of engagement be established for that purpose.

Then I also wanted to add – this is not in the report but from my discussions with these guys and from talking to council staff, there is sort of a split market and there is a high-end market for golden crab as well that is kind of established in East Asia, but even there it is competing against another species in the same genus, the Australian crystal crab. It is not a species that has a clear market identify at the high or low end; it is usually a substitute for something else.

DR. CHEUVRONT: I just want to clarify then, just to put it in simple, easy terms, basically from the SEPs perspective they are saying that there really is no reason to have a quota cap as long as the vote issue is handled so that one person does not have a majority weight of any vote of shareholders; is that correct?

DR. CROSSON: There is no economic reason to have that; is that your understanding, Tracy?

DR. YANDLE: Yes, I think that is fair because as you said there is enough competition from other species. It was more the governance issues that in other fisheries in other nations we have seen quota become a very easy way for them to establish voting, essentially these corporate voting rules instead of one-man one-vote rules. The concern is that leads to fishers who have a smaller shareholding having a diminished vote, and that can have some pretty gnarly unintended consequences.

DR. CHEUVRONT: I just wanted to make sure we had that clarification on the record so the council would know. Action 6 is a use-it or lose-it policy. Alternative 1 is do not specify a minimum landings requirement for retaining shares. Alternative 2 is that shares that remain inactive for three consecutive years will be revoked and redistributed proportionately among remaining shareholders.

Inactive is defined as less than 10 percent of the aggregate annual average utilization of the catch share quota over a three-year moving average period. Under 2A it would be just for the landed crabs, or Subalternative 2B is landed crabs and/or transfer of annual pounds. Alternative 3 is the same as Alternative 2.

However, the requirement would be about 30 percent of the aggregate annual average utilization would have to occur with the subalternatives being the same. Now, the council would like to know whether these provisions in the use-it or lose-it action, do they capture a reasonable range or there other scenarios that the council ought to consider?

DR. CROSSON: This is from the SEP report. We are on Action 6, right? Action 6 contains a use-it or lose-it provision. The SEP does not support defining or reverting inactive shares in situations where shares are transferable as this would likely undermine a property right nature of catch shares increasing uncertainty in the fishery.

Existing and future share owners may be less likely to invest or maintain investment in the fishery if the security of share ownership is uncertain in this fishery and others where the council

chooses to implement catch shares. In general, the SEP would discourage the use of such provisions which have the effect of penalizing conservation in recognition of economic conditions.

Shareowners may choose not to exercise the right to fish for a period of time for a variety of reason, including illness, temporary cost increases such as fuel cost, or temporary depressed dockside prices. If an owner chooses to not use their shares, they are foregoing current revenues because they value that more highly than selling or leasing their shares.

Inactive share owners should not be penalized for foregoing the right to fish in situations where fishing may not be profitable for them. If shares are transferable and have value, there is an incentive for inactive shareholders to sell their shares to active shareholders or to new entrants in the fishery. From a biological perspective, lower harvests could positively impact future stocks that would benefit everyone.

DR. CHEUVRONT: Okay, moving right along, Action 7 is the cost recovery plan. Basically this is a requirement for catch share programs that cost recovery fees will be collected. I believe up to 3 percent of the value of the fishery is the maximum amount that could be used for this. It is really not much of an option; it is just how it is going to be done.

Alternative 2 is cost recovery fees calculated at time of sale and whether it would be based on the actual ex-vessel value – or based on a standard ex-vessel value as calculated by NMFSS. Alternative 3 is fee collection and submission either done by the shareholder or the dealer. Then Alternative 4 is fee submitted to NMFS either quarterly or monthly.

Right now the council has preferred Subalternative 2B. It would be based on standard ex-vessel value, that they would be collected by the dealer and that they would be submitted to NMFS quarterly. Does anybody see any issues with that? It is just sort of a how are we going to do it. Okay, I didn't think there would be much on that.

Action 8 is to establish boat length limit rule. Alternative 2 is to eliminate the boat length limit rule in the middle and southern zones. Those were put into place initially to protect the smaller vessels that used to participate in the fishery. They are not so much anymore; they are not participating in there, so the fishermen have asked to remove the boat size limits out of those two zones so some of the larger vessels who have been forced to only be able to fish in the northern zone would be eligible to get a permit for the southern or the middle zone.

DR. CROSSON: I have a question. The no action alternative there, it says do not establish a boat length limit rule, so I guess maybe that should be reworded to say that – it has changed, okay.

DR. CHEUVRONT: What we have to go on right now is give you the document that the council has approved up to this point, but the staff of both SERO and the council has recommended the rewording of that alternative is to basically follow the boat length limit rule that is in place. Right now the fishermen have asked to have that removed because the smaller vessels are no longer participating in the fishery.

DR. CROSSON: Well, the SEP did not look at this particular question, but I can't see any economic justification for having a boat length limit. It seems like it would impact the efficiency of the fishing operation for no justifiable reason.

DR. YANDLE: Yes, I would agree with that, too.

DR. CHEUVRONT: Action 9 is to address quota share allocation among golden crab fishing zones. No action, participants can use quota in any of the three golden crab fishing zones. Alternative 2 is participants can use quota in any zone for which they possess a permit, and Alternative 3 is to eliminate box in southern zone originally established to protect against very large vessels.

Now the question that we have is Action 9 is being considered because initially three fishing zones were set up, and the southern zone, like I had said before, was set up to protect some of the smaller participants no longer active in the fishery. There has been some concern that because it is smaller and closer to the home port than say the northern zone, that it would not be able to withstand the pressure if all the fishermen decided to fish there, as well as the potential for some gear conflicts that could occur. The AP has asked for consideration of eliminating restrictions regarding the zones where they can fish. I think the SEP had comments about this one.

DR. CROSSON: This is Action 9?

DR. CHEUVRONT: Yes.

DR. CROSSON: Is it 9 and 10 together or is it just –

DR. CHEUVRONT: No, this is just 9. You might have put 9 and 10 together.

DR. CROSSON: Yes, we put 9 and 10 together. We said Action 9 proposes to eliminate restrictions on fishing zones, and Action 10 requests that they be able to have multiple zone permits. The SEP did not see a social or economic rationale for the zones and therefore supports the ability to stack permits subject to biological constraints and to the extent that gear entanglements can be avoided.

DR. CHEUVRONT: I will go on and show you Action 10 – and let me explain a little bit about what happens now so you understand what the procedure is. Under Action 10 is to establish criteria for permit stacking. Right now under Alternative 1, no action, if a vessel owner has more than one permit, they can only fish one permit on the vessel at a time.

If they want to fish in the northern zone, to go fish the northern zone, they have to bring the catch to port, they then have to call NMFS and transfer the permit. Let's say they have a middle zone permit, they will have to then transfer the middle zone permit onto the vessel, the northern zone permit off the vessel and go back out and fish.

What they have requested they could do is if they have got a permit for both the northern and the middle zone, then they should be allowed to fish in both the northern and the middle zone

without having to come back into port and to transfer the permits at that time. That is what Alternative 2 would allow them to do is to stack up to three permits on one vessel, because there are three zones.

They could have multiple permits and be allowed to fish in any of those zones for which they have a permit. That would change that rule for them. The SEP says no problem. Actually, I believe in part of the discussion they said it would be better economically for the fishermen to be allowed to stack these permits because it reduced their trip costs.

DR. CROSSON: Yes, absolutely, anything that allows them to avoid having to come back into port. The only concern again – and I would expect that the fishermen would not want to tangle their pots up in each other's lines and do everything they can to avoid that. As long as they feel that there is a sufficient way for them to deal with that from a management perspective, there is no reason to think that they need to be able to come back to port to move between zones.

DR. CHEUVRONT: Yes, and one thing is that these fishermen all know each other, and when they go out they contact each other so they know where each other's gear is. Right now that is handled among the fishermen. There is no management agency that is involved in reducing the gear conflicts. The fishermen do it themselves.

MR. COLLIER: The establishment of the zones was just based on the fishermen and not the biology of the species being fished at all?

DR. CHEUVRONT: Yes, and the zones themselves are also set up in connection with the development of CE-BA 1. They actually moved some of the lines and stuff from where they were able to fish to protect habitat for coral HAPCs. The fishermen were very much involved in that and working with the managers and environmental groups.

They all worked together to decide on where those zones would be. They all agreed to those zones, and they are not trying to get rid of the zones altogether because I think they see that as a tool that is helping them to manage potential gear conflicts. Action 11 has to do with monitoring and enforcement. It has to do about putting VMS on the vessels and problems between logbook landings and trip tickets.

Apparently, there is actually some shrinkage of the crabs that occurs over time, so it depends on when the measurements were taken. Sometimes there is up to a five- to seven-day delay between when crabs are caught and when they are sold. Right now the big issue is whether the council wants to require VMS.

The fishermen themselves are not real happy with the idea of VMS because where the vessels are located may not be related very well at all to where the gear is deployed. Part of their issue is that because there is fairly close in some points to where these coral HAPCs are, the vessel could drift into one of those coral HAPCs but there could be no gear deployed into that area, and so they are very concerned about VMS causing some false/positives for the vessels.

The council does not have a preferred alternative for this action yet, and they are still working on figuring out what the costs are going to be and who is going to pay what and all that. It just hasn't been worked out yet and we don't know how the council wants to handle this. Do you have any advice on any of that?

MR. COLLIER: I would think there is concern for localized depletion, especially with the current ABC that they are getting is much higher than they are currently catching. If they are moving to new locations because they depleted an area, this VMS can help at least stock assessment scientists and biologists kind of figure out that level of information; that if they take this option away, it won't be available for future assessment.

DR. CHEUVRONT: Very good point, and I hope you include that in your discussion, because we are hearing a lot from the fishermen about why it is an inefficient thing for them, but I think nobody has really thought about it from the stock assessment perspective, so thanks. Action 11 is to establish criteria for a new entrants program.

This is something that has been difficult to figure out for this fishery because there are so few participants in it. They are trying to figure out how to get potentially new blood into the fishery. A couple of these guys are getting up there in years and are not going to be fishing forever. Under Alternative 2, it has 3 ways that some annual pounds could be given to potential new entrants. Poundage released as part of a violation or quota that is taken up under the use it or lose it provision, or if the ACL should exceed 3 million pounds, then they would say, okay, we could give some of the excess to new participants.

Then there are also three other alternatives that would set aside 2, 5, or 10 percent of the annual ACL respectively to be given off to new participants. Yes, some of these low percentages would be enough for some of these guys to have at least a couple of trips a year in golden crab. Now, the council is trying to come up with new ways to even add additional potential alternatives to this to help get new entrants into the fishery.

