

# **SOUTH ATLANTIC FISHERY MANAGEMENT COUNCIL**

## **SOCIO-ECONOMIC PANEL**

**Crowne Plaza Hotel  
North Charleston, South Carolina**

**April 28, 2014**

### **SUMMARY MINUTES**

#### **Socio-Economic Panel**

Dr. John Whitehead, Chair  
Dr. Scott Crosson  
Dr. Ben Blount  
John Hadley

Dr. Sherry Larkin  
Dr. Chris Dumas  
Dr. Tracy Yandle  
Dr. Sherry Larkin

#### **Council Members:**

Ben Hartig  
Charlie Phillips

David Cupka

#### **Council Staff:**

Gregg Waugh  
Dr. Brian Chevront  
Dr. Kari MacLauchlin

Myra Brouwer  
Dr. Mike Errigo  
Mike Collins

#### **Observers/Participants:**

Dr. David Carter

Other Attendees Attached

The Socio-Economic Panel of the Scientific and Statistical Committee of the South Atlantic Fishery Management Council convened in the Crowne Plaza Hotel, North Charleston, South Carolina, April 28, 2014, and was called to order at 12:00 o'clock p.m. by Chairman John Whitehead.

DR. WHITEHEAD: This is the meeting of the Socio-Economic Panel of the Scientific and Statistical Committee. My name is John Whitehead; I'm a professor in the Department of Economics at Appalachian State University. We'll continue introductions going clockwise.

DR. YANDLE: Tracy Yandle; Environmental Policy at Emory University.

DR. CROSSON: Scott Crosson; economist at the Southeast Fishery Science Center.

DR. DUMAS: Chris Dumas; Natural Resource Economist at University of North Carolina - Wilmington.

DR. LARKIN: Sherry Larkin; Natural Resource Economist at the University of Florida.

MR. HADLEY: John Hadley; economist with North Carolina Division of Marine Fisheries.

DR. CHEUVRONT: Brian Chevront; council staff.

DR. MacLAUHLIN: Kari MacLauchlin; council staff.

DR. WHITEHEAD: Is there a motion to approve the agenda? Does the agenda look okay with everybody? The agenda is approved by acclamation. How do the minutes look? Did everyone see those and read through them thoroughly? The minutes are approved by acclamation. Our first item on today's agenda is Dolphin Wahoo Amendment 7. Brian Chevront is going to lead that discussion.

DR. CHEUVRONT: I believe it is actually PDF Page 18 and Document Page 6, the beginning of Chapter 2 of Proposed Action. Let me just give you a little bit of background about where this amendment came from. Just about a year ago some recreational fishermen from Florida came to the council and said that folks were starting to receive violations for bringing back filleted dolphin and wahoo from the Bahamas.

They were kind of unaware that was not allowed when it was allowed specifically for snapper grouper species. The council took some time to think about this and talked about it. In the September meeting they gave direction to staff to develop a one-action amendment that was going to create the condition so that dolphin and wahoo could be brought back from the Bahamas by recreational vessels under the same conditions that they could currently bring snapper grouper fillets back.

Now, there is no problem with bringing the fish. The issue is bringing the fillets back. As we got into it, we realized that it really is a lot more complicated than just swapping out the words "dolphin and wahoo" for "snapper grouper species" in the regulation that currently existed. We brought this all back to the council in September; and they said, yes, we agree that there are

issues that are related to this. They gave us some direction on the kinds of things that they wanted included in the amendment and sent it back to look at developing some more actions.

We came back in March, and they talked about this again. They realized that some of the issues that needed to be addressed now also involved snapper grouper species, which was not the original request at all; but it turns out that when the exemption was put in place to bring snapper grouper fillets from the Bahamas into the U.S. EEZ, it was a different time and there weren't all the restrictions on snapper grouper species that there are now. There were some things that needed to be addressed.

Looking at the issue; right now is you could bring back 60 pounds or 20 fish of snapper grouper species as fillets. You can bring them back any way you want to; but right now you have to bring back dolphin and wahoo as whole fish. Now dolphin and wahoo; if you are going over to the Bahamas and landing fish under Bahamian regulations, dolphin and wahoo are part of a multi-species grouping of which you are allowed to possess 18 fish.

That grouping includes dolphin, wahoo, tunas and king mackerel. Some of the issues were then, well, how do we know – there is nothing about how many pounds of those you can bring back. That is the other thing. The issue now comes up, well, how many pounds of dolphin and wahoo species equates to one fish? Well, we didn't have the data to help us figure all that out.

What the council is looking at was allowing two fillets per fish. They could be pretty big fillets if that is what somebody is going to bring back for dolphin and wahoo; but since that was such a mixed grouping of species, they couldn't turn it easily into pounds of fish that would be equivalent of the 18 fish total.

We've got some dilemmas and stuff there. The current U.S. law is based on possession in the U.S. EEZ; that is the hang-up. Right now when people fish in the Bahamas, they can do whatever the Bahamian law allows. Coming into the U.S. EEZ, however, they have to obey U.S. law if they have those fish on board.

The U.S. laws currently do not allow dolphin and wahoo as fillets to be possessed in the U.S. EEZ; so we're trying to address that here. The first action that we have is Action 1 at the beginning of Chapter 2 here. The first action is to look at exempting dolphin and wahoo harvested lawfully in the Bahamas from regulations that require them to be landed with head and fins intact in the U.S. EEZ.

Right now the current status quo is that they must be landed head and fins intact; but they can be eviscerated and all that. The problem the fishermen are complaining about that is it is really hard because some of those dolphin and wahoo are fairly large fish. A lot of the vessels; there are some of the really big yachts that are going over; but there are some fairly smaller boats that are going as well; and they are not likely to carry coolers that would allow them to put a whole fish in the cooler of some of these things.

They would like to have considered being able to bring back some of these fillets. The second alternative is to allow dolphin and wahoo lawfully harvested in the Bahamas and brought into the U.S. EEZ from the Bahamas as fillets. Right now the action has in there the vessel must have

stamped and dated passports to prove that the vessel passengers were in the Bahamas, as well as current, valid Bahamian cruising and fishing permit on board the vessel.

The vessel must be in continuous transit through the U.S. EEZ; they can't stop and fish. We are going to try to get the council to add a definition of what vessel in transit means, which is vessels in transit through the South Atlantic EEZ when it is on a direct and continuous course through the South Atlantic EEZ and no one on board fishes. It also defines that two fillets of dolphin and wahoo, regardless of the size of the fillet, will count as one fish towards the possession limit.

Basically what this will try to do is just now allow them to bring dolphin and wahoo fillets into the U.S. EEZ. Of course, understand that these regulations only apply to the recreational fishery. Now, some people have asked the question, well, what is to stop a commercial fisherman from going over there, getting dolphin and wahoo fillets, bringing them back into the U.S. and selling them?

Well, that is a Lacey Act violation. That is specifically prohibited under Bahamian law to sell these fish. They do not license foreigners to come and fish commercially in the Bahamas. To do that would be a Lacey Act violation; and that is not an issue that we need to address here. I don't know if you have anything you want to say about that; the idea of allowing folks to bring them back.

Basically, what it would do is probably cut down on some violations that people would be experiencing. What you might want to do at this point is just see if there is any discussion or anything anybody wants to add about this one action. There are only four actions here; they will go pretty quickly. If there is any discussion, probably now is a good time to have it.

DR. WHITEHEAD: Is there any discussion?

DR. DUMAS: Just a question for clarification; these two fillets count as one fish. The one fish is counted toward the U.S. bag limit; the bag limit in the U.S.?

DR. CHEUVRONT: There actually is going to be another action that is going to address bag limits, because there are differences in bag limits. Actually as far as dolphin goes, the U.S. possession limit is more liberal than what the Bahamas allows. Wahoo on the other hand is very different. When we get to that one, I'll address that specifically, because we do want to talk about how that would go. Right now this simply is to allow people to bring fillets into the U.S. EEZ.

DR. LARKIN: Do we know what the implications are of that ratio; the one fish two fillets is for each of these species?

DR. CHEUVRONT: Ratio in terms of pounds or what? The issue is a law enforcement issue. If somebody gets stopped, they need to be able to count fillets. What we wouldn't know is if somebody cut them up into smaller fillets; we would not have any idea of how many fish that represented unless the law enforcement guys got into thawing fish if they are allowed to be brought back frozen and then doing the jigsaw puzzle of putting it together.

That is really more of a hassle than anything else. I think the most expedient way to deal with it was just say one fillet per fish. A lot of these fish; the fillets are going to be so big they will have to be folded over. It is conceivable that some of these fillets could be difficult to get into even a one gallon zip lock bag. Now the other thing is that the fishermen could, if they wanted to, if they had a really big fish with a lot of meat on it, they could cut it up into multiple fillets, but every two fillets will count as one fish towards their bag limit.

DR. WHITEHEAD: Brian, on Page S-4 of this document it says basically there are no biological impacts, no economic impacts, and no social impacts. The only problem is the enforcement issue; and that seems to be a matter of number of fillets per fish.

DR. CHEUVRONT: That might be a little bit of an oversimplification to say that there aren't any impacts; because depending on how far you want to stretch this economically, you are causing people an economic hardship who are now having to go to court and pay fines, and time, and all this kind of stuff. It is not a direct impact of actual fish, bringing them in; but there are actual other impacts as well. There are probably some social things as well in terms of being able to bring back those fillets. It is what it is.

DR. WHITEHEAD: I don't see why the Socio-Economic Panel would have any objection to this.

DR. CHEUVRONT: All right; the second action is to exempt dolphin and wahoo lawfully harvested from the Bahamas from the bag and possession limits in the U.S. EEZ. Right now the way it works is that they would have to – while they are in the Bahamas, that is fine, they can have up to their 18 dolphin and wahoo in any combination with those other species; but as soon as they cross into the U.S. EEZ, they are now under U.S. jurisdiction and they would have to follow U.S. possession limit requirements.

What they want to have considered is that right now – well, just to recap, you can have 60 dolphins per vessel as long as there are – well, it is ten dolphins per person. As long as there are six people on the vessel you could have up to 60 dolphins. You can also only have two wahoo per person on the vessel.

However, in the Bahamas they don't count bodies on the vessel. It is you can have 18 fish, any combination of dolphin and wahoo and tunas and king mackerel. The current possession limit for dolphin is 60 dolphins per boat maximum, which is ten dolphins per person. Wahoo is two per person per day in the U.S. EEZ.

One of the things that the council is considering was splitting out dolphin and wahoo separately in the alternatives here. One is to exempt dolphins lawfully harvested in the Bahamas from the regulations and the other is to exempt wahoo. Actually it turns out really wahoo is the one that is the issue that could get folks into trouble; because according to this if there are just two guys on the vessel, they could bring back 18 wahoo potentially from the Bahamas; but if they get into the U.S. EEZ, they could only have four.

It would only take two people on the vessel to be allowed to have more dolphin in possession in the U.S. EEZ than they would be able to have in the Bahamas; because in the Bahamas they would have up to 18; and if there are only two on the vessel, they could have up to 20 in the U.S.

EEZ. Wahoo is the issue there that the council is considering. It is the idea of does the council want to basically allow folks who are fishing in the Bahamas to bring back what they are legally allowed to catch in the Bahamas. They would need to fix this at least the wahoo to do that.

DR. WHITEHEAD: Any questions or discussion?

DR. DUMAS: Under Alternative 1 it says the bag limit for dolphin and wahoo lawfully harvested from the Bahamas; so are they able to harvest additional fish within the U.S. EEZ in addition to those harvested from the Bahamas or does the vessel must be in transit requirement sort of preclude that.

DR. CHEUVRONT: That is exactly it. The idea is if you are going to fish in the Bahamas, you can't fish in the U.S. EEZ on that same trip. You have got to be in continuous transit back to your port. Once you get back to a U.S. port and offload, then you can go back out and fish if that is what you want to do, but you cannot stop and fish.

DR. DUMAS: If a vessel were legally harvesting dolphin and wahoo in the Bahamas, it seems to me the maximum number of fish they could have would be 18 under Bahamian law; is that right?

DR. CHEUVRONT: For dolphin and wahoo species, the maximum they would be allowed to have would be 18. But, remember, in the Bahamas, there is no limit on either species; and there are times when the guys go fish just for dolphin and just for wahoo. There is a wahoo fishery that occurs in the fall that they just go after wahoo; and they are able to catch all 18 wahoo.

DR. DUMAS: But, for example, they would never have 60 dolphins on the boat if they were legally harvesting in the Bahamas, because the maximum fish they could have would be 18, right?

DR. CHEUVRONT: That is correct.

DR. DUMAS: Should we have something in there that the maximum number of fish would be 18 on the boat and then maybe have a sub-limit on wahoo?

DR. CHEUVRONT: Well, I don't know that the council wants to get into the nitty-gritty of that; because one of the things that could also happen is that if the Bahamas changes their regulations, they want to not have to go back and change ours if necessary. I think what they are really thinking they would like to do is just if it is legally harvested in the Bahamas; you can bring it into the U.S.; but you can't fish in the U.S. once you come back into the U.S. EEZ, which is probably the simplest way to deal with it.

The third action is really a law enforcement issue. What they want to do is they want to require fillets of dolphin and wahoo and snapper grouper species brought into the U.S. EEZ from the Bahamas, to have the skin intact on the fillet to help aid in species identification. This was one of the issues that came up; because when the original regulations were put into place for snapper grouper, there weren't all the restrictions that there currently are on snapper grouper species.

The idea is they don't want folks bringing into the U.S. EEZ species that are prohibited in U.S. waters. Particularly I think they are talking about Nassau grouper and some other things that we don't want folks bringing into the U.S. It is not currently required on snapper grouper fillets; and right now we don't have anything for dolphin and wahoo in place because you have to bring back the whole fish so you have to have the skin on the fish when it comes in.

