

U.S. DEPARTMENT OF COMMERCE

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

MARINE FISHERIES ADVISORY COMMITTEE

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PUBLIC MEETING

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THURSDAY  
NOVEMBER 30, 2017

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The Advisory Committee met in the Sheraton Silver Spring Hotel, Magnolia Room, 8777 Georgia Avenue, Silver Spring, Maryland, at 9:00 a.m., Terri Lei Beideman, Chair, presiding.

MEMBERS PRESENT

TERRI LEI BEIDEMAN, Chair; CEO, Vast Array Corporation  
 ERIKA FELLER, MAFAC Vice Chair; Director, Marine and Coastal Conservation, National Fish and Wildlife Foundation  
 SEBASTIAN BELLE, Executive Director, Maine Aquaculture Association  
 ROGER BERKOWITZ, President and CEO, Legal Sea Foods, LLC  
 JULIE BONNEY, Executive Director, Alaska Groundfish Data Bank, Inc.  
 RICHEN (DICK) M. BRAME, Atlantic States Fisheries Director, Coastal Conservation Association  
 COLUMBUS HALL BROWN, SR., U.S. Fish and Wildlife Service (ret.)  
 RAIMUNDO ESPINOZA, Environmental Consultant

RASELA FELICIANO, Vice President, Feli  
Fisheries, Inc.\*  
RANDY FISHER, Executive Director, Pacific States  
Fisheries Commission (ex officio)  
ROBERT GILL, Co-owner, Shrimp Landing  
ELIZABETH (LIZ) HAMILTON, Executive Director,  
Northwest Sportfishing Industry  
Association  
PETER MOORE, Fisheries and Community Development  
Consultant  
MIKE OKONIEWSKI, Pacific Seafood Group  
HARLON PEARCE, Owner/Operator, Harlon's LA Fish  
LLC  
ROBERT RHEAULT, Executive Director, East Coast  
Shellfish Growers Association  
PAMELA YOCHER, Senior Research Scientist and  
Executive Vice President, Hubbs Sea World  
Research Institute

\*Participating by telephone

NOAA STAFF PRESENT  
JENNIFER LUKENS, Designated Federal Official;  
Director, Office of Policy  
CHRIS OLIVER, Assistant Administrator for  
Fisheries  
PAUL DOREMUS, Deputy Assistant Administrator for  
Operations  
HEIDI LOVETT, Assistant Designated Federal  
Official; Policy Analyst, Office of Policy  
MICHAEL RUBINO, PhD, Director, Office of  
Aquaculture  
FRANCISCO (CISCO) WERNER, PhD, Director,  
Scientific Programs and Chief Scientific  
Advisor

ALSO PRESENT

JAZZMIN AWA-WILLIAMS

DAVE BOND

RICH CODY, ECS Federal LLC; MRIP Program

Management Team Member, Office of Science  
and Technology

CLIFF COSGROVE, Office of Management and

Budget

LAURA DIEDERICK

TOPHER HOLMES, Office of Legislative Affairs

STEPHANIE HUNT, Office of Sustainable Fisheries

BECKY LIZAMA, Office of Legislative Affairs

JENNIE LYONS, Office of Public Affairs

JIM MCCALLUM

DAN NAMUR, Director, External Funding Division,

Office of Management and Budget

KATE NAUGHTEN, Director, Office of Public

Affairs

LAURA OREMLAND, Acting NOAA Citizen Science and

Technology

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1 P-R-O-C-E-E-D-I-N-G-S

2 9:01 a.m.

3 CHAIR BEIDEMAN: Good morning,  
4 everybody. And welcome back to our third meeting  
5 day, anyway, of the meeting. And we got a little  
6 extra time this morning, but we have some good  
7 presentations. And we're going to get a lot of  
8 things wrapped up, it looks like. So that's a  
9 good deal. Everyone's worked hard. Are you  
10 ready?

11 (Off the record comments)

12 CHAIR BEIDEMAN: Okay. So you're  
13 ready then? All rightie. And with that ---

14 (Off the record comments)

15 CHAIR BEIDEMAN: I'd like to introduce  
16 Dan Namur who is the director of External Funding  
17 Division in the Office of Management and Budget.  
18 And he's here to speak to us about NOAA fisheries  
19 grant making processes. And thank you very much,  
20 Dan.

21 MR. NAMUR: No, thank you very much.  
22 And thanks for having me, guys. I understand

1 from some of your calls and some of your meetings  
2 there's been some conversations that have come up  
3 and some questions that have come up regarding  
4 grants in general. So today we'll go over just  
5 kind of some of the grants enterprise that  
6 Fisheries oversees, some of the bigger programs  
7 and how they work.

8 And then for the most part, I really  
9 want to hear from you guys. So I really am  
10 trying to keep this fairly general, fairly quick,  
11 and then open it up to you guys to address the  
12 issues and concerns that you have. And we'll get  
13 into the weeds at that point.

14 (Off the record comments)

15 MR. NAMUR: So while she's working to  
16 go forward, I know the next slide's going to talk  
17 to you guys about kind of the size of the grants  
18 enterprise within the National Marine Fisheries  
19 Service.

20 And people don't realize that a third  
21 or more of the funds from the National Marine  
22 Fisheries Service every year actually go out

1       though financial assistance. And that's grants  
2       and cooperative agreements. And that's up to  
3       about 700 grants which is almost \$400 million-  
4       worth of funds that go out, as you can see here,  
5       that go out in the forms of grants, research  
6       grants, cooperative agreements where we're  
7       working very closely with our constituents.

8                 And this actually doesn't even count  
9       our work with the majority of our cooperative  
10      institutes, for those of you that work with them,  
11      that we work through OAR and NESDS for that. So  
12      that's another several hundred grants each year.

13                So you can see that we're working  
14      towards, when you include those CIs, cooperative  
15      institutes, about \$500 million-worth of external  
16      funds that go out for research in the form of  
17      ogrant each year.

18                So this is kind of a small slide and  
19      hard to see, but you can just kind of see the  
20      numbers across, again, about 700 grants for  
21      almost \$400 million. And we track it very  
22      closely throughout the year, at the beginning of

1 every year, around the country.

2 As you guys well know, Fisheries is  
3 very regionalized. It's not centralized like a  
4 lot of the other NOAA offices. So we have folks  
5 all over the country, and they work up their  
6 plans, what they anticipate doing, working with  
7 folks like you, coming up with plans. And then  
8 we track that throughout the year knowing that  
9 we're going to reach somewhere near \$400 million.

10 You guys probably know as well as I do  
11 kind of the areas that we work in around the  
12 country. So you can see here, again, I use this  
13 slide to make the point that, despite the fact  
14 that I sit in headquarters at Silver Spring, the  
15 majority of the work, the majority of the  
16 dollars, and more importantly the majority of the  
17 external work is happening around the country in  
18 these blue areas.

19 We have regional offices, five of them  
20 around the country. We have six major labs, and  
21 then we have many smaller labs where much of this  
22 work is. And I'm sure you guys work very closely



1 with some of our NMFS folks that sit in those  
2 regions.

3 On the financial assistance side, you  
4 can get an idea here of kind of how it's spread  
5 around, that we've got about the \$400 million.  
6 You can see that as they move around from up in  
7 Alaska, the West Coast region, out in the Pacific  
8 Islands.

9 I was just talking to Raimundo about  
10 that, you know, that that's quite diverse and  
11 quite spread out from Hawaii, American Samoa,  
12 CNMI, our northeast, which is covered by the  
13 Greater Atlantic Region, and that includes the  
14 Great Lakes, and then down in the southeast which  
15 includes Puerto Rico and the Virgin Islands.

16 And then, of course, we have  
17 headquarters offices which operate kind of like a  
18 region. Our habitat office, our protected  
19 resource office, those offices really function  
20 kind of like their own region. They have their  
21 own director.

22 So Fisheries grants, so a lot of

1 things that people ask about is: you know, how  
2 does the money get out the door? And because of  
3 both our intentions and our desires, as well as  
4 what's been expressed to us from Congress, from  
5 the White House, is we want as many of our grant  
6 opportunities to go out in a transparent way, in  
7 an open and fair way, and most importantly in a  
8 competitive way.

9 We still do have some non-competitive  
10 awards. We have some that are called formula  
11 awards which are Congressional awards that are  
12 aligned with a Congressional formula to go to  
13 certain entities, whether that be states, to make  
14 sure that they get the amount of money they need  
15 for the work that they're doing.

16 We have institutional awards. Those  
17 are awards for organizations that have been  
18 working with us for such a long time it really  
19 doesn't make sense to continue to force them to  
20 go through a competitive process for work that  
21 we've been doing for long, long periods of time.  
22 And we're talking 20-30 years in those cases.

1 And then we also have unsolicited proposals.

2 About five years ago we came to the  
3 realization that, you know, despite the fact that  
4 we have some very smart folks, we have brilliant  
5 minds in our science centers, we have not thought  
6 of every type of application that we want to  
7 receive.

8 And if someone has an idea that is  
9 better than sliced bread, and we don't have a  
10 solicitation out for them, there's no way for it  
11 to get in to us.

12 And so we've created a portal called  
13 the Broad Agency Announcement, which allows these  
14 innovative ideas that we haven't really asked for  
15 yet to come into us, and we can review them,  
16 determine whether or not we want to fund them.  
17 And you can see we did 37 of those last fiscal  
18 year.

19 And as we're moving through, please  
20 interrupt, raise your hand, ask the questions.  
21 As I said, this is a pretty general presentation.  
22 What I really want to address today are the needs

1 and concerns that you guys have. So feel free to  
2 interrupt as we go through.

3 With anything that we do, we have our  
4 legislative drivers. Every financial assistance  
5 award that goes out has to have some kind of  
6 authority associated with it. We can't just  
7 spend money for the sake of spending money. We  
8 have to spend it as is directed by Congress, as  
9 it's directed by the President.

10 So these are the major drivers that  
11 allow us --- that we cite and say we're putting  
12 money out due to the fact that we're addressing  
13 the needs of the Endangered Species Act, that  
14 we're addressing the needs of the Saltonstall-  
15 Kennedy Act. Those are the legislative drivers  
16 that let us put this money out and address the  
17 needs of the nation.

18 And you can see that we've got a  
19 decent number. You guys know as well as I do  
20 that Magnuson-Stevens is our overarching  
21 legislation that kind of drives the majority of  
22 what we're doing.

1           So major program areas, I talked about  
2           the way that they went out, whether they're  
3           competitive or formula. In our Office of  
4           Sustainable Fisheries, we have our IJ grants,  
5           that's inter-jurisdictional fisheries. There's  
6           26 states around the country that work through  
7           that. We work with our commissions and councils  
8           on that. We actually have a specific  
9           appropriation line for councils and commissions.

10           We have the Saltonstall-Kennedy  
11           Program which, despite the fact that it's not  
12           located in the Sustainable Fisheries office,  
13           that's kind of the driving force, is promotion,  
14           development, and ultimately sustainable fisheries  
15           around our country.

16           And particularly resources, we have a  
17           lot of salmon work. We have ESA work and, of  
18           course, our marine mammals, and then, in our  
19           habitat conservation, coral resiliency grants.  
20           And then if we have any disasters, a lot of that  
21           comes out of Habitat Office. And then our major  
22           data collection efforts come out of our Science

1 and Technology Office.

2 You can see, I've got a couple of  
3 extra bullets down here. They're kind of stand-  
4 alone offices. We do a fair amount of work for  
5 aquaculture, law enforcement, of course, and then  
6 we do work some with our international affairs  
7 and international work around the globe. And we  
8 have an office for that as well.

9 So quickly, those major grant areas,  
10 we'll go through these fairly quickly. The  
11 Regional Fisheries Management Councils, I'm sure  
12 you guys know them fairly well and work with them  
13 very closely.

14 But we work with them every single  
15 day. They help us out. They're helping us with  
16 our fisheries management plans. They're helping  
17 us with advice. And we spend a fair amount of  
18 time working collaboratively to make sure we know  
19 exactly how we want to move forward to further  
20 U.S. fishing around the country.

21 And you can see on this slide kind of  
22 how the funding breaks out. This is for eight

1 fisheries management councils around the country  
2 that adds up to almost \$30 million a year that we  
3 put out.

4 There is the major PPA which is just  
5 the administrative portion that goes out. And  
6 then we have these other lines to do the National  
7 Environmental Policy Act, to do stock  
8 assessments, to do peer reviews. Those kind of  
9 things are funded through this as well.

10 And these are funded through five-year  
11 multi-year awards. So we give one big award  
12 every five years. And then they can come in each  
13 year and say, yes, we're continuing to do the  
14 same great work that we have been doing. It  
15 matches our scope of work. We'd like our next  
16 installment. And we release the funds.

17 The Saltonstall-Kennedy Act which,  
18 when I change hats from being the guy who  
19 oversees all the grants, I also oversee as the  
20 national manager for the S-K Program.

21 And the S-K Program was signed into  
22 law in 1954. And the driving factor here, and

1 it's kind of unique compared to some of our other  
2 grant programs, is that the S-K Program is not  
3 appropriated dollars. And it's collected through  
4 duties and tariffs through the Department of  
5 Agriculture.

6 The money gets transfered over to the  
7 Department of Commerce. And a portion of that is  
8 left for the S-K Program. And we'll get into  
9 those transfers a little bit later if you guys  
10 have questions about that.

11 But really, the driving force here is  
12 that as Americans import fish, buy fish that are  
13 taxed, we take that money and put it back into  
14 developing and supporting our own US fishing.  
15 And hopefully, it's a positive feedback system  
16 that, as we develop our own fishing, we import  
17 less, we buy more U.S. fish, we promote our own  
18 fisheries.

19 And so you can see here we put out  
20 competitively, ballpark, \$10 million to \$11  
21 million each year and then non-competitively,  
22 which we call our national program, about \$4



1 million a year. And that's for additional data  
2 collection, a little bit more aquaculture work,  
3 things like that.

4 The way the act is written is that we  
5 are allowed to obligate funds to address the  
6 needs that were not adequately addressed through  
7 the competitive process. And so that's what that  
8 national program does.

9 And again, I know that from some of  
10 the things I've heard, you guys have more  
11 specific questions about S-K. I've got some  
12 backup slides later if people have some questions  
13 about the S-K program, the process, those kind of  
14 things, as we move forward.

15 So you can see, this is what I was  
16 talking about. We're really working towards  
17 rebuilding and maintaining sustainable fisheries  
18 and making sure any of our conservation  
19 management measures that are impacting the  
20 fisheries, how do we address that. How do we  
21 make sure that our communities, our fisheries are  
22 still thriving?

1                   Moving around and over to the West  
2 Coast, the Pacific Coastal Salmon Recovery Fund,  
3 this is about \$65 million a year. And it's a  
4 line item in the budget each year. This is  
5 appropriated funds. And really what it's doing  
6 is supporting the conservation in the western  
7 states for salmon around the western states and  
8 Alaska.

9                   And you see here, there's 28 listed  
10 salmon as well as steelhead. And we're working  
11 towards making sure that those are stabilized.  
12 And I'm sure you guys know that that's a huge  
13 effort. We put a lot of money, but we also put a  
14 lot of time and manpower into that. We work very  
15 closely with our partners on the West Coast, the  
16 Pacific States Commission, the states, and the  
17 tribes as well.

18                   The Fisheries Information Networks, or  
19 as we like to call them, the FINS, those are  
20 really working towards collecting the data. This  
21 is stock assessments, how many fish are out  
22 there, where are they? How sustainable are these

1 particular fisheries?

2           And we spend a lot of time and money  
3 working on these, because this is the information  
4 that really drives our management decisions. You  
5 know, as we know more and more about where the  
6 fish are, how many there are, whether or not the  
7 fishing businesses are healthy, we can make good  
8 decisions that are both environmentally  
9 conscious, of course, but helping our fisheries  
10 thrive and the communities around them thrive.