We are still working with the fishermen in there and trying to get some of their ideas on how to do this. This is still an action that is under development, but if you have something that you would like to add to this, we would certainly like to hear it.

DR. CROSSON: This is Action 12; the SEP had this in their report. Action 12 describes options for supporting new participants into the fishery by using set-asides. The SEP does not support the use of set-asides in part due to the difficulty in anticipating demand, but would instead recommend the new participants use the existing option of entering the fishery.

If shares are transferrable and have value, there is an incentive for inactive shareholders to sell their shares to active shareholders or to new entrants into the fishery. I would just add that any set-aside that is put out there is going to undermine the values of the shares that are out there among the other shareholders. It is just a direct relationship right there.

DR. YANDLE: Yes, we had an extended discussion about this in a couple of different settings, just the need once a share system is set up, to step back and not be tinkering with it all the time;

that it is important to allow the shares to have value as a property right and to essentially allow that trading and allow that property right value to work and that things such as this can start to interfere with that.

DR. CROSSON: I know there is a concern at least from the advisory panel meetings that I attended that some of the historical participants in the fishery that are not currently active in the fishery would have difficulty reentering. That came up in the discussion about this particular action or whatever it was numbered at the time, but this is a separate question from that in my mind at least.

If the council is concerned about former participants in the fishery being able to reenter, then that should probably be addressed in the earlier action, I guess whatever it was Action 1 that designates how quota shares will be distributed, and you can stretch out the time period to include some of those former participants.

This is a separate question; this is how do you bring new people in that may not currently be in the fishery. Given the biologically sensitive nature of this fishery and the way – it is difficult to do it; it has to be done in the middle of the Gulf Stream, it is very technical and you can cause a lot of damage if you don't know what you are doing.

It seems like this is probably the better way for new entrants to get into the fishery, because they are probably going to have to – if there are so few participants that the fishermen are worried about any of these biological affects, they are probably going to make sure that they sell their shares to somebody who knows what they are doing.

DR. CHEUVRONT: I believe one of the discussions that you had on Monday, or at least it was part of the discussion was the idea of maybe requiring who could be sold shares as a new participant. The idea that somebody had to crew on a ship, had family member, I think there was a discussion – or am I making that up in my mind, but didn't you all discuss that some on Monday as well that maybe establishing criteria for who could buy shares, but not necessarily the process other than just using market methods for buying the shares.

DR. CROSSON: I don't recall the SEP discussing that. Did we discuss that? No. I don't think so.

DR. CHEUVRONT: Okay, maybe I discussed that in my mind then or hoped if you would.

DR. CROSSON: I am not sure how you would break it up.

DR. CHEUVRONT: Well, you can establish like crew requirements, that you had to have served as crew member on a vessel for X number of years before you would be eligible to buy shares.

DR. CROSSON: But how would you be able to – the logbook program doesn't currently track crew members, so you would have to establish some means for being able to establish a history as a crew member on these boats.

DR. CHEUVRONT: That can be done. I know it is done in ways that – for example, I know in North Carolina to get a commercial fishing license, one of your entrant criteria that can help you get a license is participation in the fishery as a crew member. There are ways that can be done. Action 13 is annual pounds of overage. This is a way to potentially allow fishermen on their last trip of the year to exceed their allocation.

The first alternative would not allow them to exceed their annual pounds at all. The second alternative would allow them to exceed their poundage by up to 10 percent, and the third alternative would allow them to exceed it by up to 20 percent. Now, any excess that they would have under Alternatives 2 or 3 would be paid back off their next year's allocation. It is the idea of not requiring them to necessarily throw back some of the crabs that they may have already harvested, and it only applies to the last trip of the year.

MR. CARMICHAEL: It seems like this somehow is related to the size of the trip and how much they get. If you would let someone exceed by 20 percent, you are implying they only take about on average – you know, they only need to take like 5 trips to land their landings, or is the amount so incredibly variable that there could be people that land their entire allocation in one trip?

DR. CHEUVRONT: Well, part of the thing is that there is going to be people under whatever allocation system is chosen here that could end up with only 1 or 2 percent of the overall allocation; and if you have only got a 2 percent allocation, 20 percent may not be that much. However, if you are somebody who has potentially 60 percent allocation, 20 percent is a huge amount.

MR. COLLIER: One option you could do is just have a certain amount over as opposed to a percentage, if the fishermen are able to keep up with it. The other part of it is whose responsibility is it to communicate this is how much we have left and this is how much we can bring in. Is it NMFS' responsibility to keep track of that and tell them you have this much left or is it the shareholder? That needs to be defined before the action goes into place.

DR. CHEUVRONT: You are right, and I am not sure. I could not answer that question right now at this point; who is responsible for that? NMFS requirement, Andy says it's NMFS requirement to make sure they know.

MR. COLLIER: I don't know how often these guys go out. I mean, if they go out one day, come back in, and go out for potentially the last day of the year, that is a pretty quick turnaround for NMFS. That needs to be defined pretty well for them as well.

DR. STRELCHECK: We manage these programs with an electronic reporting system so the dealer reports real time, we deduct allocation from their account, so at any point in time they should know exactly how much they have landed, how much has been taken out of their account and how much they have left for whatever that last fishing trip over the year is.

We have a similar provision for our Gulf IFQ programs. It is a 10 percent overage. It is not frequently used, but it gives a little bit of leeway in the event that they catch a lot of red snapper

or grouper tilefish and happen to go over on their last trip because of some padding for enforcement.

DR. CROSSON: I would also add unless there is a biological reason, these guys I seem to remember from the pattern of trips, that they go out pretty consistently throughout the year when they can find weather that allows them to get out to the Gulf Stream.

If they are in December and they see that they have a two-week or a one-week period where the weather is going to be calm and it probably is not going to be calm in January, I would encourage the agency and the council to allow them to have that flexibility to go out there and harvest a lot when the weather permits. Again, it is very difficult to do this fishery, and anything that allows them the flexibility to get out. As long as it doesn't have a negative biological impact on the stock, I don't see any problem with it.

MR. COLLIER: Are the catch shares going to be set up so they are giving out the entire ABC or is going to be less than that, because that is going to get to the biological question at that point?

DR. CHEUVRONT: I believe the plan at this point is to allocate the entire ABC. There is room to grow in this fishery. This has been a developing fishery and the fishermen claim that they will be able to catch that entire ABC.

MR. COLLIER: So this is running into a risk that you are giving them incentive to almost go over, an economic incentive to go over. It will be deducted the next year but you are getting into an overfishing situation, and that is the entire point of this whole process we went through is to not allow overfishing. We set up a very liberal ABC for this fishery because it was developing. It was set up extremely liberal and now they are given the entire share.

DR. CROSSON: But because there is an accountability measure included in here and you can hold an individual fisherman responsible for it, the action should allow the council to adjust this the following year without having to go – I don't see how overfishing can develop in a fishery that is controlled by catch shares as long as the – it is nearly impossible as long as there is individual provisions for that.

DR. BARBIERI: But, Scott, this is one of those situations where if by design, as Chip is saying, you are going to set up a system that you know is going to have to go in and correct itself, application of the accountability measures, it looks like there is enough room, and if you have an ABC that is, what, 5 times what the current level of landings is.

DR. CHEUVRONT: No, it is slightly double what it currently is.

DR. BARBIERI: Well, double what it is. One way or the other, basically I think what we are saying is that this is a warning to the council to know that it has tools at its discretion to prevent this from happening and still allow the fishery to develop progressively. I see that even in a developing fishery, in this case to set ACL equal to ABC doesn't seem to me to be a good idea.

DR. CROSSON: One other comment. Without directly answering your point, I don't see them catching 2 million pounds next year. There is nothing constraining them right now from catching 2 million pounds or is there? What was the ABC before; there wasn't one, right? There wasn't one, and there was no individual constraint other than the need to have a golden crab permit on going out there and fishing. There has been some increase in recent years but I think there have been fluctuations somewhat in recent years, too.

DR. CHEUVRONT: This is a demand-driven fishery. The guys are only going to catch what they can sell and they are developing the markets now, so they are looking for the expansion in the markets that they expect is going to happen particularly in East Asia like Scott was talking about earlier.

They couldn't land 2 million pounds next year because I don't believe they have the market that is willing to buy them yet, but they are looking to continue to develop that market. It is not something that is going to happen right away, and I believe this is on the SEDAR schedule. I don't remember what year, though. I know it keeps getting booted down the list.

MR. CARMICHAEL: They have been on the SEDAR schedule but because of the SSC's action allowing the fishery some room to expand, it has lowered in its priority.

DR. CHEUVRONT: Also, the guys who basically developed this fishery, they are still participating in it. They have developed the gear that needs to be done to help make this fishery profitable like this saltwater refrigeration system that they are using. They have put a lot into this over a number of years to try to develop this fishery. What they are really wanting to do now is to reap some of the benefits of all their efforts and their investment. That is why they are thinking that as this develops more over time. their markets will continue to develop.

DR. GRIMES: Is the monitoring a level of catch the same as it is in the finfish fisheries or similarly poor and time lagging when the data is available that would lead to the potential for running over being a problem?

MR. CARMICHAEL: I think from what Andy said that under an ITQ program everyone has electronic reporting and they do a much better job than the general finfish reporting; I think is what he said by this program. Isn't that what you meant, Andy, an ITQ program in that case; yes.

MR. COLLIER: I guess my issue is not so much truly with the golden crab fishery is we are looking at an ABC and the council has set up an ACL that exactly equal to the ABC yet they are taking management actions that are going to put him in overfishing. When we get above the ABC, that is technically overfishing as we've established for the SSC and that is not supposed to happen.

MR. CARMICHAEL: I think that is exactly the case; it is the philosophical argument. It is the issue we have discussed at every FMP about pushing ACL and all the consequences right up to the ABC and not having any allowance for the management uncertainty. This alternative clearly brings in a management uncertainty of 10 to 20 percent.

It is really not an issue whether or not they catch it today or they will catch it next year, although that plays into it, because if we can't account for management uncertainty which by design could be 10 percent or 20 percent on a fishery where the ABC is two times what they are landing and everyone is saying they probably can't even get there in the short-term future, then when can we actually account for the management uncertainty?

DR. CHEUVRONT: Can I ask for a clarification then? Is the SSC recommending for Action 13, Alternative 1, no action, do not allow fishermen to exceed their annual pounds? Are you saying that is your recommendation or what?