The council wanted to consider these two separately. This is largely a law enforcement issue more than anything else. A lot of folks are really not terribly concerned. The fishermen weren't too upset about having to leave the skin on. Actually some people are saying, well, with some snapper grouper species you really need to have some scales as well to help in species identification. That is not really being considered right now at this point. I don't know that this really has socio-economic ramifications.

DR. WHITEHEAD: Any comment?

DR. CHEUVRONT: Action 4; right now the way the regulation is written for snapper grouper species, they just have to have Bahamian cruising and fishing permits on board. The issue there is that Bahamian cruising and fishing permits are not just specifically for one trip; it is for a period of time. It can be as much as 90 days.

It all depends on what they give you when you go into immigration in the Bahamas when you first arrive there. It can be as short as three months and as long as nine or twelve months. What the council is considering wanting to require is having stamped and dated passports to prove that the vessel passengers were in the Bahamas, if they are in possession of snapper grouper fillets.

Now, as you recall that very first action included this wording for dolphin and wahoo in that initial first action. This wording is not in place currently for snapper grouper, so they wanted to add it here. Well, to get into the Bahamas, you have to have a passport. The IPT is saying, well, we're not sure that you need this action at all, because it is a requirement.

If you have lawfully entered into the Bahamas, then you have a passport. The council is going to discuss this action in June. It is all a matter of do we want to require passports for this action? Again, this is another mostly law enforcement sort of thing, but the idea being there was a concern that vessels could have Bahamian fishing and cruising permits on board the vessel, go out and fish in the U.S. EEZ, fillet those fish and get stopped; never having gone into the Bahamas because they have valid Bahamian cruising and fishing permits. This was the idea of this is the way to force them into showing proof that they were actually in the Bahamas so they don't use this as a loophole to be able to fillet fish in the U.S. EEZ.

DR. WHITEHEAD: To fish there, you have to have a passport, you have to have the cruising permit.

DR. CHEUVRONT: And the fishing permits.

DR. WHITEHEAD: And the fishing permits. When you show up there, do you have to actually check into port and get your passport stamped?

DR. CHEUVRONT: When you get to the Bahamas, you go into the port. You are allowed to have a small amount of fish on board the vessel before you stop into immigration. The immigration officer will issue the cruising permit, the fishing permit, and stamp your passport at that time. If you've already got the cruising and fishing permit for the vessel, you just take them with you with the passport to the people who are on there and they will stamp them.

What happens is that sometimes there are folks who will take their vessels over to the Bahamas and leave them there and fly back and forth from Florida. Maybe they are going to stay for the summer or something like that; and what they do is they just leave the permits on board the vessel and they just get their passport stamped as they come back and forth each time. They are trying to curtail anybody from illegally using the Bahamian cruising and fishing permit as an excuse for going out and filleting fish from the U.S. EEZ, which we do not want to allow folks to do.

DR. DUMAS: Currently are there many U.S. recreational fishermen who have the cruising and fishing permits who are going to fish in Bahamian waters for snapper and grouper, are catching them, bringing them back to the U.S. and are not getting their passports stamped? Is that a very common practice now or are there relatively few of those folks? Would this be an additional significant burden for the recreational fisherman?

DR. CHEUVRONT: No, because to be legally in the Bahamas, you have to have your passport stamped and dated. It is not an additional burden; it is already required in the Bahamas. That is why the IPT wants the council to discuss this again. It is already required in the Bahamas; so once they cross over into the U.S. EEZ, they ought to have those passports on board along with the permits.

But, there is some concern on the law enforcement side that they want to emphasize that this is going to be a requirement; because if we don't require them to have passports, then they could possibly just go out with a cruising and fishing permit, fish in the U.S. EEZ, say that we were in the Bahamas. If we don't extend the regulations that we're going to check their passports, they could get away with it and probably in court they would probably be fine. Ben.

DR. BLOUNT: I don't recall from reading in the documents under what the level of demand is for this. I know that the majority of the fishermen would be coming from the Florida Keys and from the Miami area most likely. But is there a sense is this something that is going to be convenient for a number of people, but not a large number?

DR. CHEUVRONT: Actually, the largest percentages of these folks that are going over to the Bahamas are from southeast Florida, some of them from the Keys; I think even as far up even as the Stuart area; but clearly I think the majority of them are going out from the Palm Beach area down to about Miami is where the majority of them are heading from. There are a significant number of them; there are a lot of boats. A lot of these guys will just go over and do it for a weekend.

They get their permits and they can motor over on Friday, fish all day Saturday and Sunday, and come on back on Monday kind of thing. That happens apparently fairly often. It doesn't take a huge vessel to be able to do that; but we don't have a real handle on exactly what that number is. We've tried to get numbers from the Bahamians on this.



They can tell us how many non-cruise ship passengers entered the Bahamas not on an airplane, so basically everybody who came by boat is what we're getting that is not on a cruise ship; but they cannot tell us how many people were on a single vessel. That runs roughly 12,000 folks a year.

DR. BLOUNT: I have another question and apologies if this has been asked already. This kind of procedure already exists for red snapper, I believe; is that correct?

DR. CHEUVRONT: It is all snapper grouper species.

DR. BLOUNT: All snapper grouper, okay. Does that seem to work okay? I know there are some questions about enforcement, but that really hasn't been a big issue, a big problem, has it?

DR. CHEUVRONT: It has not been a big problem. The fishermen like that and actually a lot of the fishermen thought that because it was allowed for snapper grouper that it was already allowed for dolphin and wahoo. For those folks who got ticketed last year when they started enforcing this, it came as a big surprise. That is why they came to the council and asked the council to address this.

DR. WHITEHEAD: Do we see a problem with having your passport stamped?

DR. CHEUVRONT: Okay, that is it for this amendment. Those were the actions that the council has already talked about, but the IPT Is going to ask the council to consider two other potential things. One has to do with considering the number of snapper grouper fillets as a way to aid law enforcement, so they can count fillets like they are going to be allowed to do for dolphin and wahoo.

The other one is how those fillets would have to be packaged. That has to do with whether you can put two fillets into a package, or more, or landed fresh or how they are going to do it. I can tell you there would be a lot of heartburn over having to land them fresh and not frozen, because a lot of these guys go over and they go for a season, and they have freezers on board some of these larger vessels; and they are not going to want to have to hold onto this fish fresh.

Whether they have to be individually wrapped or two fillets per package, I don't know. The council will discuss that. Those are not official actions that the council has looked at yet. If you all want to weigh in on those two ideas; but again I think they are meant largely as law enforcement sorts of issues.

DR. WHITEHEAD: I don't think we want to weigh in on that.

DR. CHEUVRONT: The only economic impact might be having to buy more baggies. I'm trying to think what else could this be at this point?

DR. WHITEHEAD: With this issue; at the beginning of the agenda tomorrow, is this something that we need to write a summary about?

DR. CHEUVRONT: What you could quickly do is just basically say that the Socio-Economic Panel was concerned with these issues or not regarding this amendment. You could leave it at

that if you wanted to or if the panel would like just to make a statement on whether or not there are socio-economic issues with allowing or not allowing the fillets in general and not specifically related to the actions; however you want to do it. It doesn't need to be anything really elaborate. Based on the conversations, there hasn't been a huge amount of discussion on socio-economic implications of the actions in this amendment as they are now, so that would be appropriate.

DR. WHITEHEAD: Another question about the SSC agenda; are the things that we're addressing, it didn't look to me like they were on the SSC agenda, so these are all separate issues?

DR. CHEUVRONT: I know the two amendments that I am going to be talking about with you guys today; they are actually on the SSC agenda on Tuesday. I'll bring them up to the whole SSC. Probably what will happen is either you will talk about what you guys discussed in your report or maybe at the time we get to that amendment you may talk about what the SEP said at that time so it is relevant to the overall discussion.

DR. WHITEHEAD: Tomorrow when we are in the agenda first we can just say an issue is on the SSC agenda, we addressed it, we'll chime in when it makes it to the SSC agenda.

DR. CHEUVRONT: Yes; you could do that however you wanted to; I'm sure that will be fine.

DR. CROSSON: I was going to say actually to the SEP members that are also on the SSC; when these amendments come up on these allocation issues, I hope we are quite involved in the discussion. There is much more in terms of economic and social aspects to those amendments than there are. I'm sure the biologists on the SSC will have opinions, but I hope we're all very involved in that discussion and not just giving the SEP report.

DR. WHITEHEAD: Our next agenda item is Coastal Migratory Pelagics Amendment 24; and Kari MacLauchlin will lead that discussion.

DR. MacLAUHLIN: I'm going to go over the CMP Joint Amendment 24. This amendment; there is not actually a document yet, it is in kind of the scoping/options paper phase. What I was hoping to get from you guys, because it is talking about allocations and then ACL stuff, which I'll get into, just your input for an options paper that we are going to present in June to the council.

The regional office staff and council staff; we've been working on some draft actions and alternatives to throw out to the council. Then the Mackerel AP met a couple weeks ago and they looked at some stuff. Then we went out to scoping in January. As of now, the council hasn't even decided what actions they want in there.

Hopefully, they will be able to provide a little more guidance. There are no analyses or anything like that. This is really just you guys; you know, what are some ways that we can either talk about allocation, move the ACL around to maximize OY, and what are we missing, what is not clear and stuff like that. This is just really your input for an options paper that would be super helpful.

This is Attachment 2. What the councils are looking at – this will be a joint amendment. Specifically they are looking at Gulf king mackerel and Atlantic Spanish mackerel. The Gulf Council will proceed with working on their king mackerel when they get to a place. As of now, we are moving forward a little more than they are; but this is only for Atlantic Spanish mackerel.

Basically you have a table in here, Table 1. This is Atlantic Spanish; and in the first column we have the total ACL for that year and then the total ACL landed in that green column. You can see that until more recent years when it dropped to 5.69, it was around 70, 75 percent. What that is in the pink column shows the percentage of the sector ACL landed.

The commercial has bumped up against it and even in the past three years gone over, while the recreational is around 60, 65 percent. The council is like what they are interested in is maybe some way to take some of that leftover recreational ACL and move it to the commercial ACL. Real fast about the accountability measures for this; the commercial has an in-season closure.

It hasn't been triggered yet, because their landings come pretty late in their fishing year, like their real push at the end there. This is just they exceed the commercial ACL after the fact. It happens so late in the season that it is not tracked to close it. There is a payback, but only if the total ACL is exceeded. That is set up to give some flexibility to a sector if they're going over that won't biologically effect the stock.

DR. CROSSON: Just making sure I follow this correctly; these last three years where the commercial sector has exceeded its portion of the ACL, the council or NMFS has not implemented any accountability measures for those overages; they've been without any AMs kicking in.

DR. MacLAUHLIN: The AMs were in CMP Amendment 18, and that didn't actually go through until 2012. That very last season that is on here, 2011 and 2012, was the first year there was actually an ACL and AM. Hopefully, the tracking will continue to improve, but there is just a pop at the end of the fishing year, and that is when they go over.

DR. DUMAS: I noticed in that total ACL column that in the years where the commercial went over 120 percent, then that year the total ACL actually went down from 7 MP to 5.69 MP, a pretty significant decrease. That would have made the percentage of the ACL jump up relative to earlier years. Is it anticipated biologically?

Do we know it is anticipated whether the total ACL will stay down lower, around 6 MP, or whether it is likely to go back to the 7 MP where it was for a long time or is the most recent year the best data and the best forecast going forward?

DR. MacLAUHLIN: Actually, Atlantic Spanish has become very complex. There was a stock assessment; and we are in the process of finalizing the framework to update that one. But it is only going up to 6 – I have it in here, 6.063 million pounds. That commercial will go up to 3.33 million pounds whole weight. There will be a little more room.

The thing is that the commercial – this is a healthy stock and I think that participation is stable and even increasing a little bit, because it is kind of this growing sector. Like all of this

information is maybe in this document somewhere; but recreationally their bag limit is 15 fish per person per day.

Talking on the road, scoping and everything, for a recreational angler and even a for-hire client; what some of the for-hire guys said is that you don't want to sit all day and catch Spanish mackerel even though you can have 15. There is like a limit with recreational fishing where you're like, okay, I would like to go catch something else; and so not everybody is maximizing that bag limit.

It was raised several years ago so it could help the recreational meet their quota when it was ten per person per day, which is a pretty big bag limit as well; and it didn't really change how much the recreational effort is.

MR. WAUGH: Just one point on the commercial quota tracking; I think it is either July or August of this year the final rule implementing our dealer permit reporting will come online; so for the first time all dealers will be required to report weekly electronically. Finally we will have a data system that should address this and prevent any future overages on the commercial side. There is also accountability – you can call it an accountability measure in that if a dealer has not turned in his report, then he is not legally authorized to purchase product that following week. It really tightens the reporting down.

DR. MacLAUCHLIN: I have Table 2 in here. This was something that Ben Hartig – he's our council Chair, and he's also a mackerel fisherman. He may be here some time later this week; but this is something that he had asked me to put together. We have the proposed ACL that is coming through the 6.063 million pounds that we're getting ready to submit for secretarial review.

He wanted me to compare the new ACL to the actual recreational landings. He wants me to go all the way back to 1987. That is why that caption says that; but this table only has to 2001. He wanted to be able to show what those landings versus this new ACL that they are going to be working under, how it would look even more so.

That last column all the way on the right is actually the percentage of the proposed recreational ACL that would have been left over by the actual recreational landings to kind of show this is the excess on the recreational side that maybe could be moved over in some way. As always, we have the map – I always throw the map in there for the jurisdiction in the different zones.

The Gulf had decided that they wanted to wait. Because we have a king mackerel stock assessment in progress right now; they want to wait to do anything with the Gulf king mackerel until after that stock assessment. We may continue to move forward in an amendment with just Atlantic Spanish in it if the Gulf wants to wait.

But as of now, we're still at the very beginning phases. Then we went out for scoping in January. There was some support for reallocating to make sure that the total ACL is met; and even some recreational folks said, well, that's okay. We talked about the bag limit and everything.