11           So you can see here where those  
12 Fisheries Information Networks are. They're all  
13 over the country. In the northeast, we call it  
14 the Atlantic Coastal Cooperative Statistics  
15 Program. It's a mouthful. Everywhere else it's  
16 a FIN, down in the Gulf, the Pacific, Alaska,  
17 Western Pacific, and then we have RecFIN, which  
18 is recreational fisheries.

19           And we're funded out of S&T at about  
20 \$7 million to \$8 million. Through the S-K  
21 Program, I've put about another \$1.6 million-  
22 worth of data collection effort funds out to our

1 program.

2 So Interjurisdictional Fisheries, this  
3 is a formula allotment program which means that  
4 there's a set formula when the appropriation  
5 comes in and says we get X-number of dollars for  
6 this particular fishery. It gets pumped into a  
7 formula, and the states get their funds based on  
8 that particular formula.

9 And you can see here some of the  
10 objectives for the Interjurisdictional Fisheries  
11 Program or IFA. So it's about \$3.2 million.  
12 It's formula allotment. There's 35 states and  
13 territories if you count the territories at 2.4.  
14 And then our three commissions, we work very,  
15 very closely with. They work very closely with  
16 our constituents.

17 By its very name, Interjurisdictional  
18 Fisheries is that fish don't know where the  
19 borders are. They're going to come and go,  
20 they're going to be in state waters, they're  
21 going to be federal waters. And so about  
22 \$800,000 gets divvied up to the three

1 commissions.

2 A lot of words on this slide, I'm not  
3 going to go over it. But aquaculture in general  
4 is becoming more and more of a priority as we  
5 have more and more concerns with our wild caught  
6 stocks.

7 We're looking into different types of  
8 work through aquaculture, making sure that's  
9 environmentally stable. And so this is one of  
10 the areas that's getting more attention which, of  
11 course, means more funding.

12 One of the programs I saw from you  
13 guys' notes that you had some questions about was  
14 the Bycatch Reduction Program, or BREP. This is  
15 run out of our Office of Sustainable Fisheries  
16 here in headquarters.

17 And the BREP program historically was  
18 actually an internal program within the National  
19 Marine Fishery Service where there was an amount  
20 of money. Our scientists around the country  
21 actually did an internal competition to see whose  
22 ideas were the best. We split the money to those

1 particular science centers, and they were able to  
2 do that research.

3 Back in 2012, Congress said no, we  
4 think this money really could be better served  
5 going out externally. We want this to be a  
6 competitive process. We want all \$2.5 million to  
7 be going out externally. And so it became an  
8 open, fair, robust, competitive process where  
9 folks can apply the priorities and evaluation  
10 criteria set each year.

11 The FFO will be out very soon for the  
12 FY '18 competition. And really, what we're  
13 looking for here is innovative ways to stop  
14 catching the stuff we don't want to catch,  
15 really. That's what it boils down to. Or if we  
16 are catching it, can we utilize it? Can we  
17 market it? Can we put it towards something  
18 that's maybe edible? Can we use it for bait?  
19 Can we use it for aquaculture feed? And so this  
20 program's really looking towards making sure we  
21 don't catch things that we just toss back over  
22 with no use.

1           And then we have our law enforcement  
2 programs. And here we've got vessel monitoring.  
3 Where are the boats, what are they doing, where  
4 are they going? Are they in closed areas?

5           And then a big push starting maybe  
6 five, six years ago is EM/ER, electronic  
7 monitoring, electronic reporting. And this  
8 really is just making sure that we've got the  
9 best technologies in place to make sure that  
10 we're tracking what's being caught. This helps  
11 feed into our stock assessments, which ultimately  
12 helps feed into our management decisions. And  
13 the better our data, of course, the better our  
14 decisions, which is less impact on our fisheries.

15           You can see here protected resources.  
16 There's some overlap in a lot of these programs.  
17 S-K deals with protected resources, bycatch  
18 reductions, try not to catch the protected  
19 resources.

20           We have specific set aside programs as  
21 well. We have a pinniped program up in Alaska.  
22 We have the species recoveries grants. One of

1 the new big things, and you see it on our website  
2 right now, it's front and center, is our Species  
3 in the Spotlight. And then we have the Mitchell  
4 Act which is more salmon work, salmon hatcheries.

5 So that's the big picture for 700  
6 grants, \$400 million-plus, kind of very quickly  
7 going through it. I went through it fairly  
8 quickly, because it looks like most of you guys  
9 already know.

10 I've got some slides on S-K, because  
11 I saw that you guys had specific questions. I  
12 know you guys also had questions about some of  
13 the other programs. At this point, do people  
14 have some specific questions before we get into  
15 more slides? I saw a lot of hands. Go ahead,  
16 Bob.

17 MEMBER GILL: Thank you, Dan. If you  
18 could go back to your -- I think it was the third  
19 slide where you had the regional financial  
20 breakout.

21 MR. NAMUR: Yes. We need to flip it  
22 quickly back, here.



1                   MEMBER GILL:  There.  One of the  
2  anomalies I see there is that all the science  
3  centers are represented with the exception of the  
4  Southeast.  Is that omission intentional?

5                   MR. NAMUR:  So that's an excellent  
6  question.  And I should point that out as I give  
7  this presentation.  So the research and the  
8  funding that goes out through the Southeast  
9  Fisheries Science Center is represented in those  
10 numbers.

11                   This is me wearing my grant geek hat  
12 where, in the process, the folks that process  
13 those grants all sit in our region.  So even if  
14 the work's being conducted to support our  
15 Fisheries Science Center or some of the  
16 initiatives out of there, if the collaborative  
17 effort comes from our scientists from there, the  
18 actual grant process happens in the region.  And  
19 that's why it's displayed this way.

20                   So there is a lot of those numbers,  
21 the 106.  At least half of those are supporting  
22 the work that's happening out at the science

1 centers. And that's why they're not listed  
2 specifically, because they don't specifically  
3 process the grant. But that's just a function of  
4 the administration.

5 MEMBER BERKOWITZ: Forgive me, this is  
6 my first meeting. So I may not completely  
7 understand ---

8 MR. NAMUR: That's all right.

9 MEMBER BERKOWITZ: But could you  
10 elaborate a little bit more on the status of  
11 bycatch in terms of where we are with that?

12 MR. NAMUR: Yes. So I won't get too  
13 deep into the weeds on that. So that program's  
14 run out of Sustainable Fisheries, and it's run by  
15 a gentleman named Derrick Warner who does an  
16 excellent job.

17 In terms of your question of status,  
18 I'm not 100 percent sure if you mean whether or  
19 not we're doing a better job of not catching them  
20 or whether we're doing a better job of  
21 innovating.

22 I can tell you right now we've got an

1 initiative to address that very question, to have  
2 a better idea for every dollar we put out, the  
3 bang for the buck. We do a very good job of  
4 reading the progress reports and making sure that  
5 what was said was going to be done is being done.

6 But we don't have a great repository  
7 to say, in one location, where we are with all of  
8 our reports in general. So right now, we've got  
9 a big initiative to do that, to have one  
10 collective spot.

11 And we're also working, and  
12 Sustainable Fisheries is working towards working  
13 with the constituents to actually ask for each of  
14 your projects, you know, was there a change to  
15 the way that the fishers are fishing. Was there  
16 a management decision? Was there a regulatory  
17 decision based off of the results? But we don't  
18 have a really good quantified answer for you  
19 right this second.

20 MEMBER BERKOWITZ: So I think maybe  
21 specifically, are there fish being thrown back in  
22 right now that come up on bycatch?

1                   MR. NAMUR: So in different fisheries,  
2 most certainly there are, yes, absolutely. If  
3 folks are out, and I'll use Western Pacific, if  
4 the Western Pacific is out, and they're doing  
5 bigeye fishing, there are certain species that  
6 are bycatch that they keep, opa, ono, any of  
7 those kinds of things.

8                   Because they know they can bring them  
9 back and sell them. They sell for a pretty  
10 decent price -- not as good as the tuna, but you  
11 can still sell them. And they taste very good.  
12 But if they get a blue shark, you can't sell it.  
13 They don't really want it. They try their best  
14 to make sure they're cutting in a sustainable way  
15 and release it alive. But those are being  
16 returned. So that's just a single example.

17                   Yes, go ahead, Bob.

18                   MEMBER GILL: Thank you, Dan. And  
19 just to add to that, Roger, there's regulatory  
20 discards, you know, that quota's filled, you  
21 can't bring them back or --- but your bycatch,  
22 it's a bycatch for something else. So, yes,

1 there's a lot of that. And that's a big issue.

2 MR. NAMUR: Yes, excellent point.

3 Thank you.

4 MEMBER BELLE: Sebastian Belle. I  
5 have to say, I looked at this slide initially,  
6 and what jumped out for me was how little money  
7 is going to the northeast. And it's obviously  
8 very self-serving for my geographic base.

9 (Laughter)

10 MEMBER BELLE: But the question I have  
11 for you is: I'm assuming these numbers are not --  
12 - there's no kind of proportionality or policy  
13 about assignment to regions. It's being driven  
14 by the issues that the specific regions are  
15 dealing with.

16 But do you, from a policy point of  
17 view, at some point look at the value of the  
18 fisheries in the region and how money is being  
19 assigned to those regions? Because I would  
20 assume, just for bang for buck kind of  
21 calculations, at some point you've got to ask  
22 that question.

1 MR. NAMUR: So we absolutely do. And  
2 every program runs. And the first step of every  
3 program is to set the priorities, look at the  
4 evaluation criteria, look at the need.

5 So I'll address this in a couple of  
6 points. One, this is slightly skewed, because  
7 some of the money is hidden in other places. So  
8 Saltonstall-Kennedy is listed as headquarters.  
9 The northeast gets the majority of the S-K money  
10 most years. They get about 40 percent.

11 Bycatch reduction is run out of  
12 headquarters. That's another chunk that's spread  
13 nationally. So those numbers, again, are going  
14 to get skewed a little bit there.

15 So numbers, again, it's tricky to do  
16 a great job of really showing exactly where the  
17 money is being spent. Because we move money  
18 around in fisheries for the needs as we need.

19 As far as how the money is allocated,  
20 absolutely the biggest driving force is the  
21 issues on the table. And so we do consider the  
22 size of fisheries and things along those lines.

1 But certainly that's not the only driving factor.  
2 If that were the case, the billion dollar  
3 industry in Alaska would get pretty much  
4 everything.

5 But if they have less issues, less  
6 bycatch, less problems, then we don't need to do  
7 quite as much research to figure out how to fix  
8 it. And so that's why you see some disparity  
9 there.

10 MEMBER BELLE: Just a follow-up  
11 question, Madam Chair. So, I guess, in terms of  
12 understanding where the money actually ends up,  
13 that would be helpful for me as a MAFAC committee  
14 member. Because this slide, I think -- and you  
15 said it yourself -- is a little oblique, I guess  
16 I would say.

17 MR. NAMUR: That's right. Yes.

18 MEMBER BELLE: Because it's, as you  
19 had to say, there's money being funneled through  
20 the headquarters that ends up in some of the  
21 regions. So it would be helpful to actually  
22 know, on a regional basis, what the actual

1 expenditures in the regions are. And just kind  
2 of for interest sake, I think that would be  
3 helpful.

4 MR. NAMUR: Yes, no problem. No  
5 problem. That's certainly --- it's all public  
6 information, so that's certainly easily  
7 disseminated.

8 MEMBER ESPINOZA: Thank you, Madam  
9 Chair, and I was going to wait a little longer to  
10 see where we --- I know you have more slides.  
11 But Sebastian kind of opened the door for me  
12 asking that last question right there on where  
13 the regions and how we're spent. And, of course,  
14 being self-serving, this is very important.

15 But, you know, first I'd like to say  
16 that the reason why we've become, in the U.S.  
17 Caribbean, very interested in the S-K program and  
18 those funds is because we see the really  
19 important and great work they're doing with  
20 fisheries across the U.S.

21 So it's really great to see the  
22 collaboration, you know, besides the cooperative



1 resource program that requires that. This  
2 doesn't require it, but you see the integration  
3 of fishermen into it without it being required.  
4 So it's something that we really like that. We  
5 really appreciate it. We recognize it, and we'd  
6 like to have a bit more of it in the U.S.  
7 Caribbean.

8 But one of the things that we've seen  
9 is that -- one of the priorities that has been  
10 with S-K for a while has been territorial  
11 science. And, of course, being territories we  
12 assume that this should include the U.S.  
13 Caribbean, Puerto Rico and USVI.

14 But we have seen that. And since 2014  
15 through 2017 there's been 219 grants awarded. Of  
16 those, 29 have been in the southeast. And of  
17 those, seven have been for projects in the U.S.  
18 Caribbean. So that's three percent of the total  
19 grants in that time period.

20 So that three percent doesn't sound to  
21 me like we should be a priority. Because if  
22 anything, if you've spent three percent of

1 anything, it doesn't sound like a priority, or  
2 it's territorial science.

3 So it seems that, you know, the  
4 priority between Pacific and U.S. Caribbean, it  
5 doesn't seem to be balanced. And so my only  
6 concern with that is: how do we define priority,  
7 and how do we kind of have that balance? And  
8 what's priority and what's not? And how do you  
9 grade it? How do you quantify it?

10 And then from that, there's been  
11 projects, those projects in the U.S. Caribbean,  
12 only two have actually been based in the U.S.  
13 Caribbean. And, you know, University of Puerto  
14 Rico, the University of the Virgin Islands have  
15 amazing programs. Of course, we have amazing  
16 scientists down there. And so this is actually  
17 under 1 percent in the past years that actually  
18 have been based in the U.S. Caribbean.

19 So one of the concerns that I had,  
20 when this was brought first to my attention was  
21 actually from the Chair of the SAC from the  
22 council when he told me that I shouldn't even

1       bother applying to S-K. Because he has actually  
2       never gotten them.

3               So said, look, I'm going to get one.  
4       I'm going to do it. And again, we haven't gotten  
5       one yet. And the last one we --- the only one  
6       that we've gotten that was actually based in  
7       Puerto Rico was a really great job, reefscaping.  
8       Dr. Torres is doing a great job.

9               But that's one of those things that we  
10       want to see, how do we --- and I know you guys  
11       have invested a bit more and, you know, before  
12       the hurricanes were planning on trying to see how  
13       you can promote that and get more folks to apply.  
14       You know, one of the issues has been: not enough  
15       folks have applied.

16               But at the same time, I also see that  
17       an issue has been not necessarily the program,  
18       the S-K program, but the network or the reviewers  
19       that S-K really brings into it.

20               And for example, we did this  
21       inadvertently. We've gotten funded for projects  
22       from NOAA grants, for projects that were rejected

1 by S-K, kind of verbatim -- and different  
2 reviewers.

3           So it's interesting that projects that  
4 were from one set of reviewers, the technical  
5 aspects of the reviews seemed to have received  
6 really high marks and seemed to be one of the  
7 high priorities for certain folks. But then  
8 within S-K --- so it seems that there seems to  
9 be, at least for the U.S. Caribbean, from the  
10 experience that we've kind of gone into a little  
11 bit of analysis to see what's going on.

12           And so we want to make sure that we  
13 are able to continue to promote this program.  
14 Because it's really an amazing program. So we  
15 want to make sure, one, that we can promote it to  
16 get more folks to apply so we can up that success  
17 rate of funding.

18           And, of course, we want to know what  
19 it means actually to be a priority, what does the  
20 priority entail and how that's based into the,  
21 you know, the grant awarding.

22           Because I think, you know, if

1 something's going to be a priority, it's  
2 something that you need to really evaluate and  
3 consider when you're conducting your reviews and  
4 awards.