MR. COLLIER: I am saying your management options up there give you your ACL in a form. If you say you have a 10 percent overage, you should deduct from the ABC the 10 percent to ensure that you are not overfishing. If you select a 20 percent, then you need to go the 20 percent down.

DR. CHEUVRONT: Yes, my question was predicated on the fact that if the council is going to still have ACL equal to ABC, then you probably would prefer Alternative 1, no action. If they wanted to choose one of the other two alternatives, they should step down the ACL from the ABC by that percentage. That would be your recommendation?

DR. BOREMAN: Or set an ACT lower than the ACL, which I think makes a little more sense because that is a softer – it is not a cap; it is a target.

MR. CARMICHAEL: I think they would then allocate the ACT and not the ACL, and they should allocate it consistent with whatever they choose here. I think that is the sense; people weren't opposed to this as an appropriate way to give fishermen the necessary flexibility to harvest their full allocation and not have to stop right on the pound on that last trip, but the other parts need to reflect what is going on; the ACT allocate a little bit less to account for this.

DR. STRELCHECK: It is point of clarification. This isn't a 10 or 20 percent increase above the ABC because it only pertains to the last fishing trip the fishermen have; so unless everyone landed their entire allocation on one trip, it wouldn't be 10 or 20 percent of the ABC. I think the issue you are really wrestling with is you have expansion that could be developing in this fishery and you have a solid stock status at this point, so how much expansion can be allowed relative to the 700,000 pound landings that are coming in now? Maybe that is your recommendation then back to the council is just to be precautionary in setting the quota less than the ABC recommendation that this group has recommended to them.

DR. BARBIERI: Just to restate the same thing again but in a different way; if the council is not concerned about overages, the fact that the quota is going to be blown, then we don't need this action in the management plan, right? If the justification for saying, no, we don't need that buffer because it is very unlikely, then this action is unnecessary. The only reason that this action is being included in the plan is because there isn't a provision now in the plan that would allow some overage over the allocated poundage, right?

DR. CHEUVRONT: Well, I would think though that if this action was removed from the plan, then Alternative 1, the no action would be in effect, which means then that they could only land up to their allocation that they had left on their last trip. If they had gone over their landings on that last trip, they would be able to retain that and sell it, which is good, dropped overboard.

DR. CROSSON: Well, if the fishermen go over their allowance, I guess it would be the ACL would be the correct term because the ABC is not going to changed; that is a biological recommendation from the SSC. Even if the ACL is equal to the ABC, it is not the ABC that is going to be changed; it is going to be the ACL.

The council is going to have some mechanism for addressing, as with any fishery, going over the ACL. If there is no action put in here, there is nothing that addresses that, then the council is just leaving this as an open question how they are going to deal with it. These alternatives that are up there are putting up accountability measures ahead of time.

They are basically saying, okay, well, if the ACL is exceeded because a single fisherman goes over, then that is going to have to come out of the ACL next year, and that is going to be the means for preventing overfishing. At some point the books have to balance. I guess I am still a little confused over what the issue is that we are discussing here. If we leave it as no action, then the council has not set up an accountability measure, right? No matter what is written up there in terms of the SSC recommendation, you have to have some sort of accountability measure for dealing with it.

DR. BARBIERI: Well, my understanding is that accountability measures are going to be related to setting the ACL and landings exceeding the ACL. Whether individual fisherman exceed their annual pounds or not, it is related to the ACL itself. Scott, I get your point. I was just trying to reinforce the – there are two ways to address this.

One, you act proactively and you set a buffer and you prevent landings from going over ACL/ ABC. Another one is say this might happen and if it does, we apply the accountability measures to correct it. The council has a choice here which one of the two tools it wants to use to manage this fishery.

DR. CROSSON: But they could put the buffer in and still have the ACL exceeded. The buffer is not perfect as a management mechanism.

DR. BARBIERI: Right, but it is a likelihood type; it is a probability. You know, what is the most probable scenario to encounter if you have the buffer?

MR. COLLIER: My problem with this right now the way it is set up ACL equals ABC. The ACL is going to – all shares are going to be dispersed. There is potential for each individual to go over; and therefore if they go over, they are overfishing. That is not supposed to happen the way things are set up in the management system right now. There has to be some kind of buffer in there to prevent overfishing to make sure they don't get to that level.

DR. CHEUVRONT: Under the ACL Amendment, there are some accountability measures that were put into place for golden crab, or that will be put into place assuming that amendment is approved. It says after the ACL is met or projected to be met, all harvest, purchase, and sale of golden crab will be prohibited.

If the ACL is exceeded, the RA shall publish a notice to reduce the ACL in the following season by the amount of the overage if the species is overfished. The correction you can't necessarily stop overfishing in one season if they allow either of these Alternative 2 or 3, but it would be corrected for in the following season.

DR. REICHERT: My confusion here is that if one fisherman overfishes that is not overfishing. I still feel that this is – in addition to the other accountability measures, this is an action that is meant for the individual fisherman. If the total ACL or ABC is met, then the fishery will close no matter what. I think this addresses situations where that is not the case but an individual fisherman can actually have an overage that needs to be paid back in the next year, and it is to allow for your going out. Just because we set our fishing year from January 1 to December 1, that is an issue that I think Scott mentioned earlier, if you have a period of good weather, this allows the fishermen to do that and pay that back in the next year.

DR. CROSSON: My understanding of fisheries that are managed under catch share systems is that they almost always come in under the ACL or whatever a country chooses to term it. Because a fisherman has 21,000 pounds of allocation, he is not going to land exactly 21,000 pounds. He would have to be an amazing fisherman to be able to get his harvest to that point.

He is going to come in a few pounds under. All of the fishermen that have quota shares are going to come in slightly under their allocation. Now one of them happens to bump and exceed it by a small amount, then you don't need to worry about it because all the other fishermen came in under it.

The chances of this happening are – but actually pushing everything out to exceed – for it to have an effect, for one fisherman's actions to have the effect of going over the ABC, all of the other fishermen would have to had land exactly their allocations, which is not going to happen. They are going to come in 2 or 3 percent under. This is a very established thing in catch share related fisheries that they almost never go over the overage of your ACL because fishermen have individual allocations.

DR. YANDLE: Because they know their allocation ahead of time. They know this is when I have to stop, so they are going to go, oh, I can't take that next trip.

MR. CARMICHAEL: The difference is do those other programs allow you to go over on your last trip or do they have to choose not to take that last trip or to be extremely conservative on that last trip because they have individual accountability for going over. I think that is what the difference is. Then if no one is reaching the ACL and no one is expected to, then you don't need this.

If everyone is going to act conservatively and not go over, then you wouldn't need this. Then if no one is going to reach the ACL you could set the ACL or an ACT somewhat below ABC to give the management uncertainty that is necessary. I think all this stuff is tied in together. It is just the concept of accounting for management uncertainty seems to be what is causing the SSC problems.

DR. YANDLE: Based on the main system, I have said in the past New Zealand where they seem to have problems going over is actually where the primary species for one fishery is bycatch in another. For a lot of those ones, they actually do have some overage rules allowed there basically overage, pay it back the next year. Don't ask me exactly how those work; I can't remember of the top of my head.

But generally I would agree with what Scott said except for very few weird situations, they tend to come in right at or very slightly under. Again, they know what their limit is ahead of time so they do their trip planning. You will often see the cost of the annual catching right increase towards the end of the year as people try to top up their shares to have enough to be able to do that last trip, which is a whole different set of issues. But, usually they tend to hit those limits or pretty close to them.

MS. LANGE: Well, I think given that this fishery has not developed to a point where it is anywhere near the ABC or the ACL now, this measure is strictly to help guide the individual shareholder's business so they don't wind up throwing crabs over if they realize the last five traps they pulled put them a couple hundred pounds over their allocation.

I guess one of the questions; is there high discard mortality for golden crab? If there is, this is all the more reason to allow this to occur. The other part of it is I think the issue with ACL being set at ABC is one that we have with just about every FMP. and that has already been stated. I think it is again for the short term or potentially the long term this is not going to impact ACL or ABC.

I think we as an SSC should just state that this raises another issue relative to ACL being set at ABC and we encourage that not be done on any stock, or that ACTs be set and that be the soft target with measures to prevent hitting ACL. I don't think in this particular fishery at least again for the foreseeable future that this is really going to cause an overfishing situation on the population as a whole.

MR. COLLIER: I guess my question is could this even be approved by the secretary, because it does not prevent overfishing the way it is set up right now. I mean, in a given year you can go over the ABC and then you are into the overfishing state. I would think John and Steve would probably have more to comment on that with their experience with other SSCs. It is written in the Magnuson-Stevens Act that we are supposed to prevent overfishing. Even though the numbers right now are not there, it is not written in a way that would prevent it.

DR. CROSSON: That is a legal question I am not qualified to answer it. If I had to make a choice here, I would choose Action 1, the original Action 1 which is do not allow fishermen to

exceed their annual pounds because then the incentive for them is to go out there and buy, as Tracy stated.

If you have five fishermen that are active and they can trade quota around, then the one guy that wants to definitely make an extra trip will buy that quota from the excess that the other guys haven't used and the system will resolve itself that way. You can still set the ABC equal to – I'm sorry you can still set the ACL equal to the ABC and not have this be an issue.

Again, they tend to have a very good handle on how much allocation they have left in other fisheries that are managed using this mechanism. I don't see the need for a buffer between the ABC and the ACL given the fact that this is being managed under a catch share system and not like some of the other ones that we are dealing with.

DR. CHEUVRONT: The very last action is approved landing sites. The idea here is to have landing sites that are approved under NMFS Office of Law Enforcement that would be in consultation with the state enforcement agencies, so that basically whenever the fishermen are landing that somebody could be there to verify catches and things like that.

That is the preferred subalternative. Basically, the difference is who is going to set those between Subalternatives 2A and 2B, whether the council is actually involved in setting those approved landing sites or not. We thought it was best to allow OLE to do it in consultation with the state agencies. I didn't figure there would be a whole lot of comment on that one.

DR. CROSSON: Are they trying to set up electronic reporting mechanisms for this the way they do with some of the other ITQ systems in the Gulf?

DR. CHEUVRONT: Well, I think part of it has to do with; they want to be able to have some on-site verification as the vessels are coming in. If they have something as kind of a VMS, hailing in and hailing out something requirement. They wanted to make sure that any site where these crabs would be landed would be someplace that would be accessible by a law enforcement officer; that it wouldn't be behind a high chain link fence with guard dogs around it or something like that that would in essence keep the guys out or something. It just has to be someplace that they would know of ahead of time that was not too terribly remote that was accessible to folks to get to.