There was concern about the validity of recreational data in MRIP; if the recreational landings are not correct and maybe they're catching more, actually that the MRIP is underestimating the recreational landings, which is different; and then just in general concern about MRIP data. We threw out the in-season mechanism of the ACL shift; and people seemed to like that. It was a little more flexible and there was some concern from recreational folks about even though they are not using it right now and they haven't used it in years, that maybe what if they wanted it and they couldn't get it back.

DR. YANDLE: Just one quick question; did the discussions lead to any explanation of why they are so under? Is it a less desirable catch? Is the catch limit to the bag limits keeping them from reaching the limit? Was there any insight to that; because that affects things a lot?

DR. MacLAUCHLIN: We talked about this; because when the council first started talking about it, it was like the total ACL is not being met and it is because of recreational quotas not being met. We did have to bring up with the council on the record what are some other ways that the recreational could meet their quotas? Are there any obstacles; we need to talk about that before we talk about moving stuff around?

We talked about the bag limits, which is 15 per person per day, and most trips are not catching that. It is just a very high bag limit. The size limit that is in place was set for biological to give them a chance to spawn before; so you don't want to really make them any smaller. Then the small fish, people don't really want to keep. The council felt good about saying, okay, we talked about bag limits, we talked about size limits; those things are probably not going to help them hit their quota.

DR. YANDLE: It is really a matter of just there is not sufficient interest for the catching at this point in time?

DR. MacLAUCHLIN: Well, we did get some from the AP and then from some other people talking about like water issues and sediment issues – this came up actually around Myrtle Beach and North Carolina – sediment issues that make the Spanish mackerel – they don't want to come inshore; they stay offshore.

A lot of private anglers tend to stay inshore, because there is other stuff; but there is something about the Spanish mackerel won't come in. Some of it is there are some environmental factors. Sediment is a problem, but it is not in the jurisdiction. You know, the council can't really do anything about that.

There may be like an access, they can't get to the resource, they don't want to get to the resource, it is costing too much gas to go out there or something like that; but just kind of examining are there any obstacles to the recreational sector? Really, those are the only things like people can't afford to go offshore; and that was really the only thing like environmental obstacles.

MR. WAUGH: We also heard, in talking with some of our Snapper Grouper AP members, that part of their – at least with snapper grouper, and I'm not sure how much this applies to coastal migratory pelagics. The comment was made, well, you all told us to preach catch and release, and we've done catch and release. Particularly in the for-hire sector and the charterboat sector, a lot of their customers now; they've gotten their customers over to catch and release.

The question is posed now, so now you are going to go back and take our fish away after we trained our anglers to go for catch and release. This is something we hope you all will discuss later when you get into allocations; because we've tried to get the council to look at the motivation on the commercial side is to land that ACL, that quota, but the motivation is very different on the recreational side, and how do you quantify that? They may be fully, I don't know, experiencing and enjoying their allocation but not killing all of them. When you all get to later discussions, we really need some help with that.

DR. WHITEHEAD: Ben Blount has arrived and Ben will you first introduce yourself before your comment?

MR. BLOUNT: My apologies for being late; but I'm Ben Blount, retired anthropologist, consultant, and I actually serve on the Gulf of Mexico SSC. I've been there for quite a number of years now. A follow-up question if I could; looking at the percentage across the years – this is wildly speculative – but looking at the percentages; there were two times where it was less than 50 percent of the allocation that was landed.

If I'm not mistaken looking at those years where there were sort of general particular economic decline and hardships, I wonder how much a role economics may play in driving the lesser amount of the percentage caught in the recreational sector. It is just a thought; and I have actually no idea whether there is any support for it or not.

DR. MacLAUCHLIN: Well, I think that is why Ben Hartig asked me to go back to 1987, so you could kind of capture ups and downs like that. People have brought up that they don't want to go offshore when the fish are offshore, because it costs so much money and they want to stay inshore and stuff like that. There are some trip cost factors definitely at play.

DR. CROSSON: Actually on that thought, and it relates to what you were talking about with offshore trips, I'm looking and the two years that I see out of the past ten where the recreational sector was catching its largest portion of the ACL were '08-'09, and '09-'10; and those were years when the price of fuel had dropped rather dramatically after the economic crash. I think that is probably the bigger driving factor than anything else.

This discussion and the next discussion and then the one I'll be doing in the presentation on behalf at the group at the science center are all related to one another. I don't know if you want to continue your presentation or whether we should jump into the discussion right now, because I have a number of thoughts; but I don't want to sidetrack you.

DR. MacLAUCHLIN: Okay, we can go through. We are at the options paper. There is the bigger discussion that you guys are going to talk about with allocations and stuff. I think that I would like to throw out the ideas to you guys that we've been talking about, because some of it is not permanent allocation revisions. Some of it is these flexible things that can only be triggered under certain conditions that I would like to see what you guys think about.

Maybe I'll just keep going a little bit and then I will also pull from your general discussion on allocation. I did go over this with the Mackerel Advisory Panel at the beginning of the month. They kind of felt like they wanted a little more information, they wanted it to be a little further along.

Some of them just felt like there is not a problem yet, because there is not a payback for the commercial sector because of how the AM is set up. There hasn't been an in-season closure, so really nobody has been affected at this point; why should we change it? That was some of the things that came up.

Then some of them really felt the council should look at the other ways to help the recreational sector meet its ACL. A couple others thought a sunset clause or something like that, if you change it, then have something in place to make it go back automatically so you won't have to wait to go through the process.

I have this little thing in here, side note; mackerel is always complicated and we always have a bunch of amendments going on. We have pending approval of that new ACL coming through. Then we have for the commercial ACL – and this one is pending approval of Amendment 20B – that 21 percent of that Atlantic Spanish mackerel commercial ACL will be allocated to north the North Carolina through the Mid-Atlantic and 79 percent will be allocated to the southern zone.

It is kind of hard to talk about it, because our current ACL is 5.69 million pounds with a commercial ACL that goes from the Monroe/Miami/Dade Line through New York at 3.13 million pounds. Once these other amendments are approved, it will be different and there will be a quota for North Carolina and the Mid-Atlantic and then a quota for South Carolina, Georgia, and Florida. Hopefully, we won't have to get too much in the numbers, but just to let you guys know there are some pending things happening that will change the numbers somewhat.

DR. BLOUNT: Kari, could I ask a follow-up question of that? Isn't there an August meeting SEDAR schedule? I don't know if that is for both Atlantic and Gulf or just for Gulf.

DR. CROSSON: Yes, SEDAR 38; it is king not Spanish.

DR. MacLAUHLIN: Okay, so moving on, again this is just Atlantic Spanish, but maybe this could be something that we could use for other species. We have functional permanent reallocation. A little history of the Atlantic Spanish mackerel that is actually interesting; the first sector allocation was based on a landings ratio.

This was in 1987 and they used 1979 through 1985. Well, then in Amendment 4 they changed it to 50/50. They did that because they had decided that landings period that they had looked at in Amendment 2 was during a time when Spanish mackerel was overfished or overfishing was occurring, I think, and recreational participation was low.

They felt like maybe that landings' ratio wasn't reflective of what the recreational sector could catch, so they wanted it to be fair. That was an allocation not based on a historical landings pattern. It was based on completely to be fair; and they did a 50/50 to make it that way. Then in Amendment 8 the councils modified the framework procedure so they could do what we call a framework adjustment that would include a 10 percent shift.

That would happen kind of at the beginning of the year; and then the first time they did that was they moved 5 percent to commercial and they set the allocations as they have been ever since at 55 commercial/45 recreational. They are no longer allowed to do – just because the councils have changed the framework procedure again; they can't do a 10 percent shift in a framework

adjustment anymore. I just have these – of course, you guys know all these. This is something that we took out with scoping to see if we could get people to give us a little more specifics about how they think the councils should look at allocations.

These are general ones; time period. We have the 50 percent over 50 percent recent, which used to be called Boyles' Law, but I guess there is something else. This interim name is Bowtie Law. Then some different ways to talk about landings or the calculation like how much would you move back and forth, and should you take into account hurricanes and oil spills, et cetera, and then taking an average of the underage that is occurring or something like that.

We have more tables. This I also took out to scoping, too, so if people wanted to talk about like let's look at the landings ratio over a certain number of years, they could see kind of what the average of the total landings landed by each sector. Okay, so this is where we've tried to come up with some new things.

The council actually – somebody proposed this at a council meeting; they were discussed during a discussion. Some of our recreational members were concerned about doing a permanent allocation. They didn't want to lose some of theirs even though the recreational quota wasn't being met.

This idea came up; an in-season ACL shift; so basically there would be some kind of trigger and a percentage would go from recreational to commercial. I guess it could go either way, but in general it is looking like it would go from the recreational to the commercial. We tried to come up with some draft actions and alternatives to kind of look at the language and how we would write this out and how this would look so the council could really look at it.

The first one would be establish the trigger threshold; so what would have to happen for this to even be triggered at the beginning? We came up with a couple ways using the MRIP wave. The fishing year starts March 1. There is this kind of interesting thing of how far into the year do you want to give them a chance to hit as much of their quota as possible, but still have time to move that over so the commercial can take advantage of it?

DR. WHITEHEAD: Quick question; does the MRIP data come in that quickly now?

DR. MacLAUHLIN: It comes in 45 days after the wave closes. I have a little thing where it is like this is how this would actually work. Under this alternative, this alternative; on March 15 or whatever; on March 15 we can make the call, or whatever it is. Moving on, we have a couple of different alternatives, and we just have them written where there would be one trigger in which the recreational would have some kind of performance threshold they would have to be under to trigger it.

Then we decided we would write two triggers where recreational has to be here at their quota and commercial has to be way up here. We like to make it as complicated as possible for mackerel. Then we have a ways to go from commercial to recreational. I don't know if that would happen, but we put that in there.

Then we have one that is just written like either way. Then the next draft action is actually how much would be shifted to the ACL. We have 5, 8, 10 percent; those were just numbers that we



threw out. The council would probably really want to look into that and tweak those a little bit. Then we had – this was Brian’s idea – taking one where it is 50 percent of the remaining proportion. If there is 40 percent of the recreational quota left at the time of the trigger, then 20 percent; and that way there would still be some recreational quota left over. It would be flexible based on what was happening that year in the fisheries.

DR. DUMAS: The recreational data then would be coming in a couple of days after every two months; so essentially new data every two months?

DR. MacLAUCHLIN: Well, no, the wave ends; so the first wave data is ready April 15, our January/February wave.

DR. DUMAS: Then with the new dealer reporting requirements, the commercial data would be weekly?

DR. MacLAUCHLIN: Weekly electronic, 2014. I have an example of how this would work. This assumed a subalternative in which you would wait until after the third wave of the fishing year, which is the MRIP Wave 4; and the recreational landings are less than 40 percent and shifting 10 percent of the recreational quota to the commercial quota.

In mid-October MRIP indicates that recreational landings are, example, 750,000 pounds. That was actually kind of like an average from what I was looking at. The threshold is less than 40; so they are less than 40; so NMFS publishes a notice that changes recreational ACL for that year to a new quota of 2.5 million pounds and commercial 3.6 million pounds; and then their associated northern zone quota/southern zone quota that is coming through for the remainder of the fishing year.

Then accountability measures will be triggered by these modified sector ACLs. At the beginning of the next year in March, it will automatically go back to its original allocation. This is how we’re thinking this could work. Actually there is something similar in the Mid-Atlantic with bluefish. They have a wave where they can trigger a shift.

But no, no, no; it is not in-season it is a pre-season shift. That is the next one, a pre-season ACL shift; this requires a little bit of planning. But we have in our framework procedure something set up where the councils can make that decision; and I think in their December meeting, and we can get everything submitted and approved by NMFS in time, maybe the September meeting. It still won’t be probably as flexible as that in-season ACL shift, because that is actually what is happening in that fishing year.

If there is a bad summer or something like that and you didn’t do a pre-season ACL shift, then you wouldn’t be able to take advantage of it. Then I have the Mid-Atlantic bluefish, and that is a pre-season ACL shift, but they look at the previous years. We have a draft action. We would have to actually modify our framework procedure, but we can do that through a plan amendment.

We can do that in Amendment 24. Basically it would be how much you could be able to shift in a pre-season ACL shift here. How this would work was that let’s say they set up their framework procedure where you could allow up to a 10 percent change. At the September

council meeting, the South Atlantic Council reviews the performance of the commercial and recreational sectors.

They decide to shift a percentage of the ACL not to exceed 10 percent from one sector to the other and then direct staff to prepare the document. They vote to recommend it. The Gulf Council reviews that recommendation at their October meeting, gives it a stamp of approval and then staff submits that in October or November and then NMFS would publish the notice for that next year with all those new ACLs in place.

Unless the council takes action to specify sector ACLs the next year, it would automatically go back to 55/45 or whatever they want it to be. They could technically do all three of these. That would be ginormously complicated. But, they could change that permanent allocation and then put in some kind of ACL shift or something like that.

These are our ideas. We're trying to incorporate the dynamics of the mackerel fishery. These fish move around a lot. They are not always in the same place all the time and so this all may change. I think it is a really interesting way to look at how to do this in a flexible way that maybe also helps both sectors feel really comfortable with that.

They're not going to lose anything on a permanent basis. Like that in-season ACL shift; it could never be triggered ever once they put it in place. That would be fine, because that is what it was for. I don't know; any comments? We'll continue and then probably the next time you meet have a little more analysis and what the council is going to be doing to talk about.

MR. HADLEY: I had a point clarification. You said one of the major problems is a pulse towards the end of the season? It looks okay going throughout the season and then right at the end you get a large pulse in landings?

DR. MacLAUCHLIN: Well, with the commercial, I was looking at it because we asked why they are going over – why are they not shut down before they go over? It was kind of especially in those last few years that whatever happened with it, the rate of harvest was fine until the very end and then that is when you don't know until after the season is finished.