5 MR. NAMUR: Yes, I think ---

6 MEMBER ESPINOZA: Your program is  
7 amazing. It has done some great work. And  
8 that's why we're really interested to get into  
9 working further with you guys.

10 MR. NAMUR: So that was a lot.

11 (Laughter)

12 MR. NAMUR: So I'll do my very best to  
13 address as many of those points. If I miss a  
14 few, hit me up, okay?

15 All right. So first points, you know,  
16 how we address the priorities, we actually go  
17 through a fairly rigorous process. And we do  
18 this each year. I've got some slides on this as  
19 we move forward.

20 But all the programs are a little  
21 different. So I'm going to address the point of  
22 why one program might have thought it's better

1 than sliced bread, and it might not have scored  
2 quite as well in another, is that evaluation  
3 criteria are different for every program.

4 The priority, even though it may say  
5 that the title may be the same, exactly what  
6 we're looking for is a little bit different.  
7 And, of course, some programs are specifically  
8 regionalized so it's much more in the weeds, as  
9 opposed to the S-K program which is a national  
10 program which is quite general.

11 So that's one of the reasons why you  
12 may see, you know, when we still had a bycatch  
13 reduction priority in S-K that, if you applied to  
14 my program and to Derrick Warner's program, you  
15 may have been selected in one and not the other.

16 It's because our priorities -- though  
17 they have the same title word -- are trying to  
18 address different needs. And so, therefore, how  
19 well it addressed that priority, the evaluation  
20 criteria would be a little different. So that's  
21 kind of point one.

22 Two is if we write it as a priority,

1 why isn't it getting -- you know, it's one of  
2 four priorities. Why isn't it getting 25 percent  
3 of the funds?

4 And one of the things that we have,  
5 and if you read the full funding opportunity, is  
6 it's very robust what the review process is.  
7 There's a four-step process during the review.

8 So you've got things come in, and we  
9 do a bare minimum, minimum requirements. Did you  
10 meet the page elements, are you addressing one of  
11 our priorities? You know, are you not using it  
12 to do infrastructure? Are you a U.S. citizen,  
13 essentially, including the territories?

14 So it goes through Phase 1. If it  
15 passes those bare minimums, it gets to Phase 2  
16 which is the pre-proposals. And here we're  
17 looking at, you know, the relevance, the need.

18 One of the evaluation criteria in  
19 there right now is how well you're tied into the  
20 community, the fishing community. Are you  
21 working with them, or are you directly impacting  
22 them? That is 25 percent of the score in the

1 pre-proposal process.

2 From there, people can decide whether  
3 to apply or not. We encourage or discourage, but  
4 either way, they're still allowed to apply.  
5 That's not a hard cut off point.

6 You go into our merit and technical  
7 review process, where every application undergoes  
8 a minimum of three reviews by subject matter  
9 experts. And we utilize our experts in each of  
10 the regions. We don't focus all that work in  
11 headquarters, because we do about 1,500 reviews  
12 during that part.

13 We lean on them to knowing their  
14 region, who those subject matter experts are.  
15 And the question comes up a lot of: how do the  
16 reviewers get selected? And the answer is every  
17 single application is looked at individually.  
18 And we go out and try to find the best people for  
19 each.

20 So we don't start out with a list of  
21 people that we're going to use, no matter what  
22 applications come in. We'll look at an



1 application that comes in, we'll look at the  
2 scope of work, look at where it's being done, and  
3 try to find the people that have the best  
4 knowledge base to evaluate that application  
5 openly and fairly based on the evaluation  
6 criteria that are listed in the FFO.

7 And as much as the federal government  
8 grant programs hold our constituents and  
9 applicants to the rules of an application  
10 process, once we put it in print it also holds us  
11 to those rules. We cannot look at anything  
12 except for the evaluation criteria that we wrote  
13 in the full funding opportunity.

14 So whether someone thinks it's better  
15 than sliced bread or not, they have to rank it  
16 exactly the way we said. Look at this factor.  
17 Did it meet it? And that's how the scores come  
18 down.

19 From that, the top ones move on. And  
20 what I normally tell the folks --- and the last  
21 step is our panel process -- and what I tell the  
22 folks that sit on the panel, and this is a

1 completely external panel, there are no feds on  
2 the panel, and there are no academics on the  
3 panel. We only want constituents that are on the  
4 ground.

5 And the reason is every application  
6 that goes through to the panel process we've  
7 deemed meritorious. It's technically sound.  
8 That was the main point of Phase 3, if you will,  
9 is to make sure that the applications, you know,  
10 are they scientifically sound. Do they have the  
11 right people working on it? Is the cost  
12 reasonable? Do they have a good data sharing and  
13 outreach program? Those things are looked at.

14 Once we get past that point, the  
15 panel's really looking at --- and we sit three  
16 people from every region on every panel. So it's  
17 evenly distributed. And those folks are really  
18 looking at the relevance and need again.

19 So example, you could have an  
20 application that is absolutely better than sliced  
21 bread as far as technically sound. The science  
22 is great, the data collection's great, the

1 analysis is great. The best scientists in the  
2 world are working on it. And they're looking to  
3 see whether or not J hooks versus circle hooks  
4 work with turtles.

5 And the panel says we already know  
6 that answer. That's not a need right now. Yes,  
7 it's technically sound, and it scored very well.  
8 But we don't need that application right now.  
9 And so that's that last phase. And so that  
10 answers a couple of the little questions in the  
11 middle of how we get to where we get to.

12 One of the other questions or concerns  
13 that you brought up was kind of the distribution.  
14 And as you read further into the FFO, past those  
15 points of what are the evaluation criteria, what  
16 are the priorities, we describe how we're going  
17 to select.

18 And then there's a little section that  
19 says that one of the things that we do as a  
20 program -- and I'm talking specifically about S-K  
21 right now, but this is pretty much a case across  
22 all of NMFS grants programs -- is we have a

1 section that we, in our evaluation, based  
2 primarily on the scores, the merit scores and the  
3 panel scores, but we also have the ability to  
4 look to make sure that there's a good  
5 distribution across regions, across priorities,  
6 across entity types.

7 So we're looking at that, and we're  
8 doing a lot of statistical analysis on the back  
9 end to look at that. Now, does that mean that  
10 we're looking to see that it is equally shared?  
11 No, we're not. What we're looking at is: is it  
12 proportionally equivalent to the applications  
13 that came in?

14 And so if I get, out of 250  
15 applications, 125 or 100 out of the northeast,  
16 logically, if everybody's scoring fairly evenly,  
17 not one region scoring higher than the other,  
18 which we do a lot of data analysis on, and that  
19 doesn't happen, we do a lot of standard  
20 deviations and statistical analysis to make sure  
21 that we're getting a really good review process.

22 What you end up with is you would

1 expect that same percentage of applications would  
2 be good enough to make it to the panel. That  
3 same percentage of applications would make it to  
4 selection.

5 Does it have to be exact? No, of  
6 course not. But what we're looking for is we  
7 don't want any huge outliers, that we're looking  
8 at one region having been scored harder than  
9 another, that there was, you know, inherently  
10 aquaculture people score harder than data  
11 collection people.

12 And we look at that. And  
13 historically, we have not found that. You know,  
14 we do a lot of data analysis that shows that the  
15 scores are very even, that there's not a lot of  
16 separation between regions, and by priority.

17 And so then you're looking at, when  
18 you start getting into your 3 percent, 1 percent  
19 of applications that come in, what percentage are  
20 you representing? And it's about 3 percent and  
21 about 1 percent.

22 And that's why you're -- specifically

1 for the Caribbean I'm talking about, but this is  
2 true of all the regions, the percentage that's  
3 being submitted, within a couple of percent, is  
4 what's being funded. And so we start out this  
5 year almost 600 pre-proposals. It's a lot of  
6 pre-proposals. And it's a lot of reviews.

7 And we look at that, and then we  
8 encouraged 150. And we looked at it and made  
9 sure, of the applications that came, we're  
10 recommending full applications from approximately  
11 the same percentage across the regions.

12 I look at the priorities as well, so  
13 territorial science being one of them. Of the  
14 applications that came in, a certain percentage  
15 came in as territorial science. There's not very  
16 many. Make sure that's the same percentage or  
17 close to it is moving forward or being  
18 encouraged.

19 And then we look at entity type as  
20 well. Because one of the concerns that we hear  
21 from our constituents is: all of NOAA's grants  
22 programs are designed for the big universities.

1 And that, if you read the S-K program's  
2 objectives, is certainly not the case. We want  
3 the best science to address our communities, our  
4 fishing industry.

5 And so we make sure that we, again,  
6 have a good percentage by priority, region, but  
7 also entity type, to make sure that for-profit,  
8 non-profit, industry, rec, all of those are well  
9 represented. So hopefully that addresses that a  
10 little bit.

11 So the biggest concern for me for  
12 areas that are getting low percentages -- whether  
13 it's the Caribbean or anywhere else -- is to  
14 increase the awareness that the program's there,  
15 to increase the applications that come in.

16 You know, typically we start out -- by  
17 the time we get full applications, I think last  
18 year we had six from territorial science, total,  
19 out of 600 pre-proposals and almost 300 full  
20 proposals. That's not a good percentage.

21 And so coming out of the gates, you're  
22 looking at that you're probably --- you're not

1 going to score all six. And so that's one of the  
2 reasons. And I'm using that example, because I'm  
3 talking directly to your question. But that's  
4 true of every region, every priority, every  
5 entity type.

6 So hopefully that addresses it a  
7 little bit. So my big concern --- and we've  
8 talked on a sidebar, was to do a better job  
9 communicating with the constituents, encouraging  
10 them to apply, helping them apply, those kind of  
11 things.

12 MEMBER ESPINOZA: Yes. I think that  
13 --- I really appreciate your response. And I  
14 think it's a great direction that you guys are  
15 working for. And I understand, but when you  
16 mentioned that the panel and content expert  
17 reviews, for example, when you cite, and it's  
18 happened, when you cite --- you say this is how  
19 many pounds of certain species that are being  
20 caught.

21 And then in the reviews you get  
22 comments saying those are not real. But that's



1 what NOAA cites. That's what's reviewed. So the  
2 person that at NOAA, and this is what you're  
3 supposed to say.

4 Or when there's political comments  
5 included in the comments that are submitted and  
6 show political bias, it's very concerning. And  
7 why is that included in some of these comments?

8 So it's one of those things that I do  
9 think there is room for improvement. But also,  
10 and again, so this is again with a very small  
11 amount for the U.S. Caribbean, right. And again,  
12 so that's what's very concerning. But again, I  
13 think you've addressed a lot of the issues that  
14 we have. And I think that there's a good path  
15 forward.

16 MR. NAMUR: Yes. And one of the  
17 things, you know, I want to point out is, despite  
18 the fact that I'm explaining the process to you,  
19 that does not mean defending any one thing.

20 We're always working, too, and S-K's  
21 not unique. We're constantly tweaking our  
22 programs. We're constantly trying to make sure

1 that we're being open, we're being fair. That's  
2 always our objective.

3 Every single year you'll see a couple  
4 of sentences changed on all the programs as we  
5 learn. I mean, the fact that we didn't put in a  
6 caveat for, you know, acts of God and hurricanes.  
7 Well, that won't happen again, okay. So we're  
8 constantly learning, because maybe it wasn't an  
9 issue last year. And then it comes up, and we've  
10 learned. And when you see the FY '19, that  
11 sentence is going to be in there.

12 Our review process is the same. You  
13 know, we've only been doing pre-proposals for two  
14 years now. This is our third year. This is, you  
15 know, we're learning. And we're doing the best  
16 and, really, our objective on all of our programs  
17 is to be extremely transparent.

18 You know, I do two national webinars.  
19 I do webinars for each of the regions so that  
20 those regions get --- you know, they can ask me  
21 more specific questions. I travel to the  
22 different regions, you know, to have one-on-one.

1                   We have our website which is loaded  
2 with a bunch of S-K information, both background  
3 and where we are in the process. It's in Fish  
4 News; it's in press releases. I did, I think,  
5 eight different radio spots this year where I got  
6 interviewed and talked about the process. So  
7 we're trying to scream from the mountaintop and  
8 get the word out there.

9                   Anybody who feels that their area is  
10 not getting enough information from me, call me,  
11 absolutely. It's one of the things I've got, and  
12 I've been remiss not to introduce him, Chris  
13 Cosgrove works with me and is slowly taking over  
14 the S-K program. He'll be the new national  
15 manager here as we transition.

16                   But our objective is to reach out to  
17 everybody. This is not something we look at as a  
18 negative thing if we get bombarded with, instead  
19 of 600 we get 800 pre-proposals. To me that's a  
20 win. Because ultimately, I want the best  
21 applications for the best science moving forward.

22                   All right, so we've got one over here,

1 and then I think Mike's got one as well.

2 MEMBER HAMILTON: I'll try to keep  
3 this brief. Maybe during a break would could  
4 talk further. First of all, on the regions and  
5 how much money is distributed, I think most of  
6 you would not like the peer-to-peer management  
7 that we do for 23 listed stocks plus the Magnuson  
8 weak stock management. So it's pretty tough in  
9 the northwest to run fisheries.

10 We had an experience with S-K that we  
11 got high scores from two reviewers and a low  
12 score from one who made criticisms that were  
13 inaccurate. It showed they didn't understand  
14 what was happening. So we went back the next  
15 year and more thoroughly described. But we  
16 didn't make it past the pre, even though we got  
17 really high scores the year before, which is  
18 fine.

19 But my question is, we're also an  
20 organization that has not applied for grants. So  
21 we're not skilled in that area. And so you're  
22 going to find, I think, and I used to be on ---

1 I've been on panels reviewing grants before. And  
2 we were trying to be really careful about not  
3 having a bias towards large organizations with  
4 really skilled grant writing staff.

5 And so I'm wondering about assistance  
6 to get a good grant written, you know, to help  
7 organizations meet the benchmarks to be able to  
8 at least get past --- we didn't get past pre-  
9 proposal the next year, even though we addressed  
10 that one low scorer's critique.

11 MR. NAMUR: Okay. So I'll address  
12 that in a couple of points. And, Madam Chair,  
13 let me know if we're getting to far into the  
14 weeds and going too long.

15 As it pertains to training, we're  
16 doing more and more. Obviously, there's only so  
17 many warm bodies to go around the country ---

18 MEMBER HAMILTON: Right.

19 MR. NAMUR: -- and do this. But each  
20 year NOAA Grants Management Division does  
21 workshops, one on the West Coast, one on the East  
22 Coast. It's typically in Seattle, the West Coast

1 one.

2 I strongly recommend any potential  
3 applicants go to that. That's a pretty high  
4 level grants world, and that's a NOAA level, so  
5 it's not specific to fisheries. But that is  
6 helpful, just kind of what's needed, what the  
7 process is, who's looking at it.

8 The other thing is, you know, we're  
9 working more and more to do specific grant  
10 writing workshops. We've started doing them in  
11 the Pacific. I was up in Alaska this year. I've  
12 talked to the folks on the West Coast, and we  
13 want to do a couple of them. So again, we'll  
14 broadcast that.

15 People can come in, I'll talk about it  
16 more specifically and say, hey, we've got a lot  
17 of grants. You know, what's it take to get into  
18 a competition and fare well?

19 As far as S-K is concerned, I will let  
20 you know that every year when we write our  
21 evaluation criteria, which is what the reviewers  
22 have to follow, is that we write it to gear

1       towards to try to get as much of that bias away  
2       from the grant writing professionals. That's not  
3       our intent. So that's why we score heavily  
4       what's your involvement with the community.  
5       What's your outreach? What's the impact on  
6       management decisions, those kind of things? So  
7       we are working to try to help get there.