DR. BELCHER: Is there going to be an ability to expand a list; is it a finite list?

DR. CHEUVRONT: No, I don't think it is a finite list. I think probably what will end up happening is that the fishermen will say ahead of time these are the places where I want to be able to land and then they will just have to go out and be approved. It is not like they are trying to say there is only going to be three places where this can be done, nothing like that. It is just making sure that anyplace where these crabs are being landed are places that folks can get to to verify the landings. I think that is just mostly an administrative sort of action as opposed to anything else.

DR. YANDLE: Just in general I wonder about the enforceability of this. That has always been an issue I have had with having approved landing sites and a relatively accessible coast.

DR. CHEUVRONT: Well, we require circle hooks, too, in snapper grouper fishery but you know that is really pretty hard to enforce, too. I think the ideas behind this are letting people know this is the way it is supposed to be done. It also gives law enforcement some teeth in case they catch somebody doing something that shouldn't be done. Anyway, that is the last of the actions. Thank you.

DR. BELCHER: Further discussion or comment for that last one? No, okay. I am going to go ahead and say we take a break for ten minutes and then come back and we will go ahead and start into the clean-up items at the end of the agenda, including the recommendation that John Boreman forwarded around about procedural outline for how to deal with ABC remands from the council.

DR. BOREMAN: I just got word that the Mid-Atlantic was sued by Oceana on our Omnibus Amendment, so here it comes; but believe it or not they did not sue over the ABC Control Rules in the amendment. They sued over the accountability measures. We dodged our first bullet in the Mid. Let's see how the other councils fair when they get theirs accomplished.

DR. CROSSON: Are you going to be called to testify and explain all of the different accountability measures and the ABCs and OFL and F and all the other acronyms before a court?

DR. BOREMAN: The accountability measures are the council's problem and not the SSC's problem.

DR. BELCHER: Is the subcommittee ready to come forward again with discussions on wreckfish based on comments from Dr. MacCall?

DR. BARBIERI: Yes, and, Andy, I would start with Slide Number 4, because that might be helpful to help folks understand the core of the discussion – the hallway discussion that we had a little while ago. Basically we have two runs at this point after getting feedback from Alec MacCall and discussing this.

Combining this thought process with the discussion that we had last night, we are between two runs really that we believe are equally plausible to represent the situation. It all has to do with the first year of the time series there that is used to estimate the depletion rate. In one, which is Run 19, we used the '92/'93 – that is the real first data point that we have here – as the highest data point.

Then we used that goes through'06/'07. In Run 21 we actually take advantage of the regression estimate there that Andy developed and we go back to '90/'91 as that estimate of where in the very beginning of the fishery, right after it had fully developed, where that point should be according to this model and making the assumptions that we have to make with this model. But at this point we can't really assign any weight to either one of those scenarios. We feel that both of them have valid points.

One of them is supported by observed data that we actually have to give us a depletion, but the other one makes sense and in some of our opinions would be more reflective of the spirit behind the method that MacCall developed, that you capture the full extent of that depletion.

If we go back to Slide Number 10 and we look at those runs, that would give us then as equally plausible scenarios or runs, Run 19 and Run 21. Considering that we did not assign different weights to those runs or those scenarios, our recommendation is that we assign equal weight to those and come up with an average between the outcome of those two runs.

I did not have time after the break to calculate what their value would be, but I see John Carmichael already busy there with a calculator, and that number would be? /

MR. CARMICHAEL: 234.5

DR. BARBIERI: 234.5, yes, so the outcome of our subcommittee meeting and the work that Andy did and consultations with Alec would be then the 234.5 thousand pounds as the recommended ABC for wreckfish. Obviously, we would like to hear feedback from the committee regarding those decisions.

MR. CARMICHAEL: Would you say that is the best estimate of ABC from this analysis? We don't know that it is the recommended ABC yet. We haven't addressed question 2.

DR. BARBIERI: Absolutely. I was just trying to express that within our subcommittee we came to that consensus in recommending to the full committee that that would be our best estimate of ABC since we were tasked with addressing this for the full committee.

DR. BELCHER: I am going to refer back to John Boreman and let John ask his two questions from yesterday.

DR. BOREMAN: he first question, again I guess what I am hearing from the group, I wouldn't call it a committee, but just a group is that you are recommending that we accept the analysis as currently presented as a basis for determining an ABC; and the second question, based on that analysis, your recommending to the SSC that we change the ABC from 250,000 pounds to 235,000 pounds, 234,000, in that area, correct?

DR. BARBIERI: That is correct. By the way, in this case I am going to just speak for myself here, no longer representing the group that met, but just to revisit the rationale of this exercise, to me this is what made this whole process worthwhile is that we had a landings-based ABC recommendation that came out of our assessment of the poor level of information that we had to make an ABC recommendation.

We explicitly requested to have what we thought was the most viable analytical approach to help us fine tune that recommendation. At that time we thought that what would be the most logical approach to be used was DCAC. We made that formal request and a year later we were presented with the analysis that actually was conducted at our request.

I feel compelled to follow the principle behind our tiered approach and having more sophisticated, more informative analysis, to revise our ABC recommendation if we believe, as John pointed out, that the methods used were acceptable and were fully reviewed and revised according to whatever recommendations the group felt necessary. I still strongly believe that in this case this would be the best course of action.

DR. GRIMES: Yes, I agree with you and I support what you are saying. I raise one minor issue – maybe it is minor and maybe it is not an issue – is that if you follow that decision tree that I think we set up back in the spring, does it lead you to this or does it lead you to production model? I guess maybe we are splitting hairs, which scientists love to do. It's just the kind of thing that drives managers crazy, I guess. Anyway, I am just asking that question, but I don't have a problem with doing what you suggest.

DR. BELCHER: John, you kind of answered that earlier, didn't you, with saying a lot of the reasoning was why wreckfish has kind of been on and off of the SEDAR scheduling? I just vaguely remember the conversation about some of the concerns the Science Center was having.

MR. CARMICHAEL: Yes, the Science Center concerns that were expressed were about the stock portion that we see and being able to get an analysis out of that, yes. I imagine that colors everything that we talk about.

DR. GRIMES: Right, but that is true, that caveat applies to all of it, production model, DCAC, whatever, DBSRA, it's all the same.

DR. BERKSON: Now. in talking with Alec this morning, I believe if I got this right, he said one of the assumptions of DCAC was constant recruitment. I need to talk with Andy about that, that could have been the way he was setting up his DBSRA. I am not quite sure what assumption he is making about recruitment in DCAC, if he is making any at all.

I am not quite sure how that fits into DCAC. We are saying with DBSRA if you assume constant recruitment, that this larger population was bringing constant recruitment into the localized population. You could use DBSRA making that assumption, but once again we don't know whether that assumption is true or not, whether you are getting constant recruitment. It is obviously difficult trying to do any kind of analysis or assessment when you are only working with a small part of the population, as we know from spiny lobster.

DR. BOREMAN: Well, we can continue on. We can just say, well, let's go now and do a DBSRA; and then after we finish that, we will say let's do a surplus production model, but right now we have to deal with best science information available. I think we made the decision the last time that would constitute at least viewing the results of a DCAC to see if it changes our mind.

At some point we have got to draw the line and say we have to formulate a recommendation to the council. They have to know this by December so they can set the specs for the coming fishing year. My recommendation is to endorse the group's recommendation and move forward.

DR. CROSSON: I just had a technical question. Maybe you can refresh my memory or somebody here can refresh my memory; when we asked for this analysis last year, did the council ask us to reconsider the wreckfish ABC based off of this new analysis?

MR. CARMICHAEL: I think it is fairly inherent within the process. If new information becomes available and we are asking you to look at an analysis, we at least at the staff level are going to ask you if you think you need to reconsider the ABC.

DR. BELCHER: We have gotten as far as the methodology.

MS. LANGE: I think I would second John's recommendation that we accept the recommendation of the working group.

DR. JIAO: I feel I am comfortable to use either the previous ABC or the recommended ABC from the subcommittee because they are not big differences between them, and the previously used ABC is right between the two plausible runs there. For each of the runs, there is uncertainty inside of it, and because of these reasons I say I think I am comfortable with using either of them.

DR. BARBIERI: Yes, let me stop apologizing to you, because when we had our little hallway impromptu ad hoc meeting, I guess you were not in the room and we were trying to be timely in our response back to the committee and we did not consult with you, so I expressed the subcommittee as having consensus, but we had not discussed with you, so apologies there.

DR. JIAO: I supported the analysis and the contribution from the analyses, but if you want to ask me whether I have to pick one ABC from those two choices, as I explained, it is actually the current ABC is right between the two plausible runs, so I think it is fine.

DR. BELCHER: Other comments on that? Obviously, with that stated we don't have a consensus on what to do with the ABC modification. No, the group being aware of that; it is not unanimous, okay.

DR. STRELCHECK: I guess the question before you is, is this compelling enough to change the ABC or not or does this at least support your ABC recommendation, which is really why you wanted to look at this in the first place. In terms of the recommendations that you make, certainly additional work could be pursued to better validate these results with maybe more sophisticated models, but that will be contingent on obviously resources within the agency and whether there is going to be staff time dedicated to look at this.

From my standpoint, at minimum this tells you that you had a good ABC recommendation to begin with; maybe it was even overestimated slightly based on averaging approach. One thing that I will – or two things I will mention in talking with Alec; this certainly isn't an MSY estimate, this is a sustainable yield estimate, and this consistently underestimates MSY based on meta-analysis and other work he has done.

The other thing I will mention is certainly the biggest uncertainty with this is really estimating that B unfished parameter. We don't obviously have a strong indication of what that is. The CPUE index is used as a proxy for biomass changes, and we are projecting back in time. But as I mentioned earlier today, we probably should have projected farther back in order to estimate B unfished, because the fishery was exploited prior to 1990. To me if you made an even further adjustments, you are probably going to be right at 250 or around 250. which is your original recommendation to begin with. But if this is more compelling, then to me you average the runs and that is your recommendation moving forward.

MR. CARMICHAEL: I would say to the MSY, the committee discussed that when we talked about the difference between DCAC and DBSRA, and we would hope that MSY would be higher than the yield from this because we treat this as ABC. In the case of DBSRA, the committee talked about that as being an MSY value. and then you would come down from that for ABC to account for uncertainties. We kind of dealt with that.

DR. BOREMAN: I am willing, if the group thinks it is – based on Andy's comments especially that this is an estimate of sustainable landings and not MSY, I am willing to say that the 250 seems reasonable, our original, stick with that if that is what the group wants to do. I'm not going to be the stick in the mud.