DR. BLOUNT: I noticed that both in the scoping meeting and in the Mackerel Advisory Panel that concern was expressed about MRIP. We all know what those issues are, and MRIP is MRIP; but what I wanted to ask was whether these were just sort of observations that people made or if there was really grave concern, because much of this is conditioned on the waves of MRIP. That is really what will trigger everything. I was just sort of curious as to what the nature and the depth of the discussion was about that.

DR. MacLAUCHLIN: It was usually just general and on top of it the data are incorrect and everything. This was an interesting situation, though, because usually the people say the MRIP is an overestimate.

This is what they're saying is, well, what if the MRIP data are wrong and we actually caught more, and you guys took away our allocation; which was a little different., They are estimates and that is totally possible, but I think what the council would want to do is set that performance level where it would be in a normal year pretty easy for those guys to hit the ACL.

DR. CHEUVRONT: Kari, do we know offhand what the PSE is for Spanish mackerel? I think Mike probably went into the other meeting so he is not here. I didn't know if you knew offhand. I would imagine it is probably fairly high; it is a fairly frequently caught fish – excuse me the PSA would be pretty low, because it is a fairly frequently caught fish, so therefore the quality of the estimate is certainly going to be better than for a lot of our species, I would think.

DR. CROSSON: I've forgotten; what is PSE again?

DR. CHEUVRONT: The proportional standard error. It is that measure of the accuracy of the estimate based on the number of samples that they get.

DR. WHITEHEAD: That is the same PSE that you can retrieve with a data query from the NMFS website? Okay.

DR. MacLAUHLIN: If you just want to take all this, too, and put it in that big allocation discussion, I am totally good with that, also.

DR. WHITEHEAD: We should at least say or someone should say that we think that the quota should be reallocated as quickly as possible if we're leaving money on the table. I think that might be too obvious for all this to say. Wouldn't we want to say that?

DR. CROSSON: I have a question for Kari, I guess. Looking into the document, maybe I'm missing it; what is the stated purpose for this amendment? Why is the council discussing allocation? Did they say they are following National Standard 5 for maximizing economic efficiency or is it that people are asking for a certain thing? What is the stated purpose for this?

DR. MacLAUHLIN: Well, they are not really – sometimes it is hard to get like a really clear what is it exactly that you want to do? At first I really interpreted it because for mackerel ABC equals ACL equals OY. When I first wrote the purpose and need I wrote to use as much of the ACL as possible to hit OY, because that is how they've defined OY.

It kind of went back and forth about like what Gregg brought up about maybe optimal use doesn't always mean taking the fish out of the water. Then that kind of got in the conversation, and in the end the purpose and need that we came up with was to help increase the opportunity to reach the total ACL but not reach the total ACL.

DR. CROSSON: All right, a lot of this I am going to attribute to Stephen Holiman in a discussion he and I had when I was at the regional office recently. Initially I look at this and I think, well, okay, the recreational sector is not catching all of its portion of its ACL, and you reallocated that quota to the commercial sector and allowed them to harvest it.

That would be a pareto improvement; you would be increasing economic benefits without a cost to anyone; but what Stephen pointed out is that there is a cost to that. We're not saying we can quantify it right now, but you've decreased – if you allow the commercial sector to harvest these fish, then you are decreasing the opportunity of a recreational fisherman to encounter that same fish, whether he chooses to harvest and keep it or catch and release it. How we would get about quantifying that loss is unknown at this point. It is not necessarily a pareto improvement automatically to reallocate these fish, which makes it much more complicated.

DR. CHEUVRONT: As a corollary to that; if they don't catch the fish or they catch and release the fish, the biomass is greater; therefore, it is easier for the next person to catch a fish, because there are more fish out there; and quantifying that is also very difficult.

DR. CROSSON: Yes, that is exactly it. The question again; you know, you brought up the fact that the bag limit is relatively high for this fish. The size limit is based on biological factors and not regulatory ones, per se. Given that; is the recreational sector currently at maximum economic yield?

Right; they are choosing to leave some portion of these fish in the water to increase their fishing opportunities and increase their net benefits. That is something I'm throwing out to the SEP; I'm not making a statement. Do you guys think that the recreational sector is currently at MEY within its portion of the ACL?

DR. WHITEHEAD: I don't know if king mackerel are different from other fish, but the point that Stephen Holiman raised really changes the conversation about allocation. If it is about leaving fish in the water so we can increase encounters; that is a lot different than allocating a quota across sectors in terms of catch.

MR. HADLEY: One thought I have is there any MRIP information as far as catch plus release per trip that may be something to look into? That might get at more some of that abundance value or abundance appreciation. I don't know if you can put a value on it at this point.

DR. MacLAUHLIN: The stock assessment; SEDAR 28 for this one finished last year. There probably is some information about release.

DR. DUMAS: I was just thinking of a thought; but it was brought up as far as there is abundance information.

DR. MacLAUHLIN: I would think that they had information in the stock assessment data to look at release and everything. It was interesting with the Atlantic Spanish, because the SSC reviewed it. The first projections were actually like a huge cut, like a 30 percent cut in the ACL, which had already gone to 5.69.

The SSC said, okay, and then the science center did the projections and sent them to the council; and the council said that's not right. That is like something is really wrong with Atlantic Spanish and it is not. They sent it back and they looked at some other factors for the projections, a different way to look at it. Maybe that had something – they looked at more information about the release.

DR. CROSSON: A quick update on the PSEs for Spanish mackerel; they seemed fairly low.

DR. CHEUVRONT: Are they less than 10?

DR. CROSSON: In 2013 it is 11.7; 2012 is 9.4, so in that range.

DR. CHEUVRONT: I believe generally less than 10 is considered to be really quite good for MRIP.

DR. LARKIN: I would guess unless they each have something to the equivalent of a share of that total harvest; that the recreational sector as a whole wouldn't be at MEY. That is just I guess a statement, but I do think it is interesting and I like this conversation that, yes, should a sector – and I know they are having the same topic going on in the West Coast – what if one sector would like to hold on or even restrict harvesting some of their TAC for economic reasons?

I like that is sort of getting traction and people are talking about it, because it is very interesting. But, I guess to consider the recreational sector as a whole; I don't know how you would limit in trends. The restricting to get at the MEY for the recreational sector; I don't know if that is what you were asking, but it seems like it wouldn't be there.

DR. CROSSON: It's an open access fishery, right, by nature. This question of without individually allocated quotas whether you're going to get to MEY; I don't have a clear answer to that. Tracy and I were just finishing up this paper on wreckfish that we're trying to get out to a journal; and we were looking back to the documents about why they weren't using all their ITQs.

We found clear statements from wreckfish fishermen I'm holding onto this because I want to increase the volume of fish that are available to me. There you can make that direct link; but with an open access recreational fishery I'm not sure you can. Just because it is not necessarily a pareto improvement, it doesn't mean that there is not an economic benefit.

It still may be that value of leaving that fish in the water for the recreational fisherman to encounter later on or another recreational fisherman to encounter later on; that still may be inferior to what a commercial fisherman would receive if he were to catch and harvest it and sell it. It is just not as easy. To me it is like if you have a pareto improvement, then you go for it, but here I'm not as clear about that. Maybe you all are.

DR. WHITEHEAD: Looking at the MRIP estimates, the catch-and-release numbers are pretty substantial, so that is what we're talking about. Looking at Kari's scenarios, when you release the quota within the season, then the value of having those fish in the water maximize an increase in encounters. A lot of that is still there except towards the end of the season when the commercial boats are catching them.

DR. DUMAS: I was just going to follow up on Scott's point. Maybe that value of leaving this fish out there as part of the recreational quota, even if it is not caught by recreational fishermen, contributes to the option value of that fish to the recreational fisherman. If that fish is there and it is part of the recreational quota, the recreational fisherman has the option of going out and catching it or not. That is value to him even if he chooses not to go out and get it.

I don't know if there are any papers on that; but theoretically that may be taking it a step too far. Another thing for us to consider is maybe since the commercial fishery is bumping up against its allocation but that constraint may become increasingly binding as we have the weekly dealer data available; we might want to consider making a reallocation from recreation to commercial, but then have the in-season ability to reallocate back.

It seems like that might minimize the amount of notices that need to be published; in the sense that reallocating from recreational to commercial initially would maybe reduce the number of times the commercial is going to be hitting its constraint; and unless recreational comes up to

bump up against its constraint, then reallocating from recreational to commercial would sort of in a sense solve the problem. Then having the in-season ability to allocate back to recreation, if they come to the constraint, would maintain that flexibility; but then have the fewest number of occasions where the council would need to make an in-season proclamation – just throwing it out there as a possibility.

DR. MacLAUCHLIN: I thought that at first you said increase the recreational permanent allocations, and then that way the permanent one will always be in their favor, but you are just doing the best with MES. I understand.

DR. DUMAS: Just to clarify; I will say increase the commercial permanent, decrease the recreational permanent; but then within season have the option of reallocating some back to the recreation.

DR. MacLAUCHLIN: That's what I said; I understand.

DR. WHITEHEAD: Historically the quotas have been set by historical catch; and so permanently allocating the catch between sectors based on the recent history would make sense.

DR. CROSSON: I'm sorry; shifting away for a second; I'm looking back through this proposal, and I'm wondering what happens – is there something in here that I haven't seen? If you reallocate fish from one sector to the other, right, so you allocate fish from Sector A to Sector B; and then it ends up exceeding the total ACL; does the accountability measure just kick in for Sector B the next year? I mean, if Sector A has given up some of its allocation; do they have to feel the pain in terms of the accountability measures?

DR. MacLAUCHLIN: There is a payback only if the total ACL is exceeded, which could happen, like if you moved some from recreational to commercial and then commercial still went over and recreational had bumped up; like if commercial went over by 10 percent and recreational got to 95 percent, then there would be a 5 percent payback. But it would work – and basically when the notice is published; then the ACL is changed and the accountability measures are triggered by that.

DR. CHEUVRONT: But the payback, as I believe Scott was asking, is who pays back? I believe the way it is set up is that the sector that goes over pays back in proportion of the amount that they were over.

If in that scenario that Kari just described the recreational sector got to 95 percent of their ACL, the commercial sector went 105 percent or 110 percent over; the commercial sector only would do the payback for the amount of the overage and the recreational sector would not be affected.

DR. MacLAUCHLIN: If they both went over; then they both would have a payback.

DR. DUMAS: Currently if they both went over, because the permanent allocation is 55 commercial/45 recreational, then would commercial have to pay 55 percent of the penalty and recreational 45?

DR. CHEUVRONT: It is the size of the overage that it is based on.

DR. WHITEHEAD: What do you need from us, Kari?

DR. MacLAUCHLIN: Nothing. This has all been really helpful with other ideas and ways that we can structure this options paper. I don't know if there will be any official SEP recommendations for this unless Scott –

DR. CROSSON: Well, Ben maybe – all right, the point that I brought up initially about there needs to be a clear stated purpose for this amendment in order to give sufficient economic or social guidance in terms of the different options; because if I am told we want to increase economic benefits, then I have a better idea of about where things should go. I think the rest of the SEP seemed to agree with that.

DR. MacLAUCHLIN: Well, right now the draft purpose and need says to increase the opportunity to reach the total ACL, which to me is a little like do you want them to take the recreational fish out of the water or not?

DR. CROSSON: Then that gets to the discussion that we had a few minutes later, which is that just because of the nature of recreational fishing, just increasing the number of fish that come out of the water is not necessarily an economic benefit for that sector, because the opportunity to harvest fish and possibly release them is a significant driver in recreational fishing. Be careful about that stated desire that you want to just increase the portion of the ACL that is harvested. That works for the commercial sector, generally, but not the recreational.

DR. WHITEHEAD: That is just for king mackerel and not Spanish; is that correct? Catch and release for Spanish is important as well?

DR. CROSSON: It is definitely big for king; I don't know whether it is for Spanish.

DR. CHEUVRONT: John, didn't you have some data or something that talked about release for Spanish mackerel was pretty high; and weren't you looking at that?

DR. WHITEHEAD: That was king.

DR. CHEUVRONT: Just king?

DR. DUMAS: I pulled up Spanish. If you look at observed – right, just looking at 2013, it is a large portion. Observed harvest is 701,000 pounds, reported harvest 376,000 and released alive is 681; so there is a large release component there.

DR. CROSSON: Okay, so then I would think another thing the SEP would have comments on this would be that it is going to depend on what proportion of the recreational fishery utilize catch and release; because in my perception at least is that for the pelagics it is much higher than it is for the reef fish.

DR. BLOUNT: If I am following this correctly and coming back to what Bryan had said, if the commercial continues to go over their allocation and they have the annual payback, won't there be then an accumulation of that? I mean through time that is really sort of reducing their allocation is one way of looking at it.

DR. MacLAUCHLIN: Well, the way that their AMs are set up – and they are trying to do this with a lot of the species; but for the mackerels, a sector can go over its ACL and not have a payback as long as it is not overfished and the total ACL is not met. That gives it a little flexibility, which is something that the Mackerel AP brought up, well, if that flexibility is still in place, then what is the problem here? I guess if they trigger an in-season closure, then that will have to close earlier.

DR. WHITEHEAD: I've got one more thing. I looked at dolphin, sheepshead, red snapper; and for all of these, released alive is an important component of the catch. I am not sure if mackerel is any different from any other species.

DR. CROSSON: John, except for the catch and release is any of that related to possibly – again, I don't know how the MRIP stuff works as well as I know the commercial logbook data. Some of those catch and release; not sheepshead, I wouldn't guess, but like red snapper and things like that; is it because of regulatory restrictions instead of the stated voluntary release of the fish?

DR. WHITEHEAD: I don't know; I'm just doing some quick queries here, just looking at the numbers for observed harvest, reported harvest, and released alive. I guess the point is we don't know how important catch and release is for king mackerel relative to other species and how important the option value or the increase in encounters would be for this fishery relative to the others.

DR. CROSSON: What is the bag limit for king right now per person?

DR. MacLAUCHLIN: Three fish Georgia north; two fish Florida for Atlantic king.