8                 The other thing that we're working  
9       towards -- and as Raimundo pointed out, it is not  
10      mandatory in our program, but we do say that we  
11      take it into consideration -- is collaboration.  
12      So even sometimes the numbers show that a big  
13      university is winning, but they're subbing with a  
14      smaller entity, or fishermen, or using their  
15      boats. So there you might not see it in the  
16      data, but they are being involved, okay.

17                But absolutely, you know, any time  
18      anybody needs more help, more direction, let my  
19      staff know. We've got staff all over the  
20      country. Either Cliff or I will fly out as the  
21      headquarters person, utilize the warm bodies in  
22      the regions, and more than happy to help out and

1 help folks. Absolutely.

2 The only other point I'll make there,  
3 and no matter whether you're a big organization  
4 or a small one, and it's the same advice that you  
5 probably get --- that you give younger folks that  
6 are about to apply for a job, is answer the  
7 questions that are being asked. And when you  
8 look at the priority in the evaluation criteria,  
9 write to it. Write on that.

10 So that's the best I can answer that  
11 right now. But I'm more than happy to always  
12 work with folks.

13 Oh, Mike.

14 MEMBER OKONIEWSKI: Yes, I hate to be  
15 critical, but I'm going to make a few points  
16 here. We, me, myself, applied for a first S-K  
17 grant. And it was for a research project that  
18 actually Cisco is connected back to originally as  
19 far as just conceptually, nothing involved in the  
20 workings of it.

21 MR. NAMUR: Yes.

22 MEMBER OKONIEWSKI: Last year, we had



1 a proof of concept kind of thing we ran with the  
2 NOAA Southwest Center survey ship, paid for it  
3 out of our own pocket, realized that wasn't going  
4 to work. And we wanted to embellish that, and  
5 enhance it, and had the full support of the  
6 Southwest Fisheries Science Center to do so.

7 We realized we were at the deadline to  
8 get everything in. So we did contact the guy  
9 that's done quite a few of these before. I'll  
10 leave his name unmentioned, but we were given ---  
11 and he did a good job, I thought, really walked  
12 us through the steps. But he's had a number of  
13 these that were successful. So he set us all up.

14 And we --- he was given an option of  
15 putting in our sampling protocol when we did the  
16 pre-proposal. The system choked on that with the  
17 information. And we were just dismissed, out of  
18 hand. And it was not as ---

19 MR. NAMUR: Did you put it in? I want  
20 to be clear on that.

21 MEMBER OKONIEWSKI: I'm sorry?

22 MR. NAMUR: Because it didn't get

1 through the system, is that the ---

2 MEMBER OKONIEWSKI: It was too much  
3 information.

4 MR. NAMUR: Okay.

5 MEMBER OKONIEWSKI: But we were given  
6 no warning about that or anything, or even any  
7 feedback. And the guys that I work with were  
8 royally pissed off. And I'll just say it.

9 MR. NAMUR: That's okay.

10 MEMBER OKONIEWSKI: At my age, I can  
11 say pretty much what I damn well please. But the  
12 problem is, you know, I understand these things  
13 have to run a course.

14 But the guy that helped us was really  
15 angry himself. And the guys that I work with in  
16 this non-profit group, West Coast Pelagic  
17 Conservation Group, just were beside themselves.  
18 And they don't have the highest regard for  
19 government stuff anyway. They don't deal with  
20 it. And one's a fisherman, the other runs a  
21 major processing --- the largest processing plant  
22 on the West Coast.

1 MR. NAMUR: Yes.

2 MEMBER OKONIEWSKI: And, you know, I  
3 mean, if there's going to be some kind of  
4 something that kicks you out automatically, and  
5 somebody that's fairly skilled in the process  
6 doesn't even realize it, there should be more  
7 than just you're dismissed kind of thing.  
8 Because the people that are involved in this --  
9 and we put a lot of time, and effort, and some  
10 money into this ---

11 MR. NAMUR: Yes.

12 MEMBER OKONIEWSKI: -- it leaves a  
13 really sour taste in your mouth.

14 MR. NAMUR: No, I've been on the other  
15 side. I've been on the side writing the  
16 proposal. I know how much work it is, trust me.  
17 So first, obviously, I'm very sorry that that was  
18 the experience. Secondly, I'll probably talk  
19 with you a little more offline about more of the  
20 specifics, exactly what happened.

21 MEMBER OKONIEWSKI: I'd be very happy  
22 to do that.

1 MR. NAMUR: Because I want to  
2 understand exactly what happened. On a maximum  
3 20-page application, size shouldn't be an issue.  
4 And so that's why I want to get into the  
5 specifics, probably not with the whole group, but  
6 ---

7 MEMBER OKONIEWSKI: Right, right. I  
8 wouldn't want the whole group ---

9 MR. NAMUR: -- because I want to make  
10 sure this doesn't happen to people.

11 MEMBER OKONIEWSKI: And that's why I'm  
12 bringing it up.

13 MR. NAMUR: Yes.

14 MEMBER OKONIEWSKI: It's not to center  
15 on my own personal experience.

16 MR. NAMUR: No.

17 MEMBER OKONIEWSKI: Because I go  
18 through ups and downs every day. But when I see  
19 this happen, and I think, well, how widespread is  
20 this?

21 MR. NAMUR: Yes.

22 MEMBER OKONIEWSKI: And that's the

1 first thing that comes to mind.

2 MR. NAMUR: And again, we will get  
3 into the details offline. But if it's, you know,  
4 that they couldn't get through the system, that  
5 is grants.gov, the portal, to apply, we've got  
6 some issues that I'll need to work with.

7 Because that's not my --- that's an  
8 ETHS system that we utilize. Because that's  
9 grants, you know, enterprise-wide across all of  
10 the federal government. So if that issue is  
11 happening, I certainly do want to hear about it.  
12 And I'm going to talk with you about it.

13 MEMBER OKONIEWSKI: And that's all I  
14 ask.

15 MR. NAMUR: Yes. I'll ---

16 MEMBER OKONIEWSKI: Thank you.

17 MEMBER ESPINOZA: So thanks. So this  
18 is really quick. And it's actually a suggestion  
19 or a comment on something that I'm hearing.  
20 Because this is something that, you know, my  
21 perspective had been just US Caribbean. But what  
22 I'm hearing is that it's a lot of smaller

1 organizations that really see the opportunity in  
2 S-K and are not able to be successful with it.

3 And being one of the few NOAA grants  
4 that doesn't require a match, it seems to me that  
5 S-K could --- and these small organizations have  
6 really deep connections with the fisheries  
7 communities, be it recreational, be it  
8 commercial.

9 So it seems like there is an  
10 opportunity for helping develop these small  
11 community-based organizations that really have  
12 these connections and these relationships, deep  
13 relationships, more than just hiring them as a  
14 boat, but have long term relationships.

15 So I think, I mean, this could be an  
16 opportunity for S-K to look at these smaller  
17 organizations to help them continue to develop,  
18 to become better at grant writing, while actually  
19 meeting the goals, the core goals of S-K.

20 So, I mean, I really think you have a  
21 really good opportunity to continue doing the  
22 science but also develop fisheries, focused

1 organizations that do a lot of work, you know,  
2 continuing them and helping them out as kind of  
3 an externality of the funding, you know, if  
4 that's something that you guys would be  
5 interested in considering --

6 MR. NAMUR: I appreciate the comment.  
7 And it's poignant. I think that through the  
8 conversations that we've had already, you know,  
9 of additional training, additional outreach, we  
10 absolutely want to make sure that we're helping  
11 organizations be more successful, have a chance  
12 at being more successful.

13 One of the things I do want to point  
14 out, and this is unique to S-K, is the fact that  
15 it is unallowed to have anything to do with  
16 infrastructure. So we can't help build an  
17 organization but supporting and making sure,  
18 absolutely, and I hear you.

19 And again, I've got a slide for it, if  
20 we're going to have time for it, that kind of  
21 shows the process for setting priorities. And we  
22 really do branch out. This is not me sitting in

1 my office kind of by myself. You know, this is  
2 across the country, NMFS leadership, this is all  
3 of our councils, this is all of our commissions  
4 that are working with our states and our  
5 constituents. We're looking at five-year  
6 research plans for each of the councils. I mean,  
7 this is a pretty big enterprise that comes back  
8 to what drives those priorities.

9           So again, the question comes up a lot.  
10 How do you come up with the priorities? It's  
11 because we're listening to our constituents say  
12 what's important. And that's how we end up  
13 driving that. And that's true of the majority of  
14 the programs where they know. And now they may  
15 be more focused. I mean, S-K is pretty broad,  
16 you know.

17           Your other point, I think, is really  
18 good, and I'm glad you brought it up, and it's  
19 important for people to know, is that S-K used to  
20 have a match requirement about eight years ago,  
21 25 percent. And we got rid of it for that very  
22 reason. We didn't want it to be that only people



1 big enough to bring that big match to the table  
2 could be successful. So we got rid of it to help  
3 the smaller organizations be able to apply.

4 The other thing that happened was,  
5 even if it's a voluntary match, that can't be  
6 used in the evaluation criteria. Because human  
7 nature is, hey, more money, more bang for the  
8 buck, that's great. We're not allowed to  
9 actually look at that. Because again, that helps  
10 sway it towards people that can just drown people  
11 with money. And so those are things that we do  
12 to try to keep the playing field level.

13 MEMBER YOCHER: Thank you. I have a  
14 couple of more general comments I'd like to make.  
15 But first, I really want to thank you for coming  
16 today and giving this presentation. You're being  
17 very gracious about all this, you know, feedback.

18 But a couple of points I wanted to  
19 make, when the Admiral talked to us two days ago,  
20 he mentioned some megatrends, two of which were  
21 exponential advances in technology and also this  
22 concept that we're returning to the great power

1 competitions.

2           And he specifically mentioned China.  
3 He mentioned that this is not just a national  
4 defense issue but also an economic issue. At one  
5 point, he showed a slide that talked about how  
6 we're sustainably saving over \$100 million a year  
7 through improved science.

8           But what we're very concerned about in  
9 the science community is the decreasing  
10 investment in R&D in the United States. We're  
11 really losing our place in the world. The  
12 National Science Board's 2016 report, for  
13 example, gave a couple of statistics. Although  
14 the US is still first in total dollars, at about  
15 25 percent, China is gaining and is now second  
16 with about 20 percent.

17           Since the great recession, our  
18 investments in research and development have not  
19 even matched inflation. It's been about 0.8  
20 percent per year. China, during the same time  
21 period, has been investing --- has been  
22 increasing their investment 19.5 percent per

1 year. We went from first in the world to 11th in  
2 terms of our R&D investment as a percentage of  
3 GDP. So anyway, some very alarming statistics.

4 And so, again, we're very concerned  
5 about that. And so I like, you know, the numbers  
6 that you're showing. It looks like a lot of  
7 money. But, in fact, we're concerned about the  
8 fact that we're losing ground.

9 And then the last point I'd like to  
10 make is the fact that all of the slides in the  
11 discussion are about financial assistance. I  
12 wish it would say something like financial  
13 investment.

14 When you do a paycheck to your in-  
15 house talent, you don't hand over the paycheck  
16 and say here's your assistance for this month.  
17 It's actually, you know, fee for service. So  
18 you've talked about all of this funding goes to  
19 advance things that no one needs to get done --

20 MR. NAMUR: Yes.

21 MEMBER YOCHER: -- and things that  
22 could be better done perhaps by tapping, you

1 know, the talent. When I, again, if I hire an  
2 architect to design something for me, when the  
3 bill comes due, I don't say here's your  
4 assistance.

5 MR. NAMUR: Right.

6 MEMBER YOCHER: And so that's just a  
7 perception thing about the nature of these  
8 dollars. We really feel, you know, in the  
9 outside of government community, that we are  
10 doing a service to the nation by the work that  
11 we're providing as opposed to the nation doing a  
12 service to us by assisting us with these dollars.  
13 So thank you.

14 MR. NAMUR: No, not a problem at all.  
15 Those are excellent points. I'll start by saying  
16 that. It sounds like -- I'm sorry I missed the  
17 presentation. So that's one.

18 As far as, you know, whether or not we  
19 can do other things, you know, obviously I have  
20 no control about how much funding we give for  
21 research. So I wouldn't disagree that I'd love  
22 to have more to put out. That's always my goal,

1 more to go out for great research.

2 As far as the terminology, that's  
3 actually directly out of the Grants and  
4 Cooperative Agreements Act of 1977. That's  
5 financial assistance.

6 And the reasoning in there --- and I  
7 understand, and personally I can do a better job  
8 messaging it to make sure it doesn't come off as  
9 assistance so much as, you know, we're  
10 collaboratively working.

11 But the reason for that is that ---  
12 and as my current position I oversee contracts  
13 some as well. And you've referenced, you know,  
14 if you had an architect or if you had an  
15 employee, and the difference there is that's for  
16 the direct benefit of you.

17 So the difference in my world,  
18 contracts are for the direct benefit of the  
19 federal government. And there, that's a payment.  
20 You know, thank you very much for doing the work  
21 that we needed. We needed five tables built,  
22 they were built, here's your payment. Thank you

1 very much.

2 In the grants and cooperative  
3 agreements world, we're assisting the work that  
4 the constituents and the nation wants. It's not  
5 our work. It meets our mission, of course, and  
6 it meets our statutory authorities. But the  
7 difference is that we're trying to help people  
8 meet the needs that they want to accomplish that  
9 align with our mission. So that's why that term  
10 is used. But I'll take to heart the perception.

11 MEMBER BELLE: So I want to broaden  
12 the conversation a little bit here and just ask a  
13 question about the reviewers pools. And I've  
14 been a reviewer, and I've been on the receiving  
15 end of reviews. So I've served in both  
16 functions. But --

17 MR. NAMUR: Thank you in advance.

18 MEMBER BELLE: No way. So I think one  
19 of the challenges we have in aquaculture in this  
20 country is that, both within the academic  
21 community and within the resource management  
22 community, the level of expertise, technical,

1 scientific expertise in the scientific and  
2 management community is behind the state of the  
3 art internationally.

4 And so my question to you is do you  
5 ever use international reviewers? If you do,  
6 great, if you don't, why don't you.

7 And the second part of the question is  
8 while I recognize that obviously the purpose of  
9 all of these grants, whether it's Saltonstall-  
10 Kennedy or any of the other grants, is to answer  
11 a scientific question or address a need that the  
12 agency has in terms of a resource management  
13 question or what have you --

14 MR. NAMUR: Yes.

15 MEMBER BELLE: -- one of, I think, the  
16 frustrations from the private sector's point of  
17 view in aquaculture has been there have been  
18 many, many grants given for projects which, from  
19 a commercial point of view are completely  
20 irrelevant and, in fact, may actually distort the  
21 market.

22 Because you're basically subsidizing

1 a line of inquiry or a project which has no  
2 commercial possibility of ever being successful.  
3 And so the other part of the question is, is  
4 there any part of the review process that tries  
5 to ground truth for the kind of private sector  
6 commercial reality of the exercise as well.

7 MR. NAMUR: Yes. Those are great  
8 points. And aquaculture is, you know, as you  
9 know probably better than I do, an ever-changing  
10 environment that's growing extremely quickly.  
11 And so the reviewer pool is hard.

12 Typically for S-K, the answer is no,  
13 we don't use international reviewers. And that's  
14 because the intent of the program is based on the  
15 need and relevance for US fishing. So therefore,  
16 we use our internal folks and our external  
17 constituents that would understand the need of US  
18 fishing better. So that's why that would be the  
19 case for not using international reviewers.

20 And then the -- and I know there's a  
21 follow-up. So the second part of your question  
22 was ---



1                   MEMBER BELLE: Relevance to  
2 commercial.

3                   MR. NAMUR: Thank you. So relevance  
4 to commercial, so we do try to balance our  
5 reviewers, absolutely, so that we have people  
6 that are looking at it.