DR. BERKSON: I am not sure what the right answer is because of all the uncertainty involved in here, but it just sounds like we are getting really mushy. I would like to have a better adjective than that, but we need to have scientific justification for our actions. I think we were having good scientific justification based on the model runs; and if we can develop good scientific justification for 250 and spell that out, if it makes more sense than the average, then that is fine. But right now what we are wording is, well, that sounds kind of okay so maybe we should go with it. I don't think that is acceptable justification.

MR. CARMICHAEL: I've thought about dealing with this, and I don't know how this would be received, but the council often talks about getting a sense of the uncertainty and getting these values and knowing what the range is. You have identified those two runs; you could potentially craft some advice that says you believe it lies between 0.191 and 0.278.

You recommend the value of 0.234 as the average of those two, but you are putting forth some sense of the uncertainty to the council. Then you could comment obviously on the level of risk associated with it, which would be exactly what they would want to see. We don't know how these things work out going forward to the council and giving them a bit of a range on ABCs, but we have done that in the past.

You did that most recently with red snapper, in fact, where you gave the council some alternatives based on assumptions about effectiveness of the moratorium and then they chose within their level of confidence based on your advice which alternative they chose to actually set the rebuilding plan for that stock. That may give you a bit of a way out of this sort of hole.

DR. BELCHER: Well, part of the other thing though coming back to that -- and again, I am not going to use the phrase I used yesterday, but the 250 that we came up with isn't the actual

average, anyway. We don't know what those confidential data points were, so we pretty much just eyeballed where we thought the midline was, right? Again, there is some uncertainty even with the number that we came up with.

DR. CADRIN: I have been trying to stay quiet because I think the subcommittee did recommend using the average, but you could take these two plausible estimates and the fact that they bracket the previous recommendation to say, well, there is no need to change the previous recommendation, but I think the sobriety test came when Marcel reminded us what that was based on. It really was not based on any analysis. It was a very crude qualitative recommendation.

I think having gone through the last few days and all of Andy's support, we have now shored that up with a much more defendable ABC recommendation. Even though the 234.5 may not be meaningfully different than 250 to us, .it is based on much better science. I think that is why the subcommittee has gone with that. It is a much more solid recommendation. There is still uncertainty, of course. We don't have a full-blown assessment. There are several valid options. That is why we are recommending the average.

DR. CROSSON: Repeating what I said yesterday, I absolutely believe we should not anchor off of our earlier recommendation and that should be discarded. We should use the information that we have in front of us and make a completely new judgment.

My understanding of Yan's position is not that she believes we should use the earlier recommendation but that you believe that we should use a particular model run? The number that you believe we should use as our ABC is based off of – what is your preference for coming up with a number? What is the methodology that you believe we should be using to make an ABC recommendation for this fishery?

DR. JIAO: Frankly, I am not that comfortable with using the exact number from DCAC analysis. I believe when the author of DCAC used it, he usually tried multiple approaches, multiple models and then get a general conclusion from it. That is why I feel it is for me it is because of those uncertainties I really don't want to recommend one number there.

But the judgment of the plausible runs 19 and 21, I agree with them. I agree with the subcommittee. But again because I don't know how to read those two runs and the numbers, the differences between the two runs comparing with the medium value of it is about 20 percentage differences there.

Because of that I feel like – and I am not sure. Eventually I hope that people working on the socio-economic aspect can contribute on the impact of changing ABC. But here as I said, because the differences are very small, that is why I am comfortable to go either one of them. My concern is by using DCAC we are always going to recommend a C that becomes smaller and smaller.

There are only 3 fishermen there working on this fishery and it is a localized location. Anyway, so those are my concerns. That is why I said I am comfortable to go either one of them, if it is

really much lower than the current ABC. Even though scientifically it is from the DCAC and plausible runs like the one from yesterday's conclusion, then I would really hope the socio-economic scientists can weigh into the management aspect. I don't have any disagreements about the conclusion from the DCAC. Did I explain myself clear?

DR. CROSSON: But you dislike the idea of averaging the two runs together?

DR. JIAO: I don't know how to say it; I think I am fine with everything, the two runs.

DR. BARBIERI: Just one more comment about average the two ones versus giving the range, I understand the principle of giving the range, and I think that is a fine option. But I can tell you; in the Gulf we are struggling with this issue of having a way to capture a broader range of uncertainty in our recommendation of ABC and having something they allow us to use the outputs of multiple runs or a broad range of runs that we consider plausible and bookends what the likely scenarios are in forming our ABC recommendation.

We are seeing those PDFs of OFL that typically do not capture a whole lot of the uncertainty that went into the analysis are narrower than they should be; are under representing the true uncertainty in the analysis, especially when we have multiple runs that we believe are plausible. In that case we are asking the Science Center to really start providing us with something more like a model averaging outcome, and, of course, this will require additional work from the committee or subcommittee from the SSC that will be working with the analysts to help assign weight to those model outputs.

But, we really would like to get to a point where we try to have an outcome that captures more of that uncertainty. In principle here, because we have to provide an ABC, I am not sure we have any other viable way than to do that.

DR. JIAO: Am I the only one that says okay for either of them? If this is a question that causes the meeting to continue, then if I have to pick one approach, then I support the one from the subcommittee. I agree, it is after analyses, it is better than just literally looking at the catch and do an average of it..

DR. BERKSON: About giving the range, the council is supposed to provide us a risk tolerance – I mean, that is the whole idea behind P-star – so that we can give ABC. But that is the order in which it is supposed to happen? We are supposed to get the risk tolerance first and then it is our responsibility to give the ABC based on that risk tolerance.

We are not supposed to give, as I understand it, a range of values and then allow the council to pick the value they prefer or the risk tolerance that they want based on the values that they are comfortable with. I think that is not the way the national standard is set up, although I am not positive about that. I am sure we have got people here that are more familiar with that than I am. I do know that is the way I think we have got the P-star system set up; correct me if I am wrong on that. We ask for the risk threshold first and then we apply it to get our ABC.

MR. CARMICHAEL: You have in P-star; you have actually specified a means of obtaining the risk tolerance. I think if the council were to come back and tell you we are okay with the 50 percent risk of overfishing occurring on wreckfish, how would that help you? That is why I said I think in giving the range, you need to comment on the risk, knowing that they haven't set a hard and fast number and realizing that setting a hard and fast number in this situation, so, really, at this point, as I understand it, for any of these Tier 2, Tier 3, Tier 4 things, there is no way to analyze that hard and fast number so it becomes kind of moot.

But I think 50 percent risk is the most liberal that they can go with. They would like to be more conservative in some cases. Some of these long-lived fish, their past history suggests their willingness to be slightly more conservative. But all that becomes not of any use to the question at hand when we don't have any evaluation of the risk. If you guys can comment some on the relative risk of a range, then I think it helps them inform and make the best decision they can.

DR. BERKSON: How is this for logic – and this may not be logical – but we have got the two runs with estimates of a sustainable yield, not maximum sustainable yield, but a sustainable yield, and we are not sure which is best and the council, let's say, would go with a 50 percent risk, then that would lead to the average between the two as a sustainable yield.

MR. CARMICHAEL: I think that is one possible way of looking at it. That is certainly one way of looking at competing model results. It sort of gets to the uncertainty in the estimate maybe more than the risk of overfishing, but I think we all know that with any of these exercises we don't know the risk of overfishing.

DR. BOREMAN: I just keep thinking of Richard Levin's comment – he is a professor from the University of Chicago – "the truth is the intersection of independent lies". But in this case I am really uncomfortable giving the council a range for anything. I think if we give them a range we are not doing our job, because what we are doing is saying, well, we have taken it this far, now you finish our job for us and you come up with the best estimate of ABC.

To me again, I said I am willing to go 250, I am willing to go the average. I have heard the arguments support taking the average. It is in the same ballpark as our original, so basically again you have got two independent ways of looking at the information and coming up with some pretty close numbers. I recommend we just follow along with the recommendation from the group. and that is the average the two and use the 234.5

DR. BELCHER: Is anyone not in support of doing that? Okay, so we will recommend that the ABC be modified to the 234.5 or 234?

DR. BOREMAN: Yes, let's round it off 500 pounds, 235.

DR. REICHERT: Are we requesting further analysis as a recommendation? That was brought up earlier.

DR. BELCHER: Does anyone on the SSC not support that recommendation from the subgroup relative to further exploration?

DR. BOREMAN: Prior to that, some discussion so we don't wind up where we wound up this time. What are we going to do with that analysis, how are we going to use it and interpretation. Are we going to use that analysis and revisit the ABC once again or use it for our next cycle of ABC spec-setting?

DR. CADRIN: I am really glad you asked that because I think there are four of us who that are a little more tired than the rest of you today. I think the short answer would be we could do it just like we did it. However, if we could schedule this more accommodatingly, that there be time for a subcommittee meeting that is perhaps different than the plenary, maybe similar to the way the Economic Subcommittee met. I think the same process but maybe done a little bit more humanely would be what I would recommend.

DR. BELCHER: There is definite room to discuss how we want to handle this in the future. Like I said, that is an open discussion, it doesn't have to be done in the same technique that we did yesterday.

DR. BERKSON: I would like to expand the recommendation and have it include both DBSRA and a production model and also investigate the appropriateness of those models given the nature of the stock. I just don't want to have a number brought back to us and us debate the number.

DR. REICHERT: To that point, I think we will be facing more stocks where we will be having the exact same discussion, so I think it would be good to include how we are approaching these different runs. And like today we came to the conclusion to average them if we have two equally plausible model runs, so I think it would be very good to include that in the discussion so we can formulate a more consistent approach, because that will be something that will be asked in future stock assessments since this is the first time we set the precedent on how we approach this.

DR. BARBIERI: Just a quick comment on how to proceed; to me the way I see this, the SSC looked at the analysis that was presented, provided some input, reviewed that analysis, requested additional runs; and as of today this is the best available science and we are making a recommendation.

However, we recognize that there are additional analyses that could be done that could continue fine tuning our recommendation and bring information to the table. Like we do with any of the other assessments that come before this committee, every time that we have a new analysis that we believe is credible and that is duly reviewed, we provide a new ABC recommendation.

I don't think this is different. We are just in this case being more explicit about requesting an analysis and not different than what we did last year when we made a landings-only based recommendation, but requested this DCAC be done so we could actually look at how that compared with our previous recommendation.