DR. WHITEHEAD: I'm not sure if we want to go there in terms of allocation and whether we want to add this additional complication especially today and for this SSC meeting. I'm not sure if we want to go there in terms of talking about catch and release and recreational anglers wanting to leave the fish in the water so they can increase encounters when all of the history of allocation discussions is in terms of catch and keep. Allocation is heating it up, and we need to move the discussion forward instead of throwing a monkey wrench into the discussion; but that is just my opinion. I didn't mean that to be the last word on this. Can we take a break.

DR. CHEUVRONT: (**Recording starts here**) -- if the sector exceeds its ACL; it is supposed to pay back in the next season, but biologically this is not always necessary. The council is considering doing what is necessary biologically. Subalternative 2A says that if the commercial ACL is exceeded; the Regional Administrator will publish a notice to reduce the commercial ACL in the following fishing year by the amount of the commercial overage only if the species is overfished.

Alternative 2B is the same thing; the payback would occur only if the total ACL is exceeded; and Subalternative 2C is only if the species is overfished and the total ACL is exceeded. You have the two criteria that would have to occur there; the idea being that you would only need to do this if it was biologically necessary and only by the amount of the overage of the total ACL. Alternative 3 is very similar. That is for the recreational sector.



Subalternative 3A has if necessary the Regional Administrator shall publish a notice to reduce the length of the fishing season and the recreational ACL in the following fishing year by the amount of the recreational overage only if the species is overfished. Then there is this caveat here.

The length of the recreational season and recreational ACL will not be reduced if the Regional Administrator determines, using the best scientific information available, that a reduction is not necessary. This is to account for some of the lack of certainty in some of the recreational estimates.

Subalternative 3A is only if the species is overfished; 3B is if the total ACL is exceeded; and 3C is if the species is overfished and the total ACL is exceeded. Now, to be consistent with what the council has done for these other species in CMP and in dolphin and wahoo; they would probably choose Subalternatives 2C and 3C as their preferred. That would bring some consistency to the criteria that are used for applying AMs to these species.

That is the way this is; but there was an additional alternative added, and I don't know why. Alternative 4; if recreational landings reach or are projected to reach the recreational annual catch limit, the National Marine Fisheries Service will file a notification with the Office of the Federal Register to close the recreational sector for the remainder of the fishing year unless, using the best scientific information available, the Regional Administrator determines that a closure is unnecessary.

This has to do with because the way the language is written for the recreational sector is that the closure or adjustments would be made in the following season. However, we have issues with species such as snowy grouper where they will know probably after the first wave of MRIP whether or not the ACL is going to be reached.

Unless they choose one of the subalternatives of 4A, chances are they could blow that recreational ACL by hundreds of percent as they have done in recent years. This is to stop them and give the RA the ability to stop that fishery in season, because currently that is not in place. There may be similar things that could come up as a result of some other fisheries.

Wreckfish has a very, very small recreational allocation. The problem is that wreckfish is so rarely encountered by the recreational sector that in looking at the last five years of recreational landings, there were only actually even had recorded landings in one of the last five years; so estimating that is really quite difficult.

Anyway, that is what the council is considering with this action is looking at lining up mostly these snapper grouper species and golden crab. Now golden crab is a fishery that has no recreational component; so only Alternative 2 would apply to the golden crab fishery. Do you have any comments about this action?

I'm not surprised by that, to be honest with you, because I don't really know that this – I think adding Alternative 4 here is a good thing, because it could literally save a tragedy from occurring in a recreational fishery. Theoretically you could have – in snowy grouper you could have years where there would be absolutely no recreational harvest of snowy grouper allowed to account for overages.

Looking at the size of the overages; because, remember, they are limited to 523 fish total from North Carolina to Key West. That generally gets caught in the first wave; and their overages have been 3 or 400 percent. If they had to do this and this fishery is overfished and if the commercial sector was to exceed the ACL so this whole thing would happen; the recreational sector could conceivably not have a fishery for a couple of years. That is why this was added. That would have social and economic impacts if that occurred.

Now we're going to get to some more of this fun allocation stuff. Action 2; this is to revise the sector allocations for dolphin. This came up last year. Dolphin Wahoo Amendment 5 had this action in it; and they were going to look at revising the sector allocations for dolphin. Now, this fishery had an interesting history in terms of allocation, because so many of the sector allocations that we now have came about just in recent years.

Dolphin, however, has had what you might call a quasi-allocation going back for a number of years. What it was; it was referred to as a soft cap. What that meant was that the commercial sector was the one that was really kind of being constrained in this fishery. The recreational sector really didn't have any constraints.

However, if the commercial sector landed more than 13 percent of the total landings that were landed in a given year or if the commercial sector landed more than 1.5 million pounds; then under this old soft cap the council was going to go back and look at it and decide whether something needed to be done.

Now just in case you don't remember much about the biology of dolphin, these are really pretty much the rabbits of the ocean. I mean these fish maybe live three years. At three months they are kind of reproducing and they grow monstrously quickly. These are amazing fish. While they are not quite like shrimp where they are an annual crop and you don't have to have ACLs, they live long enough that you have to have an ACL; but you're not really quite sure that your management is going to have much effect on the abundance of the stock.

That is part of the issue. Now, what happened was that as part of the Comprehensive ACL Amendment that went into place I believe in 2012; those ACLs put in sector ACLs that were based on historic landings; and so whereas the commercial sector had been restricted to 1.5 million pounds or 13 percent of the total landings, when you go back and look at the historical landings; the commercial allocation turned out to be much less.

Now understand the total ACL for this fishery has never been reached, and they just recently in Amendment 5 actually had their ACL increased from about 14 million to about 15 million pounds; millions of pounds. We are talking there are a lot of these things that could be landed every year.

Now, the council was considering doing its Comprehensive Allocation Amendment that they started talking about I guess last spring. When they got to this action in Dolphin Wahoo Amendment 5 last June, they said, well, let's just pull this one out and wait until we get to our allocation amendment and we'll put it in with all the other things that we're doing.

Well, then as the council went further along, they decided they were going to do this visioning process that they are currently in. They decided because they were doing this visioning for

snapper grouper species, which was the bulk of the allocations that they were going to be looking at, they decided to delay this allocation amendment. Well, I reminded them, well, you have told the snapper grouper folks and the Snapper Grouper AP that you were going to look at this starting last fall and now you're delaying it again; do you want to reconsider that?

They decided to put it into this generic amendment that they're putting together that is looking at AMs; and they have put in a dolphin allocation into this one. What we did is when we put this amendment together, we took the action as it occurred exactly in Amendment 5 and placed it in here. Now, you never saw the action as it occurred in Amendment 5; because when the SEP met last time, that was October of 2012; and this Dolphin Wahoo Amendment 5 was still in the options paper form.

You hadn't actually seen the action. The first four alternatives are what the council had seen before. Those were based on – Alternative 1 is that 7.54 commercial allocation that was based on the current ACL. Alternative 2 was then to go ahead and just set the allocation according to what was the old soft cap, which was 13 percent commercial/87 percent recreational.

Then Alternatives 3 and 4 looked at different years and looked at the landings, which would have – looking in Alternative 3, the past five years, at that time which was 2008 through 2012, that would have set the dolphin allocation at 86 percent recreational and 14 percent commercial. That was the highest percentage that the commercial sector had gotten.

Alternative 4 was to look at the average over the past five years; and that put recreational dolphin at 90 percent, the commercial sector at 10 percent. At the time the AP, when they were looking at this when it was part of Amendment 5, said that is the one that they preferred. The reason they chose that was because when you look at the ACL, which is now 15 million pounds, 10 percent of it is roughly 1.5 million pounds.

They thought, well, this will get us close to that 1.5 million cap that they had before, which they really liked. Even though I said to them that is based on the current ACL, which can change, and these sector allocations are based on percentages; it is great as long as the ACL is going up, but if that ACL goes down, the percentage will stay the same.

They seemed to be okay with that partially because there are still a couple of million pounds a year that simply are not being caught in this fishery. Now, since the council pulled this action out of the amendment, we've looked again at the data that we have. There have been some improvements to the data.

They can now use a longer time series to help determine what the allocation would be between the sectors. Using that bowtie formula, 50 percent of the long-term catch history and 50 percent of the current trend; we've come up with three different subalternatives. Subalternative 5A looks at landings from 1986 through 2011; and the current trends would be 2009 through 2011.

That was chosen because 2011 was the last full year of which there was no constraint on the fishery in terms of the amount that could be landed; so that would set the recreational sector at dolphin for 90 percent and commercial sector at 10 percent. Subalternative 5B would just go ahead and go through the landings through 2012; and that would still put the allocation roughly the same between the two sectors.

Then we have the catch history of 1986 through 2012 for the long term but changes to short term for C, which would set that at 2006 through 2012, which is a six-year cycle, for the more current trend. That would just change it to 91 percent recreational and 9 percent commercial. The variations really are rather small.

It looks at getting basically – if the council chooses one of these, it gives about 1.5 million pounds of fish to the commercial sector and 13.5 million pounds to the recreational sector, which everybody seemed to be okay with. There is a problem. When you start basing your allocations on catch history, especially for fisheries that one or both of the sectors start hitting their allocation, because now you've got this artificial constraint and that is what is changing the behavior.

While it is not so bad at this point to have these upper bound years, five or ten years from now you don't want to be basing your allocations on landings that only went through 2012. That could be a problem in the long run; and that is something I think the council is going to have to discuss when it gets into allocations for snapper grouper. It hasn't been an issue in this fishery yet, but who knows what the future is going to bring? Right now this is the action and the alternatives that the council is looking at.

DR. WHITEHEAD: Comments?

MR. HADLEY: Just curious; is there any kind of economic information that would point us one way or another? It seems like this is kind of – because it hasn't really hit the cap or not – it is kind of data poor.

DR. CHEUVRONT: In the sense that you can look at the economic value of this, but neither sector is bumping up against its ACL; so it is really in essence – although we have ACLs in place, it is still kind of a wide open fishery. Everybody can do what they want. There is a commercial permit for dolphin and wahoo, but that is not an issue.

DR. BLOUNT: What you were suggesting, Brian, if I followed that correctly, is that to the extent that current trends are built into this moor, you have a bit of a buffer against those kind of idiosyncratic sorts of things that were going on in the catch history; that is essentially what you were suggesting, right?

DR. CHEUVRONT: Yes; and it also is looking at thinking that recent years are more predictive of what the next most common years are going to be; so going back to 1986; landings in the last couple of years are going to be more reflective of what we probably would see in the next couple years rather than landings from 1986.

DR. WHITEHEAD: Anything else?

DR. CHEUVRONT: Is there anything you can add about the philosophy of taking this kind of approach to allocations for this? Are there any problems or pitfalls that you could see other than things that may have already been identified of using this kind of approach for determining allocations? I remember at one point when we discussed allocations there was, well, if you are going to do it in an arbitrary way this is as good as any other arbitrary way.

I don't know if that is the way you all still feel at this point or is there any additional information that could be added that could help inform the council as to, yes, this is still arbitrary but it seems to work, because it seems to be fair; or whether you think it is not fair or what?

DR. WHITEHEAD: I think a written record on where we discussed Boyles' Law captures probably 95 percent of what we're thinking right now. I don't want to speak for others and in terms of fairness – yes, I said something stupid last time about fairness so I won't say it again.

DR. DUMAS: I've got a question about the commercial allocations. Do we know why isn't the commercial fishery catching its current allocations; what is preventing it from doing that?

DR. CHEUVRONT: The availability of fish. The fish come in waves up the coast; and so it just sort of depends on whether the fish are there or not and if they can get out there because they only last a few days in one given spot and they may be gone before the guys can get out there and get them.

There was one year where in North Carolina the longliners were actually out there and got a lot of dolphin. They were still under the old soft cap and they got very close, but didn't quite hit it in terms of triggering that. I think that was in 2010 or 2009; I forget which year; but they got pretty close but they didn't do that; so we're still okay.

Now the one thing I would like for you to think about or comment on if you can is the concern that I brought up about using landings and years and this idea now that we have an ACL in place that could conceivably constrain the fishery. Is there anything else that we should be looking at as a way to consider allocations for these sectors that maybe isn't specifically tied to landings history in specific years?

DR. WHITEHEAD: In general, we'll be talking about that in a little while, right, things that we think should be considered?

DR. CHEUVRONT: That general allocation discussion, you are going to hold off talking about it here until the general discussion that you are going to have on allocation in general. Okay.

DR. DUMAS: I would like to ask one more question about sort of the mechanics of the fishery, comparing the Spanish mackerel with the dolphin. The commercial in the Spanish, they are catching a lot of their allocation, but Spanish is also migratory, right, a migratory species – I know they are coastal pelagic – what is it that makes the commercial fishery – what is the biological difference between the two fish species that makes the commercial fishery sort of catch all their quota on the Spanish but not on the mahi, but not on the dolphin?

DR. CHEUVRONT: Again, I think it is probably more availability.

DR. CROSSON: My general impression – I haven't done research on this exclusively, but my impression is that mahi is a global commodity, right? I mean, it is a worldwide fish; and so it has economically not been viable for a large portion of the American fleet to catch a large amount of its quota. That may be changing in recent years, but in the long term that has not been the case. The Spanish; I don't know as much about the commercial market for Spanish.

MR. HARTIG: In Spanish, you have a season and we have a gill net production and a hook-and-line production in south Florida. It is a little bit similar in North Carolina. It is primarily gill net there when the fish come through, but much longer seasons. The fish are in a lot closer to the coastline; so your availability is much better than dolphin who are much farther offshore.

Most of the dolphin fishery is caught by the longline fishery, the predominance of the catch. Although we have a hook-and-line fishery that operates through the entire – actually through the entire year, we catch incidental dolphin. But as far as targeting dolphin, we're catching them now. We just left some fish this week that are coming through now, and they will be in the Carolinas.