7                   Again, I don't want to repeat myself,  
8 but it goes back to each individual application  
9 we're looking at is to try to ensure we're  
10 getting the best reviewers for that particular  
11 application. So if there is some impact on that  
12 facet, commercial fishing, commercial selling,  
13 whether it's the communities, yes, we certainly  
14 do try to do that.

15                   One of the things that is a challenge  
16 for me as the manager is if you look at, like,  
17 the pre-proposal process. That 600 pre-  
18 proposals, multiply that by three reviews each  
19 time, you just said it. The number of people  
20 that are subject matter experts, it's tough.

21                   And there's a phrase called, and I'm  
22 sure you've experienced this, reviewer burnout.

1 Everybody and their uncle's calling you, because  
2 you're the guy that knows. And so it is a  
3 challenge for us.

4 We certainly do feel that we get a  
5 very good pool of subject matter experts that do  
6 a great job for us. But it's always a challenge,  
7 absolutely. And so cheating, self-interest here  
8 is, you know, that's a request from me to you  
9 guys is, you know, wherever possible assist or  
10 recommend other people. Because we're always  
11 looking for a larger pool of people that we can  
12 reach out to for great reviews.

13 (Off the record comments)

14 MR. NAMUR: Yes. And so for a lot of  
15 programs, absolutely, we do utilize that. For S-  
16 K, historically we haven't. But that's because  
17 of the intent of the program.

18 MEMBER BROWN: I just wanted to add to  
19 the comment that Pam made. One of the things  
20 that's problematic about financial assistance, it  
21 is a budgetary term ingrained throughout all  
22 grant programs across agencies. And if there's a

1 need to change that culture, then that's  
2 something that's going to have to work its way  
3 probably through OMB and the Congress.

4 MR. NAMUR: Yes. And then it goes  
5 back to my original answer, you know, why we use  
6 that term. But I think Pam's point that we can  
7 do a better job messaging is a good one. So  
8 thank you for this.

9 MEMBER FISHER: So I love to follow  
10 the money, so I think that --- didn't you mention  
11 that some of this money goes to commerce first?

12 MR. NAMUR: Okay.

13 MEMBER FISHER: So how much do they  
14 rip off?

15 MR. NAMUR: All right. So I figured  
16 this question was coming. I know that Stuart  
17 Merrill was here yesterday and did a great job of  
18 giving you guys an initial answer. But this is -  
19 -- sometimes it's easier if you visually see it.

20 So as I mentioned, and we're only  
21 talking S-K here, this is specific to  
22 Saltonstall-Kennedy, is that these are not

1 appropriated dollars. So we're not waiting ---  
2 although we are held hostage by the appropriation  
3 process, these are not appropriated dollars.

4 And so a certain amount of imports  
5 come in. There's tax, duties, tariffs on those.  
6 And from that there is -- 30 percent of that is  
7 moved over to the Department of Commerce. So you  
8 can see the duty is collected. It is close to  
9 \$500 million. About \$145 million, that's exactly  
10 30 percent, gets transferred to NOAA, to the  
11 Secretary. And so you can see that at that point  
12 the Promote and Develop account is sitting at  
13 \$145 million.

14 MEMBER FISHER: So could I ask you a  
15 question?

16 MR. NAMUR: Yes, sir.

17 MEMBER FISHER: Real quickly, who  
18 decides the 30 percent? So if I go meet with  
19 appropriators, which I do, in the lobby to be  
20 held, so, I mean ---

21 MR. NAMUR: All grant money?

22 MEMBER FISHER: Yes.

1 (Laughter)

2 MEMBER FISHER: So the 30 percent is  
3 just some number that somebody dreamed up or  
4 something?

5 MR. NAMUR: Senator Kennedy and  
6 Senator Saltonstall. It's in the Organic Act of  
7 1954.

8 MEMBER FISHER: Got it.

9 MR. NAMUR: Yes. So that is not a  
10 choice by anybody unless the legislative act is  
11 actually amended.

12 MEMBER FISHER: Okay.

13 MR. NAMUR: That's how that happens.  
14 Question, how much is --- and I won't use your  
15 term, but transferred?

16 MEMBER FISHER: Ha, ha-ha.

17 MR. NAMUR: We have \$145 million  
18 coming over to the Secretary of Commerce that is  
19 for NAA's use.

20 During the appropriation process, and  
21 I think Stuart did decent job of kind of talking  
22 about how the offset works, is that the Congress

1 is going to say X-number of dollars is going to  
2 go to NAA.

3 What they do, and if you read the  
4 appropriation language each year, it says X-  
5 number of dollars goes to NAA. Of that, \$130  
6 million will be funded from the Promote and  
7 Develop account.

8 That means they don't need to  
9 appropriate as much to us to get to that same  
10 number. Because they're taking \$130 million of  
11 our \$145 million, putting it over to OF, and  
12 that's how they plus-up the NAA budget. Now,  
13 until 10, 15 years ago, that was a NAA/OF offset,  
14 not Fisheries ---

15 MEMBER FISHER: Right, right.

16 MR. NAMUR: -- NAA. Which meant that  
17 money went across. That's Operations, Research,  
18 and Facilities, for those --- sorry about using  
19 acronyms. And so we have a hard time sometimes  
20 at that point knowing is that going OAR, is that  
21 going to NESDS, is that going to the National  
22 Ocean Service?

1           So starting, I think it was in 2012,  
2 Congress started doing their appropriation  
3 process saying \$130 million will be transferred  
4 or offset, but it will be used for these  
5 purposes. And they're specifically for fisheries  
6 research which aligns somewhat with the S-K  
7 program.

8           So you've got expanded annual stock  
9 assessments, fisheries information networks, your  
10 cooperative research programs are 100 percent  
11 funded out of this transfer, and surveying,  
12 monitoring, as well as the interjurisdictional  
13 fisheries grants. Those are all funded out of  
14 what started in the Promote and Develop account.

15           (Off the record comments)

16           MR. NAMUR: So before we get to the  
17 next one, I think Mr. Cosgrove has an addition to  
18 my explanation.

19           MR. COSGROVE: Just a quick one. I  
20 just wanted to say that ten percent of NAA's  
21 overall budget goes to fisheries grants.

22           MR. NAMUR: Actually, was it?

1 MR. COSGROVE: Well, yes.

2 MR. NAMUR: So, yes. So I think his  
3 point here is that despite the fact that it's  
4 transferred over to our OF, is that it's still  
5 going towards our research granting  
6 opportunities. So all of these are external  
7 grant functions. So it is a transfer, which  
8 means that we get less appropriated to us, but  
9 it's still going out externally for our research  
10 needs.

11 MS. LOVETT: What part of the whole  
12 NMFS budget goes out as grants?

13 MR. NAMUR: As grants, is a third or  
14 more. Yes, actually it's a huge portion. So if  
15 you look at the NMFS budget, and actually the  
16 same is true for NAA, it's about a billion  
17 dollars each year that goes out from NAA. But if  
18 you look at the NMFS budget, about a third goes  
19 out as grants, about a third goes out as  
20 contracts, and about a third is used for our own  
21 research and, of course, administration.

22 And you can see this is just basically



1 that small, little box that was there, you can  
2 see what the \$130 million is used for that gets  
3 scraped off from the Promote and Develop account.  
4 The money changes colors. It now becomes just  
5 regular old ORF money. And it's used for these  
6 purposes.

7 The remaining funds, that's why we  
8 talk about it with two different terms, because  
9 it gets confusing if you always say S-K. The S-K  
10 money that went here versus the S-K that went  
11 somewhere else, we call that Promote and Develop  
12 money that got transferred.

13 The S-K program gets what's leftover,  
14 essentially. Whatever is left is what we use.  
15 We put the majority of that out as competitive  
16 grants. We put the rest out as supplemental  
17 grants. So upwards of 90 percent of the funds  
18 that are still colored S-K go out externally in  
19 the form of grants.

20 MEMBER FISHER: Could I ask you  
21 another question then?

22 MR. NAMUR: Absolutely, sir.

1                   MEMBER FISHER: It seems to me like  
2 Paul gave us a certain amount of money to add  
3 into the FINS, because we've been flat funded for  
4 at least 15 years, that I know of.

5                   MR. NAMUR: Yes, sir.

6                   MEMBER FISHER: So it looks like to me  
7 that there must be some ability to move some of  
8 that money around every year. But we never know  
9 what it's going to be. And Paul will come and  
10 say, well, this year we don't have any or blah,  
11 blah, blah. So how does that work?

12                  MR. NAMUR: So again, we are, like  
13 everything, subject to the will of Congress. And  
14 we all serve at the pleasure. So with that, we  
15 don't know the numbers up front. Because right  
16 now, even for '18, I don't know what's going to  
17 happen. I don't know what transfer's going to  
18 be.

19                                 And we're always playing the game of  
20 how many fish are getting purchased from outside.  
21 So how much tariffs are coming in? So we're  
22 always constantly trying to estimate as we go.

1 And we use the prior years to do that. But we're  
2 constantly kind of massaging the data, if you  
3 will. So that's one of the reasons Paul can't  
4 tell you for FY '18 this is what's going to  
5 happen.

6 The other part of it is, the way the  
7 Organic Act is written is that other money,  
8 that's being supporting the FINS, is in what we  
9 call our national program. That's after we're  
10 done with the competitive process.

11 And at that point, the way the Act  
12 reads is that funds can be used to address those  
13 needs not adequately addressed through the  
14 competitive process. So we don't know what needs  
15 haven't been addressed until we hold the  
16 competitive process.

17 So there's two points there. One, we  
18 don't know how much money we're going to get.  
19 Two, we're going through the competitive process  
20 to see whether or not some of those needs are  
21 addressed through the competitive applications  
22 that get funded.

1           Example for why we don't say anything  
2 other than what we anticipate is that, in 2010  
3 and 2011, Congress transferred more money from  
4 the OF --- during the OF offset than we actually  
5 had. So therefore, the S-K program became zero.  
6 We had nothing left. We ran no programs.

7           We hope that doesn't happen every  
8 year. We cross our fingers. But, you know,  
9 we're at the whim -- despite the fact these are  
10 not appropriated dollars, the appropriation  
11 process dictates how much money is left for our  
12 program.

13           CHAIR BEIDEMAN: So question here as  
14 we're slipping a little bit on our timberline.

15           MR. NAMUR: Sorry.

16           CHAIR BEIDEMAN: Do you have a lot of  
17 slides left?

18           MR. NAMUR: These are actually  
19 supplemental slides for the ---

20           CHAIR BEIDEMAN: Okay.

21           MR. NAMUR: Because I knew that  
22 question was going to come up.

1 CHAIR BEIDEMAN: All right.

2 MR. NAMUR: So instead of just  
3 talking, because sometimes it's very hard to  
4 conceptualize the transfer without some pictures.

5 CHAIR BEIDEMAN: I appreciate it very  
6 much. I'm visual.

7 MR. NAMUR: The only other point that  
8 I would point out is kind of --- it's talked  
9 about a lot, you know, how the priority is set.  
10 And this, again, I've already said it, but this  
11 kind of visually outlines it.

12 When we're doing the priorities, we're  
13 working with the councils, we're working with the  
14 commissions. We're working with all the NMFS  
15 leadership at headquarters. We're working with  
16 our science centers, our regions.

17 So there's a lot of people working  
18 into this and tapping into our constituents as  
19 well to make sure that we're doing the best we  
20 can to know that we're addressing the needs of  
21 the nation but also that those are in line with  
22 the intent of the S-K Act.

1                   CHAIR BEIDEMAN: So we have a few  
2 people in the queue. And like I said, we are  
3 slipping. So I'm going to ask folks if they  
4 could be succinct, and if a question's been  
5 asked, maybe no repeats. And you'll be around  
6 for any amount of time?

7                   MR. NAMUR: I know I can stay as long  
8 as people would like.

9                   CHAIR BEIDEMAN: Excellent.

10                  MR. NAMUR: You can pull me off into  
11 the hallway and ---

12                  CHAIR BEIDEMAN: Our next break will  
13 be after the next presentation. So maybe folks  
14 could grab you during that break. That's --

15                  MR. NAMUR: Absolutely.

16                  CHAIR BEIDEMAN: -- scheduled for  
17 11:00. So I'm going to go to Peter. He's been  
18 waiting.

19                  MR. NAMUR: Okay.

20                  MEMBER MOORE: Yes. Hi, Dan, thanks.

21                  MR. NAMUR: Okay, not a problem.

22                  MEMBER MOORE: This is a perfect slide

1 for my question. My experience with S-K, I  
2 worked in the industry in Alaska in the '80s,  
3 '70s and '80s. And then I did winter work for  
4 the Alaska Fisheries Development Foundation. At  
5 the time, it was a pretty robust foundation. We  
6 got all the S-K money for Alaska.

7 MR. NAMUR: Yes.

8 MEMBER MOORE: The Board was, I think  
9 it was, like, three harvesters, three processors,  
10 you know, maybe it was more than that. And I  
11 think we had the NMFS --- I don't know if he was  
12 the original administrator, Carl Roger. He was  
13 our godfather. He was very involved.

14 The point is that the priorities for  
15 Alaska were set by the industry. And at that  
16 time, it was let's get surimi making on shore,  
17 let's get flatfish development going, let's get,  
18 you know, byproduct utilization going.

19 These were not academic ideas, they  
20 were not my ideas. These were ideas that the  
21 industry said, hey, we can make money at this.  
22 Or we need to develop this, or we need to reduce

1 bycatch, or whatever it was.

2 And when I look at this slide, you  
3 know, okay, I can see maybe where industry input  
4 comes in. But in a way, sort of reflecting on  
5 Mike's comments that, you know, I helped a crowd  
6 out of Rhode Island, Sea freeze, put a proposal  
7 in, I think, a year or two ago. And it was a lot  
8 of work.

9 MR. NAMUR: Yes.

10 MEMBER MOORE: And just to get those  
11 guys to agree that they're going to put somebody  
12 on it, even though other people were doing the  
13 lifting, it was a priority for them, what we were  
14 trying to do. And we didn't -- I think we made  
15 it through the first round, or maybe not.

16 But, you know, and it's not a  
17 criticism of you, but I think that somewhere in  
18 this --- and we're not even talking about  
19 aquaculture right now, because they don't sit on  
20 the Council, for instance. So the industry input  
21 into this industry research and development, and  
22 product development, and whatever program, I



1 encourage the Agency to really think about that  
2 one hard.

3 And, you know, honestly when we see  
4 much of the money going to the academic  
5 institutions who have the capacity to put these  
6 grants together and sort of, like, well, Joe Blow  
7 got half of all the grants in the Northeast.  
8 Like, how did that happen?

9 And I'm not intending to be critical,  
10 but I think that the industry participation piece  
11 of this is what has made it unique. And that  
12 would be something I would encourage, you know,  
13 the group to really think about, you know, how do  
14 you want to try and encourage that.

15 MR. NAMUR: Yes. So I'll address it,  
16 and I'll try to be as brief as possible. So  
17 there's a couple of points. One, in specific  
18 because you mentioned Alaska, is that back in the  
19 '80s and even the early '90s the actual S-K  
20 competitive program was tiny. It was, like, \$2  
21 million.

22 And there was a lot of money going to

1 certain areas. But that's because that was back  
2 in the day of earmarks. And so that was the  
3 major driver. There was \$10 million to \$17  
4 million being pumped through earmarks to certain  
5 locations and certain entities. That has gone  
6 away, okay. With that, there was a huge culture  
7 shift.

8 What I have seen personally in the  
9 last three or four years, as people have  
10 recovered from being used to that being the  
11 process to, wow, there's a lot of competition, is  
12 that the number of applications --- and I'll be  
13 specific to Alaska here --- the number of  
14 applications has gone up significantly. The  
15 number of folks that are not from the University  
16 of Fairbanks have gone up significantly.