DR. BERKSON: I think also we need to word this in a way so that we are not prioritizing this, because I am not sure how this fits in with all of the other stocks that need work. It almost makes it sound like we want this by the next SSC meeting or like it is a high priority. That is really up to – I don't know whether it is the SEDAR Steering Committee or the Science Center

or who that does the prioritizations – I know for SEDAR it is the steering committee, but I don't know that the SSC wants to go on a separate parallel track prioritizing their own stocks for this kind of work, so our wording has to be really clear about that.

DR. BELCHER: Well, just to kind of go on that track, we didn't make this a priority this go round. I mean, we offered a suggestion to say that in the future we need to be looking at it from a DCAC or DBSRA approach. Someone just happened to pick up the banner and bring it forward to us.

As Andy was saying, this is going to be resource driven. If it is something that they think is a priority and it is not taking up a ton of resources, you may see a faster action than we would see if it has to go through the vetting of a SEDAR process or the steering committee discussions or whatever. We may find that DCAC starts showing up every meeting, that someone can sit down and do a DCAC approach. If there is that time available, that could happen.

But again, given comments in the last couple days, I would hope that wouldn't happen without some previous input from the group. I am just saying in that sense I don't really feel that we are making this a priority. I think we are just recognizing the fact that it does – there is the potential for this to be brought up another tier based on what we have now sat down and looked at. Now there are gives and takes to that as well.

DR. BERKSON: I agree with you and I didn't see that it was being made a priority. I just want to make sure that is consistent with the wording.

DR. BUCKEL: And this has been brought up by others, and John spoke to this, he said that this tried to – I guess this assessment tried to get pushed on ICCAT because it needs to be a North Atlantic assessment; that is clear. I think either in research recommendations or trying to get the council to ask again for some international body or someone to try to take all these data series – and we saw some of those that Andy presented.

I thought that was really interesting, the correlations between the different countries catches, but it looks like the data are there; and if somebody could pick up that and do a North Atlantic assessment, that should be explicit in our report. Maybe the council can try with ICCAT or some other international body again, ICES, yes.

DR. BELCHER: Okay, I will throw it all to the group; do you want to break for lunch or do you want to continue going? We still have information and updates and then to bring up the other business about the procedure for remands on ABC. Okay, so we will just go ahead and push through. With that, Gregg, if you can come talk to us about the current FMPs.

MR. WAUGH: What we have coming up with mackerel is Mackerel Amendment 19 that we will be taking out to scoping in the last week in January, first week in February. That will be looking at prohibiting sale and changes to permits. Then later in the year we will have a framework action or will be folded into CE-BA 3, where we look at changes to size limits and trip limits and so forth.

We have got a couple of snapper grouper amendments hanging around looking at trip limits and long-term management for red snapper, but those are going to sort of morph into decision documents. We have already looked at trip limits. Red snapper we will deal with once we get an assessment so that we know what we can do there.

We are trying again to get to the point where we do one major amendment a year and calling that our Comprehensive Ecosystem-Based Amendment and basically set up an annual schedule where we scope the last week in January, first week in February. The council reviews all the scoping – well, let me back up, at their December meeting they tell us which issues on a list to take out to scoping.

This time around we have got speckled hind and Warsaw, looking at the issue of powerheads and several other items, but also anything that the public suggests that we need to look at get added in there to. We scope January, February; the council reviews scoping comments in March; we put together a public hearing document for them to look at in June. They approve it to go out to public hearings. We do hearings in August, early September and the council finalizes the document at the September meeting; if it needs to carry over to December, fine.

This process over the last two years of all of these multiple documents to meet the Magnuson Requirement just about crippled the process. We are trying to get back on track and have one annual process that people know when things are going to happen. We can then better schedule our SSC Review.

It will make for one larger document, but within that you will have chapters that address individual fishery management plans. For people that are only interested in parts of it, they can tease those out relatively easily. That is what we are hoping to do next year. We will have that one joint amendment with the Gulf; it will be outside the scope of that CE-BA process. I will be glad to answer any questions.

DR. BELCHER: Any questions for Gregg? Thanks, Gregg. SEDAR is next, John.

MR. CARMICHAEL: Okay, the minutes within SEDAR that we want to bring to your attention are the long-term assessment priorities that are planned for 2014 at this point as our long term. What we are trying to do within SEDAR is have the steering committee agree to the assessment schedule about 18 months out.

They just met in October 2011 and finalized the schedule for 2013. This is in response to a lot of the pushback they have received from our life history people in particular, but also our other analysts and all about making these assessment changes so late in the game. The process is that we would like to get some initial feedback from you guys on the 2014 schedule.

It will be routed through the council, it will be routed through a new SEDAR technical committee that SSC chairs are sitting on as one of their main things is to look at the overall assessment planning and be a little bit closer to the give and take on priorities and make sure that the SSCs have a voice there.

The steering committee will come up with a preliminary suggestion for 2014 in May, which then they will finalize in October of 2012. At that time in October of 2012, they will look forward to what they want to do in 2015 and beyond. What we have got on the list here for 2014 – well, what they have agreed to for 2013 is a gray trigger benchmark, blueline tilefish benchmark, snowy grouper standard, gag grouper standard, red grouper update or standard, and then a red snapper evaluation to the SSC.

We would like some feedback from you guys first on the red grouper standard in 2013, whether it should be a standard or an update. The idea is that if you think there is some new data that might need to be considered or there might be a new data source or if there is something in there that you think justifies considering some of the changes that are required to do a standard and doing it through a single workshop, then you should recommend a standard.

If you believe that it simply will suffice to have the analyst add the new years of data and bring it to you for peer review, then we can go with the update. Obviously, that is going to be a more efficient way to deal with red grouper. Our recommendation is an update for red grouper because it hasn't been that long since the benchmark; and the standard for snowy and gag are based on you guys identifying the long time between those assessments and a concern that there could be things that have developed that you are not aware of.

DR. REICHERT: John, can you address why red grouper was put on the schedule? That was not one of the species that the SSC had on its list of recommendations, and I forgot what the discussions were when red grouper was recommended to be put on the 2013 schedule.

MR. CARMICHAEL: It was put on there because of the timing of it, because of it being a rebuilding stock so it has been a couple years and they want to see how things are progressing.

MR. COLLIER: Beginning probably the next couple weeks we are going to start looking at otolith shape of red grouper, try to determine if there is stock structure in this species because there is differences in life history parameters as well as landings have shifted from Florida up to North Carolina. They are potentially spatial considerations that might have to go into this model by 2013. Hopefully, we will have that done by then.

MR. CARMICHAEL: So perhaps looking at a standard for that one. The way that works is you guys have an opportunity to craft terms of reference that indicate what you are comfortable with having the group consider in terms of making modifications to the base run. That is the key difference in the update; they don't modify anything, they simply add new data.

It sounds like perhaps a standard for red grouper based on some of this otolith-shape stuff that you are looking at, which is a good idea. You may end up that you don't have enough data to make a change, but at least this opens the door if it should be necessary.

DR. BUCKEL: Yes, just one other new source of information, and it probably will not be enough years to use this as an index, but the SEFIS, the new independent trap and video survey for the southeast will have another reason to push it potentially to a standard.

MR. CARMICHAEL: I should probably comment about that note there, red snapper evaluation to the SSC in April 2013. The council needs to look at red snapper in 2013 because that was part of what went in with the regulations that put in the no possession, that there would be an evaluation by 2013.

The thought was that we would be looking at that new independent study and have several years. Now there are some issues with the first year and getting off to a slow start, so they don't have that many years of information. Then there was also an evaluation of survey power, which suggested for species with the lifespan of something like red snapper, it may take as many as five years to really start getting a trend that you think is useful within a stock assessment and indicative of what is going on.

Based on discussion with the Science Center representatives, the request is that the Science Center will evaluate red snapper. They will evaluate the progress under that new monitoring plan. They will look at the performance of the fishery under the no possession situation and try to get an idea of how the population is responding and give a report to you guys in April about what they propose to evaluate, so that you can have a sense of what information will come to you.

And then at your later meeting in October they would come to you with an evaluation of red snapper that would just sort of – in a sense it would be the management strategy evaluation and the performance of the population under the existing management plan, so you get an idea if the stock is on track as predicted and if it is showing signs of recovery. Obviously, the council would like at some point to lift the full prohibition and allow some fish to be harvested, both for the fishery and also for their data value.

That would be one of the things they will be considering down the road. What this is intended is to give you a chance to give feedback to the Science Center about what your standards would be, what you would like to see for red snapper and then give them an opportunity to do it, and hopefully then get it into the council for 2013, and get the final report to you in April of 2013, which gives them essentially a year to try and get that stuff worked out.

That was in lieu of attempting a full benchmark in 2013, which the steering committee did not think was going to pay off. If that looks good to folks, we can move on to 2014. So 2014 again has a red snapper benchmark. Obviously, they want to try to do a red snapper benchmark as soon as they can.

Specific timing of that will obviously depend on this report for this April 13 target, and it may be that at that point they recommend some later date for a red snapper benchmark, but we can anticipate red snapper staying as a top priority until we get to the next point of getting an informative benchmark.

Other ones are mainly representing things that have been pushed out, and gray trigger obviously came into 2013, so that wouldn't be a 2014 priority, but white grunt is. White grunt is interesting. The Science Center believes there are two stocks and it will require two analysts and two analytical spots, so it takes a bit more resources than some of the others.

Florida hopefully doing a black grouper update. There is interest in a scamp benchmark, and there is also interest in the Gulf of a scamp benchmark. This is one that you guys have mentioned a number of years as needing to look into. We think with the exception of, say, wreckfish and golden crab, which have been out there with their own issues, this brings by 2014 most of the stocks that the SSC has raised issues with, which is good.

Luiz may want to talk some about black grouper. We were expecting a yellowtail snapper assessment to be reviewed last week, but there were some delays in getting that done, so that is going to be a little bit slower getting to you guys. I don't know if that is going to affect Florida's plans, but Luiz might want to talk the long-term assessment plans down in Florida for a bit.

DR. BARBIERI: Well, yes, the delay with the yellowtail snapper assessment, it was one of those things you know, technical issues that came up and getting the data all lined up in the very beginning was a little bumpy road. Eventually that got done, but by the time that the analysis started and people started looking at the residual patterns and the reliability of the model runs that were coming out, the idea was this is not ready for primetime.