As Brian mentioned, the waves of fish that move through – and they do move through rather quickly. If the longline fishery happens to be doing something else and is targeting tuna or something of that nature, they won't have those big catches of mahi. It is kind of how your business plans fitting together for the year. If tunas are more available and more valuable, you're going to target tuna.

It is kind of just availability versus your business plan for that time. There are a lot of variables that go into dolphin. It is so far offshore; you're a long ways off to target them, and it is expensive trips. You're trying to take all these things into account; and then the hit and miss nature of the dolphin fishery.

DR. DUMAS: I suspected some of those things; that is what I thought. The reason why I asked the question is that in addition to looking at allocation between recreational and commercial and changing those allocations to try to increase the value from the fisheries; we might also want to look at allocating across species and taking that into account.

It seems like the commercial fishermen for several reasons – you know, Spanish may be something that is more valuable to the commercial fisherman than the mahi; so if you end up bumping up against the ceiling on both species and you are looking at allocating; instead of allocating between recreational and commercial within the species, you might want to look at increasing the recreational allocation on mahi, on dolphin, and increasing the commercial allocation on Spanish.

If the commercial fishermen; if it is easier for them to catch Spanish or it is more profitable or more attuned to just the style of commercial fishing; and if in the recreational fishery, they are more attuned to catching the mahi; then it might make more sense to somehow trade allocations across species then just within species. That might help both the recreational fishermen get more of what they're after and the commercial fishermen get more of what they are after. I don't know; I put that out there. I would be interested to hear your response to that.

MR. HARTIG: That is an interesting way to look at it. If you look at mahi, it is primarily larger vessels, larger longline vessels; Spanish mackerel, a lot more smaller vessels. You would be impacting a lot more commercial fishermen by actually allocating more of that Spanish. But as far as value goes, these guys; their business plans are quite a bit different from ours.

It is a lot different. I am fishing for smaller catches on a daily basis. I fish a lot of trips, 200 days a year when I'm not on the council. I'm not fishing that many days now, because I'm

wrapped up in the management part of it. The longline guys make a lot less trips but trying to make a lot more money on each trip, so trying to get all that together.

Now the Spanish guys will say, well, yes, that will be great if we can have more Spanish. The mahi guys; well, you're going to give me less mahi at the expense of giving more Spanish away. You are going to have that different dichotomy. It is always to me as you are looking at each one; you have two different things.

You have on the mahi side the recreational catches – well, both are the same now that I think about it. Neither one of the groups was catching their allocation, the Spanish or mahi, and then trying to allow the commercial harvest to have access to some of that. Now, the other thing that I've wondered would it change their business plan if they had this guaranteed mahi amount to catch? If you knew that you could gear up to catch that much mahi, would it change? Maybe, maybe not since they are not catching the allocation now. I don't know if that answered your question.

DR. BLOUNT: I am missing something here. Help me understand this, if you will. If the mahi move through in these waves and they move through fairly quickly, and that is a limitation in terms of the commercial catch; how is it that then 90 percent that is allocated to recreational – I mean, how do they deal with that? I'm a little bit confused by the 90 percent/10 percent allocation and sort of the catchability issue in regard to the fish.

MR. HARTIG: Just the sheer numbers of anglers from Key West through the entire jurisdiction. Yes, they move through in waves, but the sheer number of people that fish on each one of those waves as they move through is so much different. The commercial fishery, while there are a few people that target mahi in Florida, not that many; it is an incidental catch to us. We're more targeting other species that you can count on a little more seasonally. The mahi for us is a hit-and-miss fishery.

DR. BLOUNT: In other words, as you move further up the coast from Florida up, then there will be greater interest and greater catch levels?

MR. HARTIG: Well, what I'm saying is that as that wave is moving through, you have X amount of people from Key West, from Miami, from Fort Lauderdale, is intercepting that wave as it moves through from the recreational standpoint. Just from the sheer number of recreational anglers, you're catching that many more fish in that wave as it moves all the way through up through the Carolinas and even into New England as they move to the north.

DR. CHEUVRONT: All right; that is it for this amendment.

DR. WHITEHEAD: We'll take a five-minute break.

DR. WHITEHEAD: The next item on our agenda is potential methodologies for evaluating the economic efficiency of fishery allocations. Scott Crosson has a discussion. Scott, tell us who has joined us remotely.

DR. CROSSON: Actually from what I've seen, I know David Carter is available for answering questions; but we'll see if we can patch him in if anybody on the SEP has questions for David.

But generally we're going to go over – our group has been meeting down in Miami and discussing this, and so we're going to go over some of our thoughts. We had some specific questions for the SEP to answer as we go down the line.

The question that we were asked as a group and that we want the SEP to consider is what is the best approach for evaluating the economic efficiency of current allocations and also net benefit analysis for proposed reallocations in the fisheries for snapper grouper, the pelagics, and dolphin and wahoo; which I guess is technically a pelagic.

DR. MacLAUHLIN: I can also say this is something that Mike – you received an e-mail from Mike Collins that had this presentation in it, if you guys are looking for it.

DR. CROSSON: I'm just going to go over briefly what guidance we have from Magnuson-Stevens and the data availability we have at the Science Center. If you guys have other suggestions for data availability, we would certainly be willing to hear that; and then the specific questions we have for you.

For Magnuson, most of you have seen National Standard 5; you should consider efficiency and utilization of fishery resources. That shouldn't be the only thing you consider. The definition of allocation according to NMFS; and you can see what that is; a direct and deliberate distribution of the opportunity to participate in a fishery among different discrete user groups or individuals.

Then there are actually two tech memos that were listed on the briefing book. One of them; the Plummer et al was in the briefing book for the SEP a few years ago and that talked about generically some cost-benefit analysis, including willingness to pay. There is a newer one that was also in the briefing book which is not finalized yet.

It actually goes over a lot of the literature that has been published by NMFS over the years in terms of looking at the efficiency of allocations and different factors that contribute to that. It has got a really good lit review, and I think it is a really valuable contribution for this discussion. In terms of commercial data, things that we collect down at the Science Center; we have X-vessel prices and landings. We get that from both the logbook and the trip ticket data.

Our group does do surveys of the snapper grouper, dolphin and wahoo, and king mackerel fisheries. It is a survey; a certain percentage of fishermen are selected each year and they provide per trip economic data to us. Then they also complete an annual survey, so we get annual data as well. There is this question about HMS fleet data.

I don't think this came up in the discussion earlier, but some of the dolphin and I think maybe some of the king as well, but definitely some of the dolphin catch is caught by the HMS fleet. Our group does not survey that fleet. They have probably quite a different economic model than other fishermen that we are surveying.

That is something that is going to affect any of our producer surplus estimates that we're going to get for the commercial fishery for those fish. All right, the questions we have for you – you guys have seen this data before. You've seen it come up in different amendments when we've done analysis, and you have reviewed it repeatedly in the past. There are different ways we could get about this.



We have estimated different producer surplus or producer for different fisheries in the past. But our first question for you is what do you think we should be doing when we estimate derived demand for the harvest sector with the existing data? Juan Agar has something that maybe Sherry has seen in terms of the Gulf; a virtual price approach. It is a way of generating commercial willingness to pay estimates. Have you seen this? Again, I don't know the details of this but I do have a – John Whitehead.

DR. WHITEHEAD: Is that a published paper?

DR. CROSSON: I'm sorry; I don't believe it is right now. I'm not sure if Juan has something under review or not.

DR. WHITEHEAD: Tech memo?

DR. CROSSON: No, I don't believe so. I'm sorry, David, it is a tech memo?

DR. CARTER: Yes; we used it for red grouper.

DR. MacLAUHLIN: That was David Carter on the line, everyone.

DR. CROSSON: The second question we have about commercial data is about estimates of value for the post-harvest sectors. That is something that we've repeatedly brought up during allocation discussions amongst several councils. We tend to look at the value to the commercial fisherman once it has been harvested; but there is obviously value that comes as the fish are sold through different distribution channels. Is that something we should be considering in terms of doing analysis for allocation decisions? I'm going to stop right there and throw that open for the panel.

DR. WHITEHEAD: Comments?

DR. CROSSON: Let me go back a step then. It is fine; we've been talking about some of this stuff for a few hours. I guess the first question is – I'll take the second one first. Should we be looking at something beyond the value to the fishermen in terms of measuring producer surplus for allocation analysis? Does anybody think that we should be doing something beyond that; and if so, do you have anything in the literature, either published or in the tech literature, to support that?

DR. WHITEHEAD: You mean in terms of the second question; should we be including values for the post-harvest sectors?

DR. CROSSON: Yes, this is a less technical question, but it is certainly something that we are going to have to develop a significantly expanded methodology to tackle that question. Do you think that is necessary in order to do a proper analysis of allocation decisions?

DR. LARKIN: I suppose I'll make a comment. Let me just preface this by saying that to me it is really hard to answer these generic questions, because I think ideally the way we would do these economic analysis is we would look at what the amendment is trying to do and what it is proposing.

To me that is a more important match; like if you are looking at something that changes days at sea, your analysis should address the effects of changing days at sea. In general I'll go out on a limb and say, yes, in some cases I think we need to look at post-harvest sectors. I could probably think of examples where I wouldn't think it would be necessary, because I do think sometimes it is going to be case specific.

I think we're caught between the generic ideal and what specifically is being addressed. I think my final comment would be like, you know, what we often get is here is the amendment which has a general goal and then here are very specific ways of getting at it. Sometimes those don't even match; the overall objective with the narrowed-down list of what is being addressed.

But to me it would start with if these amendments or the proposed alternatives are making very specific things; like one is talking about bag limits and one is talking about days at sea and one is talking about trips, you might need different types of analysis to get at how changing allocation might affect the value. I don't know if that helps, but that is kind of where I am stuck right now.

DR. DUMAS: In some situations in some kinds of markets then if you correctly estimate the drive/demand curve in the harvest sector and estimate the surplus that is captured there; it will capture – that will also include the surplus from the post-harvest sectors.

But even in the situations where that is possible, sometimes to policymakers and to the public in general; they are not interested in only surplus, they are interested in where sales are occurring and economic impacts and the distribution of those impacts; you know, where the sales are occurring, where people are employed, what states, what economic sectors in terms of retailing or distribution and transportation, where those – and I'm talking about post-harvest. Those sectors also exist sort of backward; pre-harvest.

There are two sets of economics, sort of actors, those that are providing inputs and supplies to the harvesting sector and then those that are processing the product and distributing the product after the harvesting sector. Although you may be able to measure the surplus by just looking at the harvesting sector and estimating that drive/demand curve correctly; there are lots of other policy issues that are important to the public where you may want to have some information, not necessarily producer surplus, but some information on what is going on in the post-harvest sectors.

There is one report that came out back in the late eighties that was really useful. It was a consulting report, Economic Activity Associated with Fishery Products in the U.S. The National Fisheries Education and Research Foundation supported collecting a lot of data. A consulting firm put out this study back in 1989; and basically it was for different regions around the U.S., for all these different – by fish species the different distribution of the fish that went through the niche-marketing channel and the margins in each level of processing, packing, distribution by fish species, by geographic region. There were lots and lots of data collection, just lots and lots of straightforward economic information. IT was all put together in one report. That was really useful. I don't know if anything like that has been updated since then; but that was useful for getting at some of these other economic post-harvest economic type of questions.

DR. BLOUNT: I am not an economist to start off with; and that is why I can get lost here very, very quickly. But following on one or two of the points that you raised; an idea that occurred to

me is to look at value added particularly in terms of distribution and marketing. I know that in the shrimp fishery, particularly in the Gulf Coast, there has been a huge concern because of the deflated value primarily from imports.

Our imports are 93 percent right now. There is a lot of interest in marketing to create niche markets; and so niche marketing might be something that could be added to this. I'm not sure, I would have to think long and hard about how this would apply across three species. For shrimp I actually did a project for Ocean Conservancy where I did a value added for shrimping all the way from gear aboard the shrimp boats to packaging and the retailing.

Most of the interesting stuff was going on at the packaging, marketing, and the retailing value. I know that South Carolina; there has been a fair amount of research done on this, thinking about things like milk has been – you know, other products have really benefited tremendously from this kind of economic marketing activity. I'm not sure if that is the kind of thing that we should be talking about or not, but it occurred to me.

DR. MacLAUHLIN: I was just going to let you guys know we did port meetings for the visioning projects. If you don't know about that, it is just for the Snapper Grouper FMP, but it is stakeholder-driven to revise the goals and objectives for snapper grouper. Amber Von Harten was the lead on this.

She went to all of them, but the rest of us kind of went to the other ones as well. The legs that I did, some interesting stuff came up from our fish house/restaurant owner folks down in Titusville; and they brought up some really good points about that they can't develop a local market, for example, for golden tilefish, because that one is closing so quickly.

They basically said there is a local food movement and we can't get on board because of some of the regulatory constraints they have. Then we also had meetings with chefs also to talk about how the management affects chefs.

Charleston is a really good example of how much the restaurant industry and the culinary tourism happening in this town – and it is not the only place. There are a lot of places like this on the coast – is tied to that experience, the unique experience of being able to eat something that they can't eat somewhere else and their relationship with the local fishermen and how they benefit from dealing with local fishermen instead of the big distributors as far as being able to tailor their options and plan ahead for what is going to be open.

It was really, really interesting to kind of see how far that actually goes; that it goes into the restaurants, which go into your consumers, which goes to tourism. That is a huge part in Charleston, and it is like that in a lot of the coastal communities. I hope that there is more and more. I'm trying to write about it a little more in the social impact assessments of what happens when you affect the commercial sector expanding out into that realm.

DR. YANDLE: I would just also like to echo again the whole local availability issues are huge again. I'm working on a study on the same issue in Georgia. I am trying to bring it up to Atlanta. We're finding very preliminary sort of similar issues, just in preliminary conversations and how you take that information and incorporate it into this kind of analysis and get accurate numbers on it. I'm not sure if that is even possible; but I think there are issues that we do need to

be more broadly available rather than just the value at the dock numbers on the commercial fishing.