17 And what I've seen in the last two  
18 years is the percentage of applications that are  
19 not university are going up significantly as  
20 well.

21 Second part of my answer though will  
22 be kind of the same as that I gave to Raimundo

1 which is --- and it's gotten better, and we've  
2 done a huge media blitz for Alaska asking them,  
3 hey, look, if you're interested, get it in there  
4 --- but for years we've had a really hard time  
5 getting the applications in.

6 There's a concern that the money's not  
7 being funded there. But then when we look, no  
8 one's actually applying. And that's now getting  
9 fixed. And I like that. I'm very encouraged  
10 over the last years that every year there's more  
11 applications, there's more being funded, and  
12 there's more variety of entity type.

13 So I hear you. We can certainly work  
14 to include industry more when we're setting our  
15 priorities. And we certainly lean in that area  
16 on the North Pacific Council. But we can  
17 certainly work even harder.

18 That said, as far as the funding  
19 portion, there's a lot of history of why it went  
20 from \$17 million for exactly what industry wanted  
21 to do to -- now it's being addressed in a little  
22 different way.

1 MEMBER MOORE: Thanks.

2 MR. NAMUR: Yes, not a problem at all.

3 MEMBER BONNEY: One is I would  
4 hopefully we get the slides, the appendices  
5 slides, because they're not on the ---

6 MR. NAMUR: Yes, I've given them to  
7 Heidi.

8 MEMBER BONNEY: Okay. And then the  
9 other thing, and this is --- if you go back to  
10 the split.

11 MR. NAMUR: So you want, okay. Yes,  
12 ma'am.

13 MEMBER BONNEY: So where you see that,  
14 right there.

15 MR. NAMUR: Yes.

16 MEMBER BONNEY: I mean, I don't really  
17 know that I think of the offset, the \$130  
18 million. That really isn't grant funding in my  
19 mind. It's basically base funding to support  
20 particular programs within NMFS. But yet it  
21 seems like when you're looking at the --- what  
22 was it, half a billion dollars up front, what was

1 the total number?

2 MR. NAMUR: Yes, it's about \$400  
3 million.

4 MEMBER BONNEY: It's really not grant  
5 funding. It's maintaining a lot of programs that  
6 are essential to do the work of the Agency, isn't  
7 it? I mean --

8 MR. NAMUR: And I understand exactly  
9 why you're saying it that way. Because it does  
10 change color and become part of our base funding.  
11 You know, it's kind of slid across the board, if  
12 you will.

13 Once it's there, these are -- I mean,  
14 out of our appropriated dollars and our base  
15 funding, even if it's not ORF, the way we decide  
16 to address the needs of our mission sometimes is  
17 through grant programs. And in these cases, that  
18 \$400 million, those are actual grant research  
19 programs, all of them.

20 MEMBER BONNEY: Like PacFIN in the  
21 data ---

22 MR. NAMUR: Yes. Fisheries

1 information networks, those are grants. They go  
2 out the door for not us, for our constituents to  
3 go and collect fisheries' information, data  
4 collection. Now, does it benefit our stock  
5 assessments? Absolutely. But it's also used by  
6 the constituents.

7 MEMBER BONNEY: But I guess it's not  
8 really competitive. It's basically they're a  
9 line item in the budget. And that just gets  
10 programmed as grants.

11 MR. NAMUR: For certain programs that  
12 is true. Certain programs are what we call  
13 formula allotment. And we have an actual budget  
14 line that says how much is going to go into  
15 jurisdictional fisheries. Again, it's not  
16 technically competitive, it's formula. It goes  
17 to our states, because the states have a certain  
18 need.

19 Going back, there was a question  
20 earlier. Do we ever take into account the size  
21 of the fishery when we do a grant program? S-K,  
22 no. Interjurisdictional fisheries is based

1 primarily off of landings. So it changes every  
2 year. That formula fluctuates based off of how  
3 much came into each state. And that dictates the  
4 formula. That formula is decided by Congress.  
5 We have to follow it.

6 MEMBER BONNEY: I know in Alaska,  
7 first, the Alaska Department of Fish and Game,  
8 interjurisdictional grant funding is base funding  
9 for them as well. And then I hear the  
10 conversation of people concerned about being  
11 competitive for grants for different  
12 constituencies in the industry.

13 And I think the way this is messaged  
14 it makes it --- you feel as if you've got all  
15 that money out there available when the reality  
16 is, when you break it all down, it might be \$40  
17 million total, across all the ---

18 MR. NAMUR: Oh, no, much, much, much,  
19 much more than that.

20 MEMBER BONNEY: Okay.

21 MR. NAMUR: So on one of my first  
22 three or four slides I had a breakdown. And it

1 showed the types of applications that we funded.  
2 And the number one is competitive. It is by far  
3 the majority.

4 Now, there still are, of course, our  
5 formula allotments. Those are Congressionally  
6 mandated. We don't have a choice. We certainly  
7 have other line items. That, again, comes from  
8 Congress, therefore we have to follow the intent  
9 of Congress. I wouldn't look good in orange. So  
10 I'm going to follow the intent of Congress.

11 So I hear where you're coming from.  
12 But no, the majority of our funds still go out in  
13 an open and fair competition, absolutely.

14 MEMBER BONNEY: Okay.

15 MEMBER RHEAULT: Great presentation.  
16 So I sit on two groups which spend a huge amount  
17 of time devising surveys to survey our industry  
18 members on research priorities. And then, you  
19 know, we winnow down dozens and dozens, and  
20 prioritize these lists, and send them off to the  
21 various funding agencies, and wonder if anybody  
22 ever reads them.



1                   Just curious if those are ever  
2 weighed?

3                   MR. NAMUR: Yes.

4                   MEMBER RHEAULT: And maybe I'm sending  
5 them to the wrong address or ---

6                   MR. NAMUR: No, no. I'm not sure what  
7 address you're sending them to. No, we certainly  
8 do. And in my case, that window is on the slide  
9 where you saw, you know, to set the priorities,  
10 that you've got NMFS leadership involved, is that  
11 that's where that's going.

12                   And so one of the points, again, and  
13 I'm not sitting twisting my mustache in my office  
14 by myself, is I'm really leaning on a lot of  
15 folks when the priorities are being set. And one  
16 of those places is we go up and we're talking  
17 with our head leadership. And that's the AA and  
18 the DAYS, Cisco, of course.

19                   You know, they can weigh in and say  
20 look, you know, based on what's come in this is  
21 the way we're going, this is the needs for the  
22 Agency at this point. So those certainly are

1 taken into account. But if you're feeling  
2 they're not being heard sufficiently, you can  
3 always send them directly to me. That's fine.

4 (Off the record comments)

5 MR. NAMUR: Ha, ha, ha.

6 CHAIR BEIDEMAN: Okay, Mike.

7 MEMBER OKONIEWSKI: Forgive me, I'm  
8 going to give a little speech here.

9 MR. NAMUR: Absolutely. Go for it.  
10 As long as it's okay with Madam Chair.

11 MEMBER OKONIEWSKI: I think it will  
12 be.

13 (Laughter)

14 MEMBER OKONIEWSKI: I promise not to  
15 use any more profanity.

16 MR. NAMUR: Okay.

17 MEMBER OKONIEWSKI: But, you know, 91  
18 percent of our seafood is imported. We  
19 represent, in part here, producers that would  
20 like to see the trade deficit for seafood go the  
21 other way.

22 But we are on a cost basis. And what

1 I -- I'm responsible for five bottom lines, five  
2 divisional bottom lines in our company. So I  
3 wasn't skilled in business when I took on the  
4 job. But I've learned how it works.

5 MR. NAMUR: Yes.

6 MEMBER OKONIEWSKI: So we're competing  
7 against cost models which don't have all of our  
8 regulatory burden and foreign imports.

9 In my mind, some of these funds were  
10 set up as somewhat of an offset from tariffs on  
11 imports, right?

12 MR. NAMUR: Okay.

13 MEMBER OKONIEWSKI: Thirty percent.

14 MR. NAMUR: Correct.

15 MEMBER OKONIEWSKI: But when I start  
16 seeing or hearing of competition, and who's got  
17 the best writing skills gets the money, and I see  
18 a lot of universities -- and I'm all for  
19 research, believe me, but we've talked more and  
20 more about collaborative and cooperative  
21 research, how beneficial that could be on many  
22 different levels, not just, you know, the data

1 that comes out of it. But it's a trust-building  
2 thing. We're talking about citizen science, I  
3 think, next.

4 I think that a certain amount of this  
5 stuff should be non-competitive that probably is  
6 competitive now, and be dedicated towards  
7 industry-type projects that are in line either  
8 with research or marketing.

9 Marketing is a big deal to us. And we  
10 don't have, you know, the largest seafood  
11 companies in America, and I represent one of  
12 those, are very small in comparison to, you know,  
13 some of the big other food giants out there.

14 MR. NAMUR: Absolutely.

15 MEMBER OKONIEWSKI: And I guess it  
16 would --- and hearing Peter's comments and  
17 Randy's, I think there's a lot more that could be  
18 done. I'm not saying that the research at the  
19 academic level is not necessary. But we're kind  
20 of a tip of the spear, and we're doing stuff  
21 that's going to be lot more fundamental to just  
22 keeping our industry alive and vibrant.

1                   And I think that has to be a  
2                   consideration on how these funds are handed out.  
3                   We're not -- you know, stuff that's climate  
4                   change, 20 years down the road or whatever,  
5                   that's great. We need to be doing it. But you  
6                   shouldn't be picking our pocket, in a sense, to  
7                   do it. Because this money to us is how do we  
8                   keep fishing on the water and keep our industry  
9                   going. And it's helpful what PacFIN does, and  
10                  these guys, it's amazing.

11                  MR. NAMUR: Yes.

12                  MEMBER OKONIEWSKI: So it's  
13                  beneficial, right, to industry itself. I think  
14                  some of these collaborative projects, one which I  
15                  just talked about that got kicked out before it  
16                  even started, would also be beneficial, I think,  
17                  from a data collection point too.

18                  Because we can, with fishing vessels,  
19                  and other techniques, and our knowledge, we can  
20                  fill in a few gaps at a much cheaper basis than  
21                  what the NOAA ships and some of the other  
22                  research items they have can do. So I'm just

1 putting it out there for consideration.

2 MR. NAMUR: No, no. And that's one of  
3 the reasons I'm here today. I appreciate the  
4 comment. And I certainly take it to heart. And  
5 so on Point 1, considering whether or not we want  
6 to allocate the funds differently, I'll certainly  
7 take that. And that is a decision and, again,  
8 not made with me sitting by myself. That's a  
9 conversation.

10 But no, it's hearing things like that  
11 that bring it to the table, and that we can talk  
12 about it, and decide what's best for the program.

13 The other thing I would say is the  
14 fact that, you know, we're continually evolving.  
15 I said, you know, we're constantly changing our  
16 FFO. And over the years, and I hope it's  
17 becoming apparent and that we're doing an okay  
18 job messaging it, is that we're working more and  
19 more to ensure that the way we write our  
20 evaluation criteria and our priorities is geared  
21 towards communities and industry that we have.

22 If you look at the scoring, even

1 during the pre-proposal process, 40 percent of it  
2 is are you working -- either have a direct impact  
3 on the community or working directly with the  
4 community. So again, it may be a university  
5 that's working with them. But if they're not,  
6 they're actually going to score lower.

7 The last point, and we're working very  
8 hard to try -- and I use the term level the  
9 playing field, but I don't really like that.  
10 Because it makes it sound like one is actually  
11 better than the other --- but to make sure that  
12 all entity types, regardless of whether or not  
13 they're professional grant writers or not, are  
14 coming in on a level playing field, that we're  
15 really looking at the technical merit of the  
16 science not the technical merit of their sentence  
17 structure.

18 MEMBER OKONIEWSKI: And lastly, I'd  
19 like to thank you for taking some abuse here and  
20 listening.

21 (Laughter)

22 MR. NAMUR: It's all right. It's the

1 story of my life, Mike. Ha, ha, ha.

2 CHAIR BEIDEMAN: So the last word will  
3 be going to Liz.

4 MEMBER HAMILTON: I think that's my  
5 nickname, right, Last Word Liz?

6 (Laughter)

7 MEMBER HAMILTON: Just a quick  
8 question. How much --- it's to help the fishing  
9 industry, and I echo a lot of what Mike said.  
10 How much of it goes to help the recreational  
11 industry?

12 And I'll admit that, in our industry,  
13 our feeling is with NOAA that we're very much a  
14 small, tiny, little after-thought versus being an  
15 industry that deserves the attention and customer  
16 service that the aquaculture and commercial  
17 fishing industry currently receives.

18 MR. NAMUR: Well, that's an excellent  
19 point.

20 MEMBER HAMILTON: It's a confession.

21 MR. NAMUR: And I don't have an exact  
22 answer for you. So I apologize. Because a lot



1 of times, kind of like whether or not there's  
2 collaboration, whether or not it is rec fishing,  
3 sometimes it's hidden in a project that doesn't  
4 say in the title "Rec fishing for the Southeast."  
5 It will be that there's impacts on the  
6 recreational fishing as well as commercial  
7 fishing or the management needs.

8 We did do an analysis of this  
9 recently. Actually, Mr. Cosgrove was the one  
10 that headed it up. And I'm sure he'd be happy to  
11 talk with you on the side. Because we were  
12 concerned for the exact same reason, making sure  
13 that despite the fact that this most certainly is  
14 not a recreational fishing program, that the  
15 objective of the program includes them,  
16 absolutely. They are part of the objective of  
17 this program and of the mission.

18 And so we did go through and make sure  
19 that we're looking at a number of applications  
20 that are really submitted. And it becomes hard  
21 and a little bit soft data, if you will. Because  
22 again, you can't just query it in Sigmacell and

1 say, yes, there were 27 that were the word, "Rec  
2 fishing." Because sometimes it's only a portion  
3 of it. And it gets put into the aquaculture  
4 panel or put into the data collection panel. But  
5 it's affecting the recreational community.

6 From that we were pleasantly  
7 surprised, to be honest with you. We were pretty  
8 pleasantly surprised. But I don't have the  
9 numbers right off the top of my head. I  
10 apologize.

11 MEMBER HAMILTON: I just would  
12 encourage you to think about the word industry  
13 and rec, rather than rec fishing, rec industry.  
14 Because they are different. You know, one is  
15 about customers, and the other's about business.

16 MR. NAMUR: Yes. Thank you. And you  
17 can see Mr. Cosgrove here is quickly writing it  
18 down so that we actually have right now our FY  
19 '19 FFO is a draft document. And every time  
20 somebody says something like that to us, we put  
21 it as a little comment on it. So that when we go  
22 through looking at what we want to write for '19

1 we take all of those points into consideration.

2 So this whole, despite the fact, you  
3 know, as Mike says, I take a little abuse  
4 sometimes, it's very useful for us. Because when  
5 we go back and work towards writing the next  
6 solicitation, we're hearing what you guys say and  
7 can include it where it's appropriate.

8 P-R-O-C-E-E-D-I-N-G-S

9 10:31 a.m.

10 CHAIR BEIDEMAN: Well, and I thank you  
11 Dan for coming and helping us get through this.  
12 You can see there's lots of interest and  
13 questions, and it's very helpful to have you in  
14 person.

15 MR. NAMUR: Absolutely, and the last  
16 thing I'd say is, first, thank you so much for  
17 the opportunity. Really appreciate being able to  
18 come. And both Cliff and I are really always  
19 available.

20 Please reach out, whether it's about  
21 SK, I know we got kind of in the weeds there  
22 towards the end but, you know, that's ultimately

1 40 of our 700 grants. There's a lot of other  
2 programs out there. If you guys have concerns or  
3 questions, please let me know.