It will be best to just have a more in-house review, do all the revisions that need to be done and bring this before the SSCs when – for the CIE review, the review workshop and the SSCs whenever it is ready for a full review. We pulled it out of last week's SEDAR 27 review workshop, but I am in discussions now with the CIE folks; you know, the leadership within CIE to commission a desk review that would be done probably this coming January; that we would contract independently with the CIE and actually get a desk review from an independent CIE reviewer and have that completed before the assessment comes before the SSC in April. I don't see that having any impact on the black grouper update. We have enough assessment capacity now to assimilate this update in 2014 without a problem.

DR. REICHERT: Greater amberjack was on the schedule earlier for 2014, if I am correct. Has that been discussed at all?

MR. CARMICHAEL: Greater amberjack was discussed and given the stock status is pretty good it wasn't considered as big a priority as some of these others. You notice the updates and standards are dealing with things where we are in rebuilding situations or things are really borderline. I think greater amberjack is on maybe 2015.

The question then is does this look good for 2013 as a first cut and now sort of a chance to indicate if there is any stocks that you all know in your experience might be showing some signs of trouble based on monitoring you are doing in states or other areas that we might want to pencil in at this point for 2014.

DR. BARBIERI: John, I still don't understand that the gray trigger.

MR. CARMICHAEL: Gray trigger will be in 2013 and not in 2014. Yes, missed the cut.

DR. BELCHER: Other suggestions for John?

MR. BOREMAN: Just an FYI, I have been in touch with Kari and John about this, but the SEDAR Steering Committee is also interested in having a special workshop involving calibration of MRIP to MRFSS. That is something that NMFS is moving forward with undue haste, as fast as we possibly can.

I have been asked to run that workshop and to set it up. Just an FYI, right now it probably will happen around March or so, and I have approached John and Kari to see if the SEDAR group wants to come in and at least co-sponsor the workshop since we all have similar goals in mind and how we are going to extend time series back before 2003 so we can do stock assessments involving longer time series of recreational catch once MRIP takes over.

Right now the plan is that the agency will go 100 percent MRIP; MRIP all the time starting in 2013. This year in 2012, this coming year they will be running both surveys side by side. This is the last year we will have a chance to compare. The question is how are we going to calibrate the new survey, which has a new intercept methodology, a new estimation methodology with the old survey in a statistically robust fashion.

We will need a CIE type of independent peer review and a blessing so we know we are using the best science. We formed a steering committee. Andy is a member from the Southeast Regional Office, and we have got Steve Turner from the Southeast Center. We have got Jim Weinberg from the Northeast Center, Sara Heil from the Northeast Regional Office, Ron Salz from Headquarters and Wes Patrick from Headquarters and myself.

We have come up with terms of reference to basically look at the calibration work going on so far; make recommendations for what other studies should be done. A lot of money is being spent on calibration work now within the MRIP program. The second term of reference is basically look at the side by side that will be coming out publicly I guess in January; the runs from 2004 to 2011, MRIP and MRFSS, so you can compare one to the other and then use that to develop some calibration technique for extending hind casting before 2004 and maybe back to 198,1 if we can, the start of MRFSS.

Then the last term of reference is a timeline; come up with some way of a process for incorporating the new MRIP into stock assessments either through benchmarks or updates or how we going to do that, what is the timing, what criteria should be used for setting priorities on species and so on. That has been done.

We have also come up with a list of background working papers that need to be done. That is what is going to affect the timeline is how soon the NMFS leadership feels their Center people can prepare these working papers. Right now we are thinking March, but we have come up with the list of terms of reference and the list of working papers.

That is going back to NMFS leadership and we are saying now it is up to you folks to decide if this is a priority or not. If it is a priority, then we can have the workshop sooner; and if groundfish are still a priority on the east coast, which it seems to be in the agency, then we will have the workshop later, but we are not going to set a workshop date. We will leave it up to the leadership to hold their own feet to the fire to set up a workshop date.

I just want to say that is in the works and we are reaching out to SEDAR. I will be sending that list of background papers and terms of reference. I will be corresponding with John and Kari Fenske about that. We welcome their willingness to throw the towel in and suffer along with us. We don't know what the MRIP numbers will show for 2004 to 2011. There has been speculation; some are good some are bad.

But every time they have gone back and looked at the algorithm, they found another error which causes things to swing one way or the other. By January we will have those numbers out and available for people to be looking at. It says me, but I'm saying it because I am also chairing their Executive Steering Committee for MRIP. They will have those numbers out. This is supposed to have been out last June, so we are still waiting for them. Thanks.

MR. CARMICHAEL: Thanks, John, for filling everybody in on that. The last couple of things here, I sent around an informational document for you. It is a technical memorandum – you will recognize one of the authors at least – "Assessment of Four Southeast Stocks". I think that given what we have discussed here, this should be considered as an example of the types of non-SEDAR assessments that could come in for your consideration.

One of the situations we should discuss at our next meeting in April, when we talk about practices and policies for peer reviewing such information, that may be enough said about that at this point in the game. There seems to be heads nodding in agreement so that sounds good.

DR. BERKSON: I have another item to bring up; is this an appropriate time? Okay, I corresponded with John Hoenig last week and learned that he had not been reappointed to the SSC. We know these decisions are made by the SSC Selection Committee in closed session so we don't know why those decisions are made and it is not our job to question those.

I think we all know that John is a world-renowned fisheries scientist with incredible expertise on everything we deal with, especially quantitative matters and stock assessment matters. We were incredibly fortunate to have him as a member of the SSC. We are missing his expertise given the topics that we are having to deal with.

I have two recommendations I would like to make. One is, first of all, that the SSC Chair send him correspondence thanking him for his service on the SSC. The second recommendation is that the SSC formally send a request to the SSC Selection Committee or suggestion, whatever the proper term is, to reappoint Dr. Hoenig at the earliest possible opportunity.

DR. CROSSON: The first one I certainly agree with. I am not sure I agree with the second; not that I have anything against John. The council has set up a process for the SSC selections. I think at their June meetings is when they do their appointments and look at the needs of the SSC. I think we are all now on a staggered term basis, on a 3 year basis. I think if the council – again, John is great and very valuable in contributing to the SSC. I would think next June would be the time that would be. I don't think the council wants to change the membership of the SSC in between.

DR. BERKSON: Well, that is why I said early as possible, whatever the schedule is. When I was previously on the SSC – I don't know what the policy is now – the SSC was encouraged to provide suggestions for membership. I don't know if we still are. We didn't have to review them. We didn't have to approve them, but we were encouraged to provide suggestions. If that is still the case – even if it isn't the case, I think we should be providing suggestions. That is just basically nominating people. But I think if people think that John is as valuable as I do, we ought to make that an emphatic suggestion.

MR. CARMICHAEL: The process is such that each year the council reviews membership. They are typically appointed to terms for three years, review a third of the membership each year. It is done in June. In early spring we try to send out the word and put it on the streets that we are looking for people and obviously appreciate your assistance in that.

At the April meeting we normally as you do you have anybody that you would like to recommend. In fact I think that is how we found out about Tracy, because through the SEP she was identified and recommended as someone. What we will do is then take your recommendations to the council. People that you recommend may or may not always apply.

We have had people that individuals have recommended, we have contacted them, told them what is entailed and some have said, you know, I don't really have time at this point in the game. But your recommendations are appreciated and they are considered at the council. The right time to do that would be in April I think to bring it up again and make sure that that is part of what goes forward to the council if you want to recommend Dr. Hoenig for reappointment.

The other bit of new business we had was the remand policies that we wanted to bring up, and John Boreman had sent around the policies that the Mid-Atlantic Council has specified for remanding of ABCs and how to handle them. I think the membership agrees that having some sort of policy would help in this endeavor. John, if you want to take it away.

DR. BOREMAN: Sure, I will take it away. This policy was developed early on when we started working on the ABCs. This is maybe three years ago now. It was basically a knee-jerk reaction in response to what happened up in New England to the SSC up there. I don't know the whole story, Steve does.

It is to prevent the council from saying we do not like the number, go back and work on it again, and keep coming back to us with a number until we see one we like, and then we will agree. I got together with the Chair of the Mid-Atlantic Council and the Vice-Chair and we decided we better make sure our butts are covered on this so the council cannot arbitrarily just say, well, thanks for your ABC but we want you to do more work on it.

It is a remand, so we came up with four reasons why the council – four situations where the council can remand it back to the SSC. The first is we failed to follow the terms of reference that they gave us so we didn't answer their question, which it happens. I mean, it happens during the SARC process.

When I was Center Director, I was annoyed sometimes that the SARC terms of reference were not fully addressed, so that happens; but if we don't answer their question, they have a perfect right to ask the same question again. Second is an error in fact or omission in the materials provided to the committee, and that has happened, too, where we made a wrong calculation during an SSC meeting in the heat of a moment and gave them a number that needed to be corrected – excuse me, in the materials provided to the SSC.

I am talking about Number 3, and Number 2, in this case it happened that for – I think it was black sea bass there was a document that the SSC did not have in hand at the time when they were developing a quota recommendation to the council; and if we had had it in hand we probably would have changed our recommendation. It was available; it just wasn't available to the SSC.

Finally, failure of the committee to follow its standard operating procedures; here the most important part of the SOPPs for our SSC is that we have to have a quorum in order to develop an ABC recommendation. Quorum means 50 percent or more of the membership has to be there. Since then though we have been advised by Regional Counsel, Joe McDonald that we don't have to have a quorum.

Even if it is in our standard operating procedures, we don't have to have a quorum at a meeting to develop an SSC recommendation. I am still comfortable as SSC Chair making sure we do have a quorum where we can schedule a meeting where we can get at least half the members there, so that is the case.

Now, this hasn't covered every situation where we have gone back and revisited an ABC. Since we have come up with this these four reasons for a remand, there is also the case where survey information comes out that presents significantly new information on the status of a stock. This past spring, we usually go through a cycle where we do scup, summer flounder, black sea bass, and bluefish at one meeting.

Well, the stock assessment scientist at the Center last spring who was supposed to do the updates for summer flounder and scup was pulled off to work on groundfish, of all things, go figure. What we agreed to was to at least do projections based on the previous year's updated assessment; run the projections another year so we can look at those at our June meeting, which we did, and we set an ABC based on those projections. With summer flounder, however, it was in a rebuilding plan and all the indications were that the stock was rebuilt; but since they didn't have a full updated assessment in June, they couldn't declare the stock rebuilt in June.

So the deal was that when Mark was available, his time was available, he would do the updated assessment and try to get it to the SSC by the end of the year so we can advise the council on the updated assessment and advise council whether the stock is rebuilt or not. Well, Mark did that and in the meantime, well, he had said the good news and bad news.