MR. HADLEY: I guess one of my questions would be it sounds like there is some backing for including that; but what would be some of the reasons not to? I know that there are data limitations; but from a methodology standpoint, I can't really think of a reason to leave that out. That is a broader question.

DR. CROSSON: Yes; that is a very broad question. The ultimate question for this where – I mean my first response is that we're usually dealing with the commercial fishing sector and the recreational fishing sector in council discussions. Those are the two groups. When you talk about what affects the commercial fishing sector, the primary thing that affects it is what its profit margin is.

If somebody else is making more money on it down the line, they certainly don't have any problem with that; and that helps support their business because they can probably get a larger cut. But, that is my initial answer to it. The second answer then on top of it is that I don't have a sense where we would get accurate data for and also even where we would stop.

I guess ultimately you would stop at the consumer, the person that eats the fish. Some of that is going to be in a restaurant in a high dollar area like Charleston; and some of it is going to be at a local fish shack in a rural county in eastern North Carolina. But I don't know where we are going to get accurate data on that.

Unless I'm misinterpreting what Chris stated, my interpretation of what Chris said is that this is a better place for using economic impact numbers. We do have tools available for that. That is something; but the problem then is that politically economic impact versus economic benefits; and you constantly see these things conflated, deliberately or not, but it is definitely an issue. People get them confused in their mind. That is the trouble with it is that you have to put ten addendums on top of anything when you state an economic impact, because it is usually going to get misinterpreted. What is that, David?

DR. CARTER: (Inaudible)

DR. CROSSON: Good point to bring this back. Again, following that line is that we are able to do Juan's virtual price approach right now, right, but that is just measuring things at the commercial fishing sectors level. Is that your understanding?

DR. CARTER: (Inaudible)

DR. DUMAS: We have to look at the data that you have. There is existing literature on economic welfare and economic value of measuring kind of like approved for consumer surplus in a given market; and under what conditions does that also include the consumer and producer surplus from all other market segments that are on down the distribution chain? Sometimes that is possible.

DR. CARTER: (Inaudible)

DR. DUMAS: Could you repeat, please?

DR. CARTER: (Inaudible)

DR. DUMAS: I'm sorry; I can't understand.

DR. CARTER: How about now; is it clearer now?

DR. DUMAS: Yes.

DR. CARTER: Okay, I'll try one more time – inaudible – that was adapted by so many, right ?

DR. DUMAS: Right and then just general economic welfare – papers on how to measure economic welfare unrelated to fisheries.

DR. WHITEHEAD: I think there was a paper in Marine Resource Economics a long time ago. One of the co-authors was Jim Easley, who was making this argument based on some other theoretical work. Is that what I'm hearing? Yes.

DR. CARTER: (Inaudible)

DR. WHITEHEAD: Exactly.

DR. CHEUVRONT: Is the ultimate goal with this then to try to come up with a commercial willingness to pay? If that is the case, typically in the commercial sector you are basing that on actual values that you have access to. When you're doing this for the recreational sector, you are doing this based on stated preference.

Well, there is a fair amount of it that is stated preference. There are some other instances, but I'm looking at considering some of the stuff I think that was done for the red snapper study that was done recently for the Gulf of Mexico. Correct me if I'm wrong, but I think the willingness to pay for the recreational sector was derived based on stated preference.

There is a lot of literature out there that says that actual behavior and behavioral intentions are two very different things. That is largely – I'm familiar with that literature largely from the social psychology background. I think we need to be careful. I know there have been willingness-to-pay studies that do actually look at the actual costs on the recreational side.

I know there are some that have come out of UNC-Wilmington particularly. I think Pete Shumen also has done some as well on striped bass in North Carolina. I remember looking at that study when I was working on that fishery. But, we need to be really careful that there is a built-in bias when you're looking at stated preference versus actual behavior.

In social psychology generally the stated preference is people are usually willing to do more than what they actually do when presented with the opportunity to do that behavior. I think we need to be careful that if we are going to be comparing willingness to pay between sectors, we need to consider that we're using the same types of data; that if we're looking at actual behaviors and

comparing to actual behaviors; and that will give you a more realistic appraisal of what those differences are.

DR. BLOUNT: Fairly quickly; I was going to ask a different question, but what you raised ties into it. What I wanted to ask in general – and then I'll ask the specific question – was I haven't looked at Agar's or any other literature on the virtual price approach; and so I'm not entirely sure what that includes.

I wondered if that would include something like the kind of thing that Brian was talking about; would it also include niche marketing. I don't know. Again because I'm not an economist, I don't really know what the answer to that would be. But maybe while we're thinking about that, let me get to the more specific point.

Brian is absolutely right they have done a fair amount of research on water issues and water preservation and resources. People will answer questionnaires and interviews. They will tell you they will gladly pay additional amounts for certain volumes of water if it is cleaner and safer and so forth and so on.

Then when push comes to shove and they are asked to actually make those payments, they are totally opposed to it. The same kinds of thing I think applies here in the study that you were talking about in red snapper shows that I think very, very, very, very clearly. But at any rate, could we come back to the initial thing about the virtual price as to kind of what that is. I'm not quite sure about that.

DR. WHITEHEAD: Yes; there is another slide further down in Scott's presentation on recreational. We should finish covering this one first.

DR. CROSSON: Do you want me to get down?

DR. WHITEHEAD: No; can we do the commercial to your satisfaction before we get to the recreational? The red grouper; I found that technical memo and I think we've seen that before. The question is a good one. I don't know; I think David and Juan probably have a better handle on whether that approach can be useful than we do.

Looking around the room, we could serve as useful reviewers. There are a lot of other useful reviewers of that work. I don't know if it has been sent up for peer review; but for a report like that, that could be useful for managers, it seems like it would be great to have a peer-review process similar to what goes on with the biological stuff at the SSC.

It is probably our fault as much as anyone, but we see the reports and we attend the meetings and then we go home and forget about it. But if someone asks us to peer review or to look for peer reviewers and we had a formal process –

DR. CROSSON: Are you talking about with this specific allocation proposal?

DR. WHITEHEAD: A specific report.

DR. CROSSON: Okay, that there would be something that the Science Center would put together and doing an analysis for the economic benefits of the proposed allocation; and then the SEP or a subgroup of the SEP would do a formal peer review of it. Is that what you're recommending?

DR. WHITEHEAD: Yes; I am recommending that. I think that would be great.

DR. DUMAS: Were you talking about a review of Juan Agar's method paper, the virtual price paper, reviewing that or reviewing the specific policy proposal based on that?

DR. WHITEHEAD: Both. It seems like we should be reviewing stuff more formally than we do on the Socio-Economic Subpanel.

DR. CROSSON: Without disagreeing with that; the second one, though, in terms of the council's need – just like what the council has done in terms of setting up a SEDAR process, it relates to specific needs of the council in terms of getting a sense of stock status. It is tied to specific regulatory proposals. I would think the second one would be a higher priority for the council and for the SEP.

DR. WHITEHEAD: I'm not trying to set priorities for the SEP. I know we're given those; but I think if we're going to be on the SEP, we should work harder than we do.

DR. DUMAS: I just wanted to say one more thing about the commercial. I think it would be interesting and good to look at some post-harvest sector levels in terms of the economic impacts that are occurring there; but we need to be careful if we do that to make sure we don't double count the value. There are some problems doing that; but I think those are things that can be looked at and can be addressed to make sure that we don't double-count value. That is something that you should keep in mind.

DR. CROSSON: Can I move on to the recreational stuff now since we are already moved into that somewhat? In terms of the recreational data availability that we have down at the Science Center; from MRIP we have the effort and the catch, effort and harvest estimate. There are two sources of data that we have.

The Carter and Liese paper we've seen used several times I think in the council process; and that is the value of catch-and-release fish. That was published I think in the North American Journal of Fisheries Management, but it is based off of a 2003 survey. Then there is a newer one that is based off of a 2009 sample.

You can see the species there; and that is not published yet but will be going out for peer review soon. Note that there are different things being measured. The earlier papers using the value of kept and released fish; and the newer one is looking into value bag limits, including closed seasons.

I don't know, John; I have this down here as question mark next to you, site choice models; that is something that you've got some experience in. These are all potential sources and information for willingness to pay and consumer surplus. What advice does the SEP have in terms of applying this to the council process?

DR. WHITEHEAD: Comments? I have some.

DR. CROSSON: Actually, I think I have three or four slides here, because David assisted me with developing this. David, are you still on the line?

DR. CARTER: Yes.

DR. CROSSON: Do you want me to go through several of these slides and then lead into the discussion? Do you have a preference here; this is more your work.

DR. CARTER: I would go on to the next few slides and then open it up.

DR. CROSSON: Okay, this is an example using the red snapper. Note that the numbers that we have here in that equation that is up above; the change in allocation and then also the denominator on the other side, these are numbers that we have. The big question is that numerator, the net benefit.

But David also has listed in here; you know, there are several assumptions in using these willingness-to-pay numbers. Again, if you relax these assumptions, the second column shows you where the results are going to go. If we assume that there are no new anglers or trips; we relax that assumption then the number is going to be higher.

Okay, here are the questions that we have in terms of the recreational willingness-to-pay numbers. How do we deal with the range of value estimates and the lack of species-specific estimates; because there are a lot of different sort of subsectors in the recreational fishery? How do we translate proposed allocation changes to changes in the value measurement?

There are lots of different ways we can do that. The third one is can we follow the previous work and hold the number of trips and anglers constant when trying to measure allocation changes. At that point I will stop and do the discussion.

DR. WHITEHEAD: I'll go back a couple slides and look at the recreational data. This is getting into the next item on the agenda, which I wanted to talk about. I was at the Recreational Modeling Needs or something Workshop; Sherry Larkin and Brian Chevront were there. I was on a panel at the end and I got to say pretty much whatever I wanted, and I did.

It was about a lot of this. One thing was that in terms of the third item in this is the revealed preference versus data preference issue, too. There is so much revealed preference data in recreational fishing that is not used; and it could be used for this issue. The MRIP data set is huge; and it is way better than it used to be because of the weights.

It is fairly straightforward to develop basic recreational demand models that would generate willingness to pay for catch and keep and catch and release. If you wanted to work harder, these numbers that are revealed preference numbers based on people's behavior; it is not stated preference numbers based on what they say they would do.

The models are fairly simple. They don't speak a lot to the allocation issue, because it is hard to get a declining marginal value per fish like there he tells us there is going to be; and one of these



later slides has that picture drawn; but it gives us a place to start. Right now we have a blank page in terms of knowing what the value of these species is.

Every SSC meeting I've been to and every SEP meeting I've been to is basically a blank page. That would be one place to start. These models aren't difficult to estimate, especially when you have the programs developed and you are just adding and you are just updating the program every year.

The National Marine Fisheries Service has done a lot of work with these stated preference models. I think the South Atlantic has those two studies that are on the slide. The Region has the least number of these studies that have been developed. There is a problem with stated preference estimates, which you were talking about.

It is known as hypothetical bias; but the problem with stated preference numbers can go both ways. From the 1997 MRFSS add-on study, there were some continued evaluation questions asking about willingness to pay for avoiding king mackerel bag limits. I estimated a revealed preference model compared it to the continued evaluation estimates; and the continued evaluation, the willingness-to-pay numbers was five times lower than the reveal preference numbers. It can go both ways.

After the meeting in January or February, I talked with Dan Lew, and he's done a lot of these stated preference studies for Alaska. This summer we're going to be working on joining the reveal preference and the stated preference data. What you try to do is purge out all of the bad stuff from both data sets; and so there are things to do with these stated preference data sets.

I'm not as worried about the hypothetical bias in the recreational fishing context as some people might be. Two more slides down; so how do we deal with the range of value estimates and lack of species specific estimates? First of all, I say we shouldn't worry about it, because we need to put some stuff on this blank page.

For years on the SSC we've been saying we just need to see something, something to work with. Especially now that we see allocation on our agenda today; we need something to work with. I'd say that for the commercial sector, too. Instead of worrying about what is the right approach, we just need to start with an approach and get something going that we can use to compare some numbers.

Beyond that, the problem is that in the recreational fishing literature the numbers for species values can be all over the place. I mean the value of catching a dolphin; there are order of magnitude differences across studies; and some of these are using the same methods. In the field of benefit-cost analysis has a lot of ways to deal with this in terms of Monte Carlos simulations and assuming triangular distributions and just running with the numbers that you have.

It is all about using the data that you have and not the data in models that you wish you had. The second question – I'm going to stop there and let other people say some things. I have my own opinion about the answers to these questions, too, but I should stop. Anyone else?

DR. DUMAS: I just want to say that I think John Whitehead is pretty modest. He's done a lot of work on this issue over the years. A lot of work with both stated preference data that you

guys talk about; there are some problems with hypothetical bias, but also he has done a lot of work with revealed preference data, travel cost data, and the types of data based on numbers of trips and costs and things.

He has done work estimating values for bag limit changes for numbers of fish caught versus kept, I think, and also for comparing different species' values, and a lot of different places and a lot of different situations; also other types of regulatory changes, estimating recreational values from the data that are available.

I think we're lucky that we've got someone who has that much experience with both revealed preference data and stated preference data on the panel. Also he has done work like, he just said, combining the two types of data together in analysis and using the best parts of both types of data together. You can get some benefit from doing that.

I think I agree with John that seeing some of the things he's done in the past there is a lot more that could be done with the data that we have. You can always collect more data and get better data, but there are a lot of data that are out there. Some of the types of models that can be run to get the recreation value estimates can be done; we could do a lot more with that.

Another thing, too, is that one of the issues about the range of value estimates for the value of a fish caught recreationally; one of the reasons why there is such a range of values is because there are different situations in which a fish is caught or different types of fishermen and different types of situations that a fish could have different values in different situations, different types of fishermen and different situations.