4 CHAIR BEIDEMAN: Thank you again, and  
5 --

6 MR. NAMUR: And I'll stick around.

7 CHAIR BEIDEMAN: Oh, okay.

8 MEMBER FISHER: This is a question to  
9 you, Madam Chair, and that is is it possible that  
10 MAFAC could make some suggestions based on what  
11 you've heard here today? I mean, what was the  
12 plan for MAFAC as a result of this presentation?

13 MS. LUKENS: Well in going back to it,  
14 I think it was raised request to have more  
15 information on this and have a better  
16 understanding and get a thorough explanation from  
17 Dan about all of the different programs and  
18 become more informed on it and to have some and  
19 to have some Q&A and answers.

20 So I don't think there was a specific  
21 plan, what MAFAC was going to do with it. It was  
22 just a topic that they expressed interest in.

1 After this, MAFAC may have a conversation or  
2 something to that extent. But nothing was  
3 articulated that I'm aware of.

4 CHAIR BEIDEMAN: So we are a little  
5 behind, so I think we're going to have to work  
6 through our break, unless they're very quick.  
7 Citizen science, very interesting. So the next  
8 topic and I don't know, is it Laura?

9 MS. LUKENS: Laura's over there.

10 CHAIR BEIDEMAN: Laura?

11 MS. LUKENS: Ormeland.

12 CHAIR BEIDEMAN: Ormeland. She can  
13 come up here if she wants. I'll give up my seat.

14 (Off microphone conversation.)

15 CHAIR BEIDEMAN: Okay. And Rich.

16 Okay.

17 MS. OREMLAND: Oh, I'm sorry. Would  
18 you like us to go a little bit shorter and try to  
19 take an abbreviated version? Or just go with  
20 what we had planned?

21 CHAIR BEIDEMAN: I think what I'd like  
22 to do is to hold any questions until you've been

1 able to present it, and then there could be some  
2 questions and potentially we might get a little  
3 bit closer to our schedule. But I'd really like  
4 to have you be able to go through your whole  
5 presentation. So if folks can just, you know,  
6 catch my eye, I'll put you in a queue.

7 MS. OREMLAND: Okay.

8 CHAIR BEIDEMAN: But that might work  
9 out better.

10 MS. OREMLAND: Okay, thank you.

11 CHAIR BEIDEMAN: So, thanks.

12 MS. LUKENS: Okay. Well thank you for  
13 having us here today. I'm Laura Oremland and  
14 this is --

15 MR. CODY: Richard Cody.

16 MS. OREMLAND: -- from the NOAA  
17 Fisheries Office of Science and Technology. And  
18 really excited to talk to you today about citizen  
19 science in the fisheries sector.

20 So with that, let's see, okay. Here  
21 we go. So just to give you a sense of the  
22 outline, what, you know, really have to start

1 with some definitions and also to give you a  
2 sense of where does citizens science fit within  
3 NOAA. Where does it fit within the federal  
4 community and where does it fit within fisheries?

5 Then I think the part that folks will  
6 be most interested in is some examples. Where is  
7 it being used? How is it being used? What are  
8 the challenges encountered? And we wanted to do  
9 a special spotlight on how it's used or what the  
10 potential is in the recreational fishing sector  
11 where I'm going to turn it over to Rich to cover  
12 that topic. And then we'll review the  
13 challenges, possibilities, and then leave it open  
14 for questions that you may have.

15 So the slide I would like to start  
16 with is this one, to really show where citizen  
17 science has potential in this area. I've always,  
18 you know, just in classes, known that space is  
19 way more to explore than the ocean. And I would  
20 say in a similar sense, citizen science really  
21 hasn't been explored as much in the fishery  
22 sector.

1           So looking at it from a broad scale,  
2           we're the second largest EEZ in the world, and  
3           nearly 500 stocks in stock complexes, a hundred  
4           are protected species, barely 3,000 federal  
5           employees to manage all of that, shows what  
6           having extra eyes on the water, the potential can  
7           be.

8           So just to give you a quick sense of  
9           where does citizen science fit in the broader  
10          NOAA community. NOAA started its own community  
11          of practice in 2013. There's almost 200 members  
12          from across the agency, many of whom are from  
13          fisheries.

14          And one interesting statistic in  
15          there, we had to inventory our projects to submit  
16          to a federal catalog per a request of the  
17          previous administration. And we noted that they  
18          receive over a half a million volunteer hours per  
19          year for these projects, which was pretty  
20          substantial.

21          And then just a quick snapshot of what  
22          does it look like at the federal level. There is



1 a very large and active federal community of  
2 practice, over 350 members from over 60 agencies.  
3 And one of the things that is interesting is that  
4 of the steering committee, there's about eight  
5 from across the federal agencies including NFS,  
6 Fish and Wildlife. NOAA has been one of the core  
7 seats at the table to help direct their actions.

8 And one thing that was recognized this  
9 year was the Federal Community of Practice was  
10 one of four finalists in Harvard's Ash Center  
11 Innovation in American Government award. So they  
12 are a very, very active community.

13 So where I'm going to skip to at this  
14 point, actually, I'm going to mention they do  
15 have an active catalog of projects that you can  
16 search. You just go to [citizenscience.gov](http://citizenscience.gov), and  
17 over 40 of the projects there are from NOAA. And  
18 I just want to also mention, because what I  
19 understood to be they asked here, they do have a  
20 very detailed reference desk.

21 I mean, some of the key questions that  
22 come up in citizen science are how do you design

1 a project? How do you maintain volunteers? How  
2 do you find volunteers? They've got very nice  
3 how-to guides, reference papers, you know, sort  
4 of case studies that kind of walk people through  
5 some of the hurdles that are encountered. So I  
6 just want to point that out as a reference.

7 So now getting to the core thing.  
8 What is citizen science? There are many  
9 definitions out there and the one thing I  
10 encourage people is not to get bogged down in the  
11 details. It's referred to as NSF is public  
12 participation and scientific research. Some  
13 people don't even like the word citizen in there.  
14 But I think, don't get too bogged down in the  
15 details.

16 The where I point to is the  
17 Crowdsourcing & Citizen Science Act that was  
18 enacted in January of 2017. And I'm going to go  
19 over how they defined it. But I'm also going to  
20 mention, because what sometimes comes up in the  
21 same discussion of citizen science are prize  
22 competitions, crowdsourcing. So I'm going to get

1 into those, just very peripherally, but if you  
2 have questions, I'll be happy to address those.

3 So how does the Act define citizen  
4 science? They take a very broad approach to it,  
5 which is any form of open collaboration which  
6 individuals or groups voluntarily participate in  
7 the scientific process. They give a bunch of  
8 examples from collecting data to analyzing data.  
9 But it doesn't, it's not restricted to this list.

10 So, it's a very broad definition. If  
11 you're voluntarily contributing in some way or  
12 other to the scientific process, they consider  
13 that to be citizen science.

14 And then just again from the language,  
15 because again I think these get talked about in  
16 the same discussion to citizen science, how they  
17 define crowdsourcing is simply a method to obtain  
18 services from a community. Largely, it's an  
19 online community. I don't know if anyone used  
20 your Waze app to get here this morning. There's  
21 a perfect example of crowdsourcing.

22 And also, prize competitions. There

1 used to be, State Department used to run a fish  
2 hack-a-thon to design projects that would help,  
3 you know, address sustainability and fisheries  
4 issues. And there are active competitions right  
5 now that NOAA fisheries has taken advantage of in  
6 the prize sector. They often involve a large  
7 incentive to do that.

8 So citizen science, again, there's a  
9 spectrum of projects. It can be simply  
10 contributory, scientists design the project and  
11 volunteers are collecting the data. All the way  
12 over to co-created where volunteers are actually  
13 helping design the project in some way and are  
14 full-fledged partners in it.

15 I would say most examples in the  
16 fishery sector fall into the contributory  
17 element, but we do have an example that I'm going  
18 to highlight today that it gets a little more  
19 into the collaborative scale.

20 And the other thing in the definition  
21 thing that I thought would be important to bring  
22 up, because this has been a question that we've

1 sort of been struggling with and finally tackled  
2 this is, how does citizen science differ from  
3 cooperative research?

4 We worked with our NOAA fisheries  
5 cooperative research working group, we worked  
6 with some legal folks to say what are the true  
7 differences here, if any?

8 So I am going to go through this in  
9 the sense that you know quite straight forward,  
10 the authorities are different. The Crowdsourcing  
11 and Citizen Science Act provides broad authority  
12 for federal agencies to conduct citizen science.  
13 And the Magnuson is the primary authority for  
14 cooperative research in terms of subject matter.

15 For citizen science, it just needs to  
16 be scientific. It's not restricted to fisheries,  
17 whereas cooperative research would be fisheries  
18 research determined with the councils to address  
19 critical needs. So there's a little more of a  
20 guidelines to what can be cooperative research.

21 Terms of the voluntary nature, you  
22 know, for according to the Crowdsourcing &

1 Citizen Science Act, they're not financially  
2 compensated for their time, if you are going to  
3 accept voluntary services under that act whereas  
4 in Magnuson, for cooperative research, fisheries  
5 research, that NMFS is authorized to provide  
6 funding for. So there is a funding element  
7 there.

8 Participation citizen science, it  
9 could be a wide range of volunteers where it's a  
10 little more, you have a more structured pool of  
11 stakeholder participants in cooperative research.  
12 And the timeframe can also be variable. But  
13 again, it can be variable for citizen science.  
14 In some cases, you might be able to get off the  
15 ground quickly. If not, for cooperative  
16 research, it may depend on the vehicle you're  
17 using.

18 But what does this all boil down to?  
19 Both are tools to help address science and  
20 management priority needs for the agency. So one  
21 isn't going to replace the other. They can both  
22 add value. They can address similar questions.

1 They can help improve our understanding of  
2 fisheries in the environment.

3 But I think it's the last bullet that  
4 kind of gets to the heart of the matter, which is  
5 some cooperative research can fall under the  
6 citizen science umbrella. If you have volunteers  
7 who aren't compensated, that too could be citizen  
8 science. And a perfect example would be these  
9 tagging programs. So there I think that would be  
10 a clear-cut example.

11 So before I go any further, the one  
12 thing that shows up is, you know, when people  
13 often ask well how much citizen science are you  
14 doing? It's not always easy to identify this.  
15 And I think this example shows it.

16 It 2014 they did a study that looked  
17 at a publication that was tracking, a synthesis  
18 publication tracking of phenological changes and  
19 bird migration. Found out over 170 research  
20 papers were cited in the subject and none of them  
21 used the word citizen science, even though on  
22 further exploration, over 80 of them had used

1 citizen science data.

2 So publications are often not using  
3 the key words citizen science. They are not  
4 referencing citizen science in there. So it  
5 really takes a lot of digging to figure out when  
6 citizen science is actually used.

7 So stepping over to, again you know,  
8 when the question was asked, and last spring we  
9 asked ourselves at the NOAA fisheries level, you  
10 know, how many citizen science projects and  
11 crowdsourcing projects do we have going on across  
12 the agency? And I would say this is very much a  
13 living exercise.

14 I don't think this is a completed one  
15 by any means because there's always new ones  
16 you're discovering as the word isn't always  
17 present. But what we discovered so far is that  
18 there were over 40 activities across the nation.

19 Some of these are activities where  
20 NOAA was an actual partner in, some where we were  
21 actually the beneficiary or the end user of the  
22 data. They were going on in all regions, science



1 centers. Right now it looks like, you know,  
2 there's a higher number in the northwest than the  
3 northeast. Some were supporting management  
4 efforts and some had an education component to  
5 them.

6 This slide here probably could take an  
7 own presentation of itself. But why I put this  
8 one up here is to say, they're really helping  
9 provide information in several of our key areas  
10 and priority goals, whether it's providing  
11 information for fishery resources, we're going to  
12 cover one in particular that has been used for  
13 some assessments on west coast rockfishes.

14 Sound toxins is an example that has  
15 volunteers monitoring harmful algal blooms, and  
16 managers actually use that in their decision  
17 process whether to close or to do further  
18 sampling in the northwest. Many, many examples  
19 relate to protective species conservation  
20 recovery. We'll go a little deeper into one of  
21 those.

22 And we also have examples that are

1 with Puget Sound rockfishes, where divers are  
2 collecting information on their locations. Are  
3 reporting them have been used for habitat  
4 suitability models. And also ocean temperatures  
5 and currents.

6           Again, this slide alone could be an  
7 hour long presentation, but with lobster traps, I  
8 think the number I had on that one this morning  
9 was, you know, basically millions of hourly  
10 temperatures from over a hundred locations in the  
11 gulf of Maine. And again, many examples that  
12 cover the range from environmental to actual  
13 organisms.

14           I would point out that citizen science  
15 is definitely not new. Just because we had the  
16 act in 2007, some of these programs, many in  
17 fact, the one program, Cooperative Shark Tagging  
18 Program proceeds NOAA becoming NOAA. Some of  
19 this is sort of their data, and some of this is  
20 fairly recent.

21           I mean, just to give you a sense of  
22 the magnitude of the voluntary contributions for

1 this program, between 1962 and 2016, over 285,000  
2 sharks of 52 species were tagged, and more than  
3 17,000 sharks of 33 species have been recaptured.

4 It's been used to report assessments  
5 and a variety of other stock identity, EFH  
6 designations. The American Littoral Society has  
7 a very active and meaningful tagging program that  
8 has also been used to support the MRIP B2  
9 discards estimate.

10 And again, even the southern and  
11 resident killer whale sightings, one of our  
12 species in the spotlight, data that report takes  
13 the public sightings of these southern resident  
14 killer whales have been used in Section 7  
15 consultations.

16 Quickly here, just most of these  
17 projects involve partnerships. NOAA is just one  
18 of many in I'd say probably all of them. Some of  
19 them are, you know, delving into the apps.

20 I think apps are an area that are an  
21 active exploration, how they can be used. I  
22 think the lesson learned so far is that it's more

1 to maintain it. The costs are higher to maintain  
2 an app than to develop it. I don't know if you  
3 wanted to mention the app in angler, but they're  
4 --

5 MR. CODY: Yes, I mean, there are  
6 various initiatives around. I mean, I'm more  
7 familiar with most of the ones in the gulf, but  
8 there around the coast that deal with angler app  
9 development and maintaining the application.

10 And, you know, in most cases the  
11 impetuous is there to get the app started, but  
12 what the difficulty is being that they're finding  
13 is that keeping the app up is a huge challenge.

14 MS. OREMLAND: And finally, I'm not  
15 sure, I think it may be in the interest of time,  
16 I'll breeze through this, but just to show that  
17 there are some crowdsourcing projects that NOAA,  
18 one platform of folks are familiar was universe  
19 which maybe is just more familiar in the citizen  
20 science world.

21 But it's a online site, it's a website  
22 that basically allows any online participant to

1 contribute information on multimedia files,  
2 whether it's images, sound recording, video  
3 recordings.

4 In this case, I think the latest date  
5 on the stellar sea lion, stellar watch which  
6 reaches out to the online community do try to  
7 identify which images actually have a tag stellar  
8 sea lion in them. I believe there were over  
9 300,000 images classified by about 7,000  
10 volunteers to date.

11 And again, NOAA is making use of these  
12 prize competition, which I'm going to skip over  
13 here. But if there are questions, just let me  
14 know on that one.

15 So finally, again, kind of divvying a  
16 little deeper into some of these examples. I  
17 think many of you are already familiar with this,  
18 but just in case not, that South Atlantic Fishery  
19 Management Council is attempting to become of the  
20 first council with a full-fledged citizen science  
21 program.

22 They kicked things off in January,

1 2016 with a program design workshop for all  
2 partners. And they actually formed a council  
3 level committee in July of 2016. And by  
4 December, they had designated a full-time council  
5 staff position.