The good news is, yes, the stock is rebuilt. The bad news is your ABC is higher than it should be by – well, the overfishing limit is higher by 30 to 40 percent than what it should be. You would

be overfishing if the council followed your ABC recommendation. We are having an emergency meeting in a couple of weeks.

He said, oh, and by the way, I also did an updated assessment for scup and it is the same situation there that we overestimated the stock biomass for the coming year. It is about 25 percent less than what we thought it would be; therefore, your ABC recommendation on scup was too high, too. If the council follows that, they will be overfishing. So we are punting that back.

But that is a situation that comes up and it is basically up to the Chair of the council to determine if that is warranted to go back to the SSC, but it is not an automatic. It is a judgment call on the part of the Chair to come back to the SSC and say take a look at the new information and advise us if we should change our ACLs or based on your ABC if you should change your ABC.

If that happens, it seems reasonable that is something, but it is not an automatic remand. Of course, we don't want to get in a situation every time a new survey comes out a new number pops up; the SSC has to scramble to find a new ABC, because it just goes on and on and on. These are the four that we are functioning with now.

The council passed these; it is part of the standard procedures now for the council. They seem satisfied with that, and it avoided the situation that we originally got into was just they didn't like our first round of numbers on ABCs so they wanted to send this back and keep working on it. This gets us away from that, and I think it offers some form of protection for the SSC, so we are not twisting in the wind depending on the whims of what the council feels is good number, bad number or data, no data, updates, new survey information or whatever pops up.

We will be here for years in these meetings if that occurs. I am just offering that up. What I am recommending is that this SSC develop a recommendation to go to the council; something along these lines, maybe not this exact wording, but this idea that certain circumstances, there should be a remand back if we are not doing our jobs, but other than that they get what they get in terms of an ABC and they have got to live with it. Thanks.

DR. CROSSON: I don't want to necessarily add to the number of potential reasons the council could remand something back to us, but I am not sure what just happened with the wreckfish would fit underneath this. This is the SSC requested a particular type of analysis from the agency and they came back, and the SSC used that as a basis for reconsidering an ABC recommendation. I would think that that would be something that would definitely be a reason that the council could ask us to reconsider an ABC, that we specifically asked for a type of analysis to be done by the agency and then that analysis was given to us. That would probably be something that should be a fairly standard operation of this committee.

DR. BELCHER: I didn't really consider that a remand; I considered that reevaluating new information that was brought to us. It was different then the council saying, well, this has been done, we want you to reconsider.

DR. CADRIN: I think the Mid-Atlantic remand policy is logical; I think it is thoughtful. I think the governance structure of the SSC developing remand policies is a little backward. I guess the way I see it is the SSC serves the council. If the council wants to consider remand policies and develop them, then I think that should be the genesis of it. Has the South Atlantic Council requested the SSC develop remand policies? To me this shouldn't come from us; it should come from them.

MR. CARMICHAEL: They haven't requested it; they haven't discussed it. It probably hasn't crossed their mind.

DR. BOREMAN: Yes, to that point, again, this is something that we decided to do and then advised the council. It is definitely up to the council to do a thumb's up or a thumb's down, or modify it or develop any kind of policy that they want, but it was what happened in New England that kind of scared us a little bit.

We are having the same cast of characters for the most part in the Mid-Atlantic. And we didn't want that to happen there. I don't see any reason why we can't develop recommendations to go to the council to say this is how we think you should be governing us. Somebody has to come up with this idea.

DR. YANDLE: Yes, just from a public policy, public administration perspective, having some set of defined criteria of when a remand can or cannot take place makes a lot sense to me. Could we take, say, this list of criteria, if this is the one that we want, and request that the council consider – essentially that the council creates a policy for remand, and we suggest this one be as it is already in place, and I assume successfully in place in the Mid-Atlantic. We are recognizing the council's authority and we are just requesting that they address this issue and almost are going to put it this way, here is our preferred method of doing it, but the decision is still theirs.

MS. LANGE: I guess I sort of haven't really paid attention to this. Have we gotten unreasonable remands or any remands?

MR. CARMICHAEL: You have gotten remands. I won't comment on reasonable or unreasonable, but you have gotten them.

DR. CROSSON: We had Spanish mackerel as a conference call this past summer; that was a remand, wasn't it?

MR. CARMICHAEL: Spanish mackerel, wreckfish, all your unassessed stocks were remanded to you at one point, so, yes, and it has happened.

DR. BOREMAN: Our recommendations last year on golden crab, for example, that was a remand. They didn't like our ABC and sent us back to the drawing board.

DR. CADRIN: Or is it that they didn't like the basis for the ABCs, in which case that is a valid reason in the dialogue between science and management that should happen. Again, I think we

shouldn't be too uppity with our remand policies, is that if the council leadership feels that there is an issue important for us to reconsider, I don't think that we have the authority to say no.

DR. CROSSON: I agree that we don't have the authority to say no. We are asking the council to develop a policy towards us that binds themselves essentially from remanding every recommendation that they dislike.

DR. BERKSON: I agree with Steve, the council has the right, as I understand it, to ask the SSC questions along the way. We also have the right to say what we did before is best available science. There is either no additional information, it was done correctly, or there is additional information it supports what we did. Just because we are asked to do something again, it doesn't mean they are going to necessarily get a different answer. But they always have a right to ask and we always have the ability to double check, triple check our work, I think.

DR. CROSSON: We have standard operating procedures developed for this SSC. I am sure we have a document somewhere, don't we? This would probably be included in that and that is something that the council has to approve. That is something that we don't develop the SOP for the SSC, the council does, or at least we might advise them on it but they have to approve it, correct?

MR. CARMICHAEL: Yes, there are SOPPs for the SSC. The council approves the SOPPs. The council recently, as all the council's did, had all of their SOPPs approved. Something like this, it could be in the SOPPs or the council can just have standing policies and agreements that are not as formalized as the SOPPs for dealing with this kind of stuff.

It comes down to whether or not you guys think it is an issue and maybe in general people don't think it is an issue at this point. Remember all this if we get something remanded back that people think they should have gotten back, but we will deal with that bridge when we come to it, I suppose.

DR. BOREMAN: Whether it is an issue or not, it wasn't an issue at the time when we developed this, but what we tried to do was avoid it becoming an issue by doing this. But, again, I worked in concert with the council chair, so it wasn't the SSC going back to the council and saying, here, this is how you should govern us. It was a collaborative work in progress, I guess.

DR. BELCHER: Well, maybe modifying the third bullet point where it says suggest the council establish; I mean, could we just say suggest that the council consider establishing criteria for remanding ABCs based on certain things that have happened in other regions. I think that at least it puts them before them to determine if it is something and that they can look to the Mid-Atlantic policy for remanding as a jumping off point. Does that language seem to carry forward? Because, again, with the whole us recommending, what we are actually saying is that we do see a need or a potential need for a remand policy. We can suggest that the council consider establishing one and that the Mid-Atlantic has one in place and that is a point at least for them to have a discussion on what exactly a remand policy would look like and what it would do. Then it is up to them to determine if they feel it is needed or not needed and how they would specifically dovetail it for the region. Any other business?

DR. BARBIERI: Just before we adjourn, if you are getting ready to adjourn, Madam Chair, I hate to always sound like the sappy Latino but if the shoe fit, right, but I think that we should make a comment and thank Mike for his contribution to this meeting. I think Mike did a great job. I mean, all the staff really do a phenomenal job here.

But I see this as a great improvement to our reporting process. It is a significant change from the way that we have been doing things. I think it is a major contribution to capture the consensus of the group in very well done way there, in a summarized way, condensed, capture what our recommendations are. It will make this report preparation a lot easier to complete, so thank you, Mike and staff, for thinking about this. It has been great.

MR. COLLIER: I have a question about the deepwater closure and what happened with that. At our last meeting we had a presentation that we didn't accept as the best available science and now the deepwater closure is coming off. Now there is going to be another revision of it with potential changes to that, and I am just wondering how that policy is set up and how we are supposed to review that.

MR. CARMICHAEL: Well, based on issues that you raised with the analysis and the things that were apparent, and what it suggested about what was going on with the fish and the capture, and where it was occurring in the deepwater species, the council did decide to lift the overall closure. There is expectation that they will look at other types of ways of holding down the impact in those deepwater species, such as perhaps other types of closures that are in different areas, you know, trying to bring where the closures occur more in line with where the fish are encountered was the discussion at the council meeting when they dropped it.

We expect that to happen at a later amendment and to be talked about by the council in the coming year and come up with some other approach that solves the problem. The bottom line was it was recognized that it didn't seem like the deepwater closure was having the desired effect in terms of protecting those fish and that there may be better ways to go about solving that problem.

MR. COLLIER: So they are lifting the entire thing and taking away all protection before putting in other management measures to ensure that something is not going to happen to them?

MR. CARMICHAEL: No, they are not taking away all protection. There are still quite a few regulations that impact those fish. Gregg, want to go ahead and fill in.

MR. WAUGH: Yes, the Regulatory Amendment 11 has been submitted to the National Marine Fisheries Service for formal review. It is being reviewed internally and is near to starting the official review period, so we will know whether it gets approved or not. That action did remove the deepwater closure. It keeps the prohibition on harvest and possession in place. How to deal with speckled hind and Warsaw are one of the issues that will be scoped in January and February to go into CE-BA 3.

MR. CARMICHAEL: If you have any ideas, you could forward them to staff for consideration in CE-BA 3. It would be appreciated.

DR. BELCHER: Any other business? Timeline for folks; I would like in order for us to keep on timeline with what John needs, which is to get the report to the council on the 21st of November, if I could have everybody's notes by close of business on the 14th, which is next Monday, I will work on that for the next two days and get it out to you on the 16th for everybody's review.

If you can then get comments back to me by the 18th, I will make sure it hits John's desk by the close of business on Monday, the 21st. Your notes to me, I know most of you have already sent them in, but if you have got notes by Monday, end of the day, I will get it back to you on Wednesday, and then if you can get it back to me by Friday. It will all be fresh on everybody's minds. Any other comments, discussion points, other business? Okay, seeing none, we are adjourned. Thank you all; I appreciate all your hard work and time.

(Whereupon, the meeting was adjourned at 12:33 o'clock p.m., November 10, 2011.)

Certified By: _____ Date: _____

Transcribed By:
Graham Transcriptions, Inc.
November 2011

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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.

SCIENTIFIC AND STATISTICAL COMMITTEE MEETING
November 9, 2011
Charleston, SC 29414

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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.

SCIENTIFIC AND STATISTICAL COMMITTEE MEETING
November 8, 2011
Charleston, SC 29414

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