Sometimes the range of values reflects the range of different types of situations or recreational catch situations that might be present. Sometimes it is a matter of out of the range of different estimates, picking the one that fits your situation; and that there could be different estimates for different situations.

Just like an umbrella; an umbrella has a certain value to a consumer on a sunny day, but that same umbrella could have a different value to a consumer on a rainy day; so the value of a fish could be different to a recreational fisherman and different situations. Sometimes it is a matter of using the data to get estimates and then looking at which estimation method and which value estimate is the right one for the policy situation that you're trying to model.

DR. CROSSON: If I'm reading you clearly, then again you are stating that there shouldn't – and I guess this ties in with what John was talking a little bit about, the way that we should be reviewing proposed analysis is that it depends on the situation. The type of estimate that you're going to use will depend on the methodology – I'm sorry; the link between the proposed regulatory change or allocation change and what was measured in different studies. Am I reading you correctly that the different methodologies are going to be more useful in some situations than others?

DR. DUMAS: There are several different types of data that are available, and there are several different types of methodologies that could be used to analyze the data; and which type of data and which methodology to use, which would be the best to give you the best estimates of value,

depends on which policy change you are trying to value. If the policy is in consideration of the change of the bag limit, then you might do things one way.

If you're trying to value the change in kept versus released, there might be something different. If you're looking at a change in allocation that increases the population of fish out there that are available to recreation so that the encounter rate increases; what was the value of increasing the encounter rate.

There are lots of different things that could possibly be of value. If you are in a recreational fishing economist position of trying to decide what to value, there are just a huge number of different possible things you could sit down with your data and your models to potentially value.

If you are someone like John Whitehead who said there was a lot of data and a lot of models, there are lots of different things he could estimate, a lot of different values; so the question is which ones is most policy relevant? I think that is what Sherry was talking about earlier. A lot of times we need to know which things out of this huge number of possible things we could estimate, which things are most useful at a given moment for policy purposes? Correct me if I'm wrong, John and Sherry.

DR. WHITEHEAD: I would say estimating the basic model with these data would still be useful; and that is the one with the blank slate. I just want to estimate a model and see what value there is and update it every year and we have somewhere to start. Once the programs are developed, you can tweak those to estimate the model to give values for changing bag limits and other things.

DR. DUMAS: The basic input data there would be MRIP data to use with those models?

DR. WHITEHEAD: Yes.

DR. BLOUNT: I was thinking really more about the third question. The second one I'm not quite sure how to translate the question for the second one. But the point that I want to raise here is that the human demographics and the change in human population demography drives a lot of these issues.

You can look particularly for the recreational, but I think also for the commercial but in fairly different kinds of ways; but the increase in the number of recreational fishermen in certain population areas like Houston, for example, or Miami in south Florida drives a lot of these changes. I don't know that we have the information.

Maybe the information is available such that we could go and begin to sort of chart those and sort of track those and sort of see what is happening in regard to them. But in response to that third question is can we follow previous work; well, yes, we could but I think it would be very inadvisable. I really think that we need to focus much, much more on what is happening now and projections for coastal populations are still going up, they are still booming. The Houston area totally dominates, for example, most of the recreational catch for the entire Gulf of Mexico. Those are issues of various kinds that I think that we could bring into this and to our advantage.

DR. WHITEHEAD: This is another place where just basic benefit cost methods could be used. One assumption is that the number of trips and anglers stays constant; another one is that increases of population and you might come up with a more informed assumption after that; and you can conduct sensitivity analysis over these and develop a probability distribution of benefits and costs and use that in the analysis.

DR. BLOUNT: Just as an example of the kinds of things that I'm talking about for the Houston area is that based on some work that I've done there for the past couple of years, virtually all of the inshore or bay shrimping has changed to bait shrimping; whereas, that hasn't happened in other areas of Texas.

The reason for that is the huge increase in the number of anglers in the Houston area who need bait shrimp. That is not just a way of them surviving economically but of actually prospering from it to a certain extent by making that switch. But it is driven by population; it is all I think the consequence of that.

DR. DUMAS: Another point about the third item on the slide can we follow previous work in holding the number of trips and anglers constant over allocation changes; another thing that could be done with some of the models that are based on the MRIP data is you can estimate models that not only estimate the sort of the value per fish or the value of changing policy instruments like bag limits, but you can also estimate changes in the number of trips.

There are two types of models, models that give you the value per fish but also models that give you the number of trips per fishermen or the number of trips; and you can also estimate both of those models together as another possibility. We're not necessarily tied to holding the number of trips or anglers constant or to any other sort of assumption.

That is so simple and basic we can develop models that try to predict how numbers of trips will change with changes in the policy and different policy instruments; bag limits and allocations and so on. John Whitehead has done some work in that and others also have done some work in that area of estimating changing number of trips as well as value of the fish.

DR. CROSSON: I'm going to move forward from there. Okay, I guess this next question is do we need to know the management measures that will be used to implement implied harvest changes? I guess the answer to that is yes based off the discussion that I just heard. This last question about pareto; this is something I want to throw out.

This is kind of moving now into the policy area, I guess, and maybe not specifically numbers. Again in discussing with other members of the SSRG in Miami – and this is again related to what amendments were coming up earlier in some of the discussions that Brian was leading. There are situations in which neither sector is catching its ACL.

There are situations in which either the commercial or the recreational is capturing its portion of the ACL. Then there is I guess a few situations in which both sectors are capturing a portion of the ACL. In terms of tackling these questions; does the SEP have any guidance in the order in which it might be advisable to do this? I guess this relates back in my mind to what we were talking about earlier with Ben.

Sometimes you might end up favoring one sector. I mean, if one sector ends up giving a portion of its – or if the council either temporarily or permanently reallocates the portion of an ACL from one sector to another, maybe from the commercial sector to the recreational sector or vice versa; in one sense that is – especially if it helps open up the doorway to further reallocations in terms of increasing economic benefits; that is a positive thing.

Does the SEP have any recommendations about what situations would be easier to address first before moving on down the line? I would think the order of this is explicitly trying to address things that are not as economically confused or politically confused. I mean, I think if neither sector is capturing its portion of the ACL, it would seem to me that the first question would be are there specific things inside either sector that are holding that sector back? If there is some sort of regulatory process, some sort of regulations that can be lessened that would then increase that sector's catch rate, that is a pareto improvement.

DR. LARKIN: Right. Oh, I love to see that you are thinking this way; this is really cool. But I would sort of caution that there might be other evidence other than bag and trip limits and regulatory limits that mean that somebody is not catching their ACL. If you would sort of delete what that evidence might be; because you are right to say there is – I mean, there are a whole suite of reasons why any one sector in any one year might be under; like the whole seasonal, when they show up, kind of scenario; there would be more of an economic explanation then.

DR. CROSSON: Yes; that is exactly my thinking, right. If you look at something like dolphin and we see that, okay, the sector is not catching its portion of the ACL not because of specific regulations but because the fish are not showing up regularly like they used to or they are not showing up in a place that is economically beneficial for the fishermen to go out there and pursue them; then you are saying basically that this may be an open access fishery or may not be, but at this point the fishery is doing okay and there is nothing that we would recommend in terms of reallocating fish.

Then we move down the line. Now we have Number 2 and 3 here where we have one sector catching a portion of the ACL and not the other. Now when I wrote this – I'm sorry, when we wrote this; this is not all me. When we wrote this, we were talking about, okay, well, it seems like if one sector is capturing its portion of the ACL and could use more and the other sector is not; then it would be a pareto improvement.

But after talking to Holiman and he brought up that question especially about the recreational sector valuing things differently; you might be decreasing the opportunities; it is not as clear cut. I guess nothing is. But again I wanted – this is something I think the SEP could definitely weigh in on/

There is a paper that is circling around – I know that it is under review – that Josh Abbott wrote, and he is talking about trying to reform the process. I think one of the things that he advocated was not having permanent allocations but at least tackling things in a way that makes it more fluid, so that you don't get this situation where one sector had just a portion of the ACL and it hangs on to it for dear life because of this perceived zero some nature of the game. If we start listing things we recommend that the council – because I don't think there is any specific regulations other than the ones I guess we saw earlier. Are there specific recommendations the

SEP thinks to move through this process that we don't get into – well, I guess I will just stop it there.

DR. WHITEHEAD: The SEP has been on record in favor of – I don't know what the – in terms of tradable catch shares and being able to trade across sectors and creating a market for the sectorial quotas would directly reveal the willingness to pay for catch on each side, and it would be fluid.

DR. CROSSON: Yes; I guess one of the things the council is still considering are those recreational fishing tags that might be for species that have low ACLs. If those were allowed to be traded, then you would have some direct measurement that you could use. At that point it would be easier to make an analysis in terms of allocation efficiency.

DR. DUMAS: Another advantage of the tradable shares is that if you buy a share and you have it, whether you are recreational or commercial, then there is less uncertainty in the sense that you've got it. Whereas, if we move to a policy regulatory regime that is more flexible and more adaptable, then that is better in the sense that the policy is more flexible and adaptable, it can move the catch share around.

But it is worse from a fisherman's point of view in that you are less certain that you're going to have access to those fish. The flexible policy is less certain, because it creates less certainty or more uncertainty; whereas, the tradable catch shares, if you buy the share, there is more certainty that you've got the share, so you may be more willing to make a capital investment and so on.

The tradable shares could be better than a more flexible policy; but just comparing less flexible policy with more flexible, having a more flexible policy has pros and cons. If it has more flexibility, that's good, but then it also would probably have less certainty for the fisherman, and that could reduce their incentive to invest possibly.

DR. CROSSON: That is the end of my presentation right now. Are there further things to discuss on this?

DR. WHITEHEAD: Yes; could we go back to Slide 10? I would answer the question a little bit differently than Scott's interpretation of our answer. I would say in terms of just the analysis, it would be great to – you can do the analysis without knowing what the particular policy would be; whether it is bag limits or trip limits.

If you look at the tech memo from 2012 – I forget who the author is, but the one that was circulated – I think the methods that are laid out in there can and should be done when these issues arise. I don't think we need to know if it is a bag limit or a trip limit in that case.

DR. DUMAS: I was just going to say in some sense if there is time, you would want to look at each management measure and see if one management measure is better than another in terms of economics to implement implied harvest change. You could look at what would happen with bag limits, trips limits, season length, look at all the different ones and see which one gives you more value. That would sort of be doing "what if" and doing simulations for each of those possible policies to see if one is better than the other in terms of the economic value that is created.

DR. CROSSON: Kari pointed out to me that there is an IFQ in place for wreckfish; and considering I've been studying it for a year, I should probably have remembered that.

DR. LARKIN: A couple of comments I guess if we're about to finish up; we've talked before about this idea that right-spaced management can help solve all of our problems. It would be great if they could be tradable amongst commercial and recreational; but the reality is we are like two steps removed.

The first step would be to even have a tradable-right system on the recreational side to begin with; because the fact that it is typically open access within that sector drives a lot of behavior. We would have to get there first, I would almost think, before we would even get to the step of having these two sides trade. I guess that is one point.

In general I love how in the Southeast Regional Center, when they are looking at ideas of looking at these allocations. that they have somebody working on the commercial side and somebody working on the recreational side, side by side; because a lot of times they can talk about the data and talk about the assumptions that are made and try to be as consistent across both sectors as possible.

That is really I think important when you are taking these steps to try to do more of this analysis. In general, I would like to see that step progress. We sort of talked about commercial first and recreational and sort of how do you deal with what level to go at. There are some good papers – maybe they are gray literature – about attempts to try to do the whole ball of wax.

One that I go back to is one that is about ten years old from Australia. They have lots of diagrams and how you get the demand curves to be consistent and incorporate all those steps from the wholesale sector on the one side and the charter sector on the other. You know, how do you take recreational values and do you stop with the recreational; what do you do with charter and how you get those to be consistent?

They've had good case studies where they have tried to put the pieces together. Of course, they are going to have different data than we are so the holes may be in different places, but more of a comprehensive approach to try to get at that consumer and producer surplus with everybody involved.

I guess the only last point I would make is that I really would want on record that there are some good stated preference studies that are done. I mean, it is easy to say, because you are asking people what their preferences are, that you are not going to get a good answer. I think John gave a couple of good examples on the recreational side.

I think most researchers know that you attempt to get the most conservative value possible; and nobody asked open-ended willingness to pay. It is always a tradeoff that involves two different costs to normalize those and two different prices. I do think there are good examples on the recreational side containing stated preference and revealed preference. But even on the consumer side, there is a lot of good studies done that are stated preference that are worthy of consideration as we try to move forward.

DR. WHITEHEAD: I would say the bigger concern might be – and I don't do commercial fishing research, but I would say that the commercial fishing research is based on market values; and recreational fishing research is based on nonmarket values. I don't think it makes much difference whether it is revealed preference or stated preference. There is the bigger mismatch, the market versus the non-market. We know that and if you know something, if you know there is a mismatch, then you can take account of it in the comparisons.

DR. CROSSON: Yes, I'm done.

DR. WHITEHEAD: Okay so we need to be out of the room at 4:30. We're almost to the end of the four o'clock time limit. There is another item on the agenda, but I think we talked a lot about it, or at least I did. If it is okay with everyone; we don't have to get to that; research needs. We have a report to give at the beginning tomorrow, and I've been typing some notes into the overview document.

I have short paragraphs for everything up until Item Number 5; and I could type a summary of that in the next 30 minutes, maybe. Would it work if I just finished that up and sent it out to you and you take a look and edit it as you see fit? Just edit it into this document with track changes and send it back to me, and I'll try to put all those edits together and send it back out. That would work; would that work for you?

DR. MacLAUCHLIN: That's great.

DR. WHITEHEAD: Do we need to do anything else?

DR. MacLAUCHLIN: I don't think so.

DR. WHITEHEAD: Is there a motion to adjourn? Second? Yes, thank you all.

(Whereupon, the meeting was adjourned at 4:00 o'clock p.m. April 28, 2014.)

Certified By: \_\_\_\_\_ Date: \_\_\_\_\_

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