6 So where they are now is in June they  
7 had an advisory panel selected to advise on, and  
8 five action teams and five key topical areas.  
9 Communications, data management, finance,  
10 projects, and volunteers.

11 And I think the areas to watch for  
12 right now are in January, they are going to have  
13 an all hands meeting of all these action teams to  
14 share their recommendations. And in March,  
15 that's when the council is going to review modify  
16 or adopt any program recommendations.

17 And the project that's being proposed  
18 right now is the likely first project, is to  
19 develop an app for fisherman from all sectors to  
20 provide scamp discard information.

21 Interestingly enough, the Western  
22 Pacific Council, on a much smaller scale, was

1 exploring on a recommendation citizen science to  
2 both support outreach and some smaller scale data  
3 needs. Right now, they are holding off on that.  
4 There was some concern on whether that data could  
5 be used to meet national standards for best  
6 available scientific information.

7 So I think we can probably tag team --

8 MR. CODY: Sure, sure.

9 MS. OREMLAND: -- this slide here.

10 But I think this is one of the most interesting  
11 and effective examples of citizen science in  
12 fisheries.

13 The California Collaborative Fisheries  
14 Research Program, basically it started off in  
15 2007, California had designated several MPAs  
16 covering about 20 percent of California's central  
17 coast, and to help monitor them and provided data  
18 for fisheries management. This program got off  
19 the ground.

20 What it effectively is is a fishery  
21 independent survey program for west coast ground  
22 fish. Scientists designed the study, although

1 volunteers help select the sampling sites. And  
2 there's a large number of active volunteers to  
3 collect fish. Did you want to add anything to  
4 that?

5 MR. CODY: Yes, I can add a little.  
6 The program itself had very specific long term  
7 and short term research questions that they  
8 wanted addressed. So they really get that across  
9 to their volunteers that these are the things we  
10 wanted to achieve and this is how you can help.

11 And Laura mentioned about the 850 plus  
12 volunteers that are part of this program.  
13 There's a lot of effort that goes into  
14 maintaining that panel, no I wouldn't call it a  
15 panel, but that list or that group of anglers.  
16 And they keep them participating in the project.

17 As Laura mentioned, it's been going  
18 for more than ten years now. But one thing I  
19 will add is that they took to heart the concerns  
20 that the scientific community had about opt in  
21 designs, or opt in or volunteer data being used  
22 to provide population parameters and population



1 related estimates.

2 And what they did was, they came up  
3 with a very, very structured, rigorous scientific  
4 design, sampling design. And then the volunteers  
5 really are the vehicle through which that's  
6 enacted.

7 MS. OREMLAND: So, and also in terms  
8 of the importance to NMFS, it has been used.  
9 They're catching upward data for indices of  
10 abundances and length compositions. The size  
11 compositions were used in recent rockfish  
12 assessments. And I think perhaps most  
13 significantly, it's filling a key data need.  
14 There's really no other near shore fishery  
15 independence survey that exist for these.

16 And one last example, going back to  
17 that example where citizen science isn't often  
18 used as a key word, or even if you read the paper  
19 you're not going to see the term citizen science  
20 anywhere. But several recent publications here I  
21 think demonstrate that it's being actively used  
22 to support some of our models.

1           So I don't know if anyone is familiar  
2 with this program called REEF, which is the Reef  
3 Environmental Education Foundation. It's  
4 basically an opportunity for divers to report  
5 their sightings and sort of a categorical  
6 estimate as opposed to saying I saw 33 types of  
7 this fish that were reported in groups of 1, or 2  
8 to 10, or 11 to 100, or over 100.

9           But that data, REEF data has been used  
10 and you can see some of the publication dates,  
11 just come out in the last few weeks in some of  
12 them. But in some cases they were used with  
13 demographic modeling to help inform the habitat  
14 preferences and population dynamics of goliath  
15 grouper and mutton snapper.

16           And again, if anybody needs the  
17 publications on these, I'm happily willing to  
18 share that. They help provide growth rate  
19 estimates for protective rockfishes in Puget  
20 Sound, that was using a MARS model. And again,  
21 at one thing I was saying, in some cases it's  
22 just one data source of many. In some cases it's

1 the only data source available.

2 So it's an interesting opportunity to  
3 see where this type of data fits. It was used to  
4 help evaluate the population status of some  
5 rockfish species and Puget Sound. And the last  
6 few examples, I think, are some really  
7 interesting recent publications.

8 One, in some cases it was used to  
9 improve the quality of ecosystem models and  
10 produce distribution maps for grouper species.  
11 For goliath grouper, the REEF data was the only  
12 data available. And it was also used to estimate  
13 some natural mortality rate for multiple species  
14 and life stages in the Gulf of Mexico.

15 And I'm going to wrap up in just a  
16 minute, but to just to also say there are several  
17 monitoring programs to wrap up, or to address  
18 here. There's a program in Kachemak Bay,  
19 research reserve trying to identify if the  
20 European green crab is, hopefully, not invading  
21 there yet.

22 Australia's Red Map is a really

1 interesting program that helps track the  
2 distribution of species of, whether it's a  
3 fisherman or diver. If you see a species that  
4 you think, I've never seen this before. You snap  
5 a picture of it, it's sent to a team of experts.  
6 And they'll actually get a response back as to  
7 what it is. And that data is actually logged to  
8 try to track if species distributions are  
9 changing. So it's a really interesting model.

10 And then there are Phytoplankton  
11 Monitoring Networks to try to track for harmful  
12 algal blooms. On the start, it was a regional  
13 effort, it's now a national one. And with that,  
14 I'm going to turn it over to Rich to really focus  
15 on the recreational fishing side.

16 MR. CODY: Yes, usually when you think  
17 of citizen science, MRIP is probably not the  
18 first thing that comes to mind. Of course, MRIP  
19 has had quite an involvement with the angler app  
20 development and also in electronic reporting and  
21 supports efforts to do so.

22 So coming at it from the formal

1 probability perspective, we have, you know,  
2 within MRIP we have a catch and effort components  
3 to contribute to a complimentary survey that  
4 produces catch based on an effort portion and  
5 also a catch portion. And it's, as I said, it's  
6 based on formal probability sampling design.

7 And the reason for this, or I should  
8 say that it's basically, it follows the mandates  
9 put forth by Magnuson and national sign or two  
10 and for nation quality act requirements. So from  
11 the formal probability perspective, research ism  
12 on non-probability sampling is very limited.

13 But the American Association of Public  
14 Opinion Research in 2013 produced an opinion that  
15 basically said that non-probability based  
16 sampling is not appropriate for estimating  
17 population characteristics.

18 So those are the volunteer type  
19 surveys that you would expect that use angler  
20 apps and that are the ones that we hear about  
21 quite a bit in our field collecting research, or  
22 collecting recreational data. So the MRIP

1 perspective, I should say, really represents the  
2 formal probability sampling perspective. Not so  
3 much MRIP.

4 And we think that, you know, it's not  
5 appropriate to estimate catch and effort based on  
6 volunteer data from self-selected groups of  
7 anglers. So you need some kind of a way to  
8 represent population in a representative manner.

9 So as far as citizen science direction  
10 is concerned, we have a NMFS procedural directive  
11 on electronic technologies and fishery dependent  
12 data collection.

13 And that provides some guidance for us  
14 in terms of what types of things we should be  
15 involved in and support. And what it does is it  
16 supports identifying and addressing the  
17 limitations of non-probability sampling designs.

18 So that is, basically, it supports  
19 finding appropriate uses for these types of data,  
20 and support for electronic reporting for census  
21 and probability sampling methods. So essentially  
22 the California example, the California Fisheries

1 Research Collaborative that we just talked about  
2 is an example of using formal probability designs  
3 to harness the willingness of anglers to provide  
4 data, to volunteer.

5 So in 2012, MRIP conducted a workshop  
6 on opt-in angler panels. It was chaired by Jason  
7 Didden of the mid-Atlantic council. And what was  
8 the workshop acknowledged was that, you know, a  
9 large potential for bias existed in this type of  
10 framework.

11 One of the other things that I think  
12 is very important that the workshop acknowledged  
13 was the fact that angler trust could be harmed if  
14 volunteer data is not used. There is an  
15 expectation that if you volunteer your data, that  
16 it's going to be used.

17 So coming up with methods that would  
18 identify bias and perhaps cultural data that  
19 define the representative sample, may leave some  
20 anglers feeling like their data is not as  
21 important as some other anglers. So that's  
22 something that has been a consideration for us.

1                   And then again, it's difficult to  
2                   assess the appropriate uses for data. We just  
3                   recently did a discard workshop in New Orleans  
4                   and we had several service statisticians there.

5                   And their basic take home message was  
6                   that right now the status of research into  
7                   volunteer angler types of data collection  
8                   programs is at its infancy and there's just not  
9                   that much research out there that tells us how  
10                  effective they are. And then the ones that are  
11                  out there may not be applicable to the situation  
12                  that we're interested in.

13                  So MRIP over the year has though has  
14                  funded or supported electronic reporting research  
15                  studies. And those have included Snapper Check,  
16                  which is the Alabama State angler app that's used  
17                  by the State of Alabama to monitor red snapper.

18                  And then you have iSnapper in Texas.  
19                  And then the iAngler app, which may be familiar  
20                  to some people here. It was developed by the  
21                  Snook and Gamefish Foundation in Florida. And we  
22                  funded a study that evaluated the appropriateness



1 of the data or uses of the data, and did some  
2 comparisons with MRIP data.

3 So what do we know as far as that's  
4 concerned? We know that opt-in angler data and  
5 volunteer data is being used and it can provide  
6 data that's useful under certain conditions. For  
7 instance, in the fishery dependent data realm,  
8 distributional information has been used on catch  
9 locations, things like that. Tag return  
10 reporting and biological information on effort as  
11 well.

12 So there are some uses, very important  
13 uses to stock assessments that could be of  
14 benefit by developing these programs. And the  
15 fishery independent realm, we mention again the  
16 California example, biological information and  
17 also relative abundance information has been used  
18 in stock assessments.

19 And then from a fisheries management  
20 perspective, angler notifications, a lot of fish  
21 and wildlife agencies are taking advantage of the  
22 fact that anglers voluntarily sign up for apps

1 where they can get notified on regulatory changes  
2 or area closures, that kind of thing.

3 So, I'm going to talk a little bit  
4 about the angler app data. A lot of reference  
5 has been made to, while the states are using  
6 angler apps regularly, why isn't MRIP doing it?  
7 And we have some data that we can look at to kind  
8 of give you our perspective on things.

9 The angler app that we hear a lot of  
10 reference to is iAngler. And that has been used  
11 effectively to provide discard information on  
12 snooks, spotted seatrout, red drum for Florida  
13 State stock assessments.

14 Now this app itself has the ability to  
15 harness anglers' willingness to provide those  
16 kinds of data, whereas with MRIP, APAIS, the  
17 dockside survey that's conducted by MRIP, we  
18 don't get that information because the angler has  
19 returned from his trip and discards are not  
20 available to be measured or seen. So we have to  
21 take their word for what they report.

22 So this does provide some information

1 that MRIP can't. Information is very limited on  
2 other species. And one of the things about this  
3 app is that it's being used, as I said, by stock  
4 assessment biologists in the State of Florida,  
5 but it's not quite as rosy a picture as has been  
6 painted.

7 It has been rejected for use in  
8 certain stock assessments and mainly the  
9 sheepshead assessment. And that's a relatively  
10 commonly encountered species, even in APAIS.

11 So it's something that they are  
12 looking at, you know, the possible ways that they  
13 can expand the use, but there are some  
14 assumptions they have to make for stock  
15 assessments where it is included. And then there  
16 others where they are not willing to make those  
17 assumptions.

18 And I will say that for snook, for  
19 instance, the iAngler app was developed by the  
20 Snook and Gamefish Foundation. So it had a very  
21 motivated group of anglers that were users of the  
22 app. And they do mirror the snook distribution

1 pretty well in terms of where the fish occurs and  
2 where it's being caught. So, you know, there's  
3 less of an assumption associated with discard  
4 data that may be provided from that app for that  
5 assessment.

6 An MRIP pilot study that looked at the  
7 iAngler data found under certain conditions,  
8 unweighted CPUEs could be comparable. But those  
9 conditions were really set up to favor the app  
10 data. So it really is not an apples to apples  
11 comparison. It picks the best scenarios for a  
12 comparison.

13 And then also acknowledged in the  
14 study is that there is an angler avidity bias,  
15 which is what you would expect when you have an  
16 act that was specifically developed for one  
17 purpose and now is being used, or the use is  
18 being extended to other realms.

19 So I think that's basically where I  
20 am, or where we are with it. But going forward,  
21 we see managing expectations as being key to, you  
22 know, successful use of these types of apps and

1 that involve volunteer data.

2 Have to set expectations based on  
3 identifying and addressing data use imitations.  
4 And then finding the appropriate uses and making  
5 sure that that message has gotten back to the  
6 anglers.

7 Defining data standards is also an  
8 important consideration. With the examples of  
9 the iAngler app, it was developed for one purpose  
10 and then has kind of evolved into something that  
11 is a little bit different.

12 So it may be that the intention is  
13 there to provide data, but the minimum data  
14 elements may not be even available with that app.  
15 So that takes some consideration.

16 And as Laura had mentioned earlier on,  
17 it's easy to develop the app, but keeping it up  
18 and keeping it current with evolving data needs  
19 takes quite a bit of resources.

20 Then, you know, accounting for bias.  
21 There are some studies out there right now that  
22 are investigating the use of metadata and

1 administrative data as supplemental data sources.  
2 But there are some issues with access to those  
3 data. They may not be widely available, and may  
4 be confidential in some respects. So there are  
5 considerations there as well.

6 And then appropriate waiting for the  
7 data. That's something that comes with some  
8 negatives and positives. If you wait data that's  
9 applied by volunteers, then that means that it  
10 could be perceived that one angler's data means  
11 more than another angler's data.

12 And then quality assurance and  
13 validation metrics are important in terms of  
14 transparency and how the data are used. So I  
15 think that's all I have.

16 MS. OREMLAND: Yeah, I think I just  
17 have about two or three slides that I, just to  
18 wrap up here. You know, I think data collection  
19 and data quality are some of the big concerns and  
20 questions that come up. There are a number of  
21 publications on this that do provide some  
22 guidance in what you can do to improve the data

1 quality.

2 But one study I'll point to here,  
3 which was a very interesting one that came out  
4 recently in Biological Conservation that  
5 compared, and again, this is not as complex as  
6 doing a catch rate or some sort of catcher  
7 effort, but nonetheless, they compared  
8 researchers to citizen science and how on the  
9 numbers -- they collected marine debris from  
10 around the entire coastline of Australia.

11 And they compared what the data  
12 results were for both the citizen science and the  
13 trained scientists. And they found that there  
14 was no significant difference.

15 They did find some minor differences  
16 between the volunteer sets, but between the  
17 overall volunteers and the scientists, there was  
18 no significant difference.

19 And so just to wrap up, again what are  
20 the possibilities which, going back to the title,  
21 again, it could be a lighter, faster, cheaper way  
22 of doing things. It can be cost effective. It

1 can be a timely mechanism. It can help build  
2 relationships with stakeholders.

3 I think somebody mentioned in the  
4 previous discussion, you know, the trust in the  
5 relationships in the outreach. So I think that  
6 that is a definite benefit of using citizen  
7 science.

8 You can also serve multiple goals and  
9 can be used as a tool for outreach in education.  
10 And there is a stat that, a 2015 paper that  
11 looking at bio-diversity citizen science. And  
12 their figure was that over, you know, between one  
13 to two million volunteers contribute anywhere  
14 between a several hundred million to billions in  
15 time annually through their contributions.

16 And again, what are the challenges?  
17 Not to be pointed here, I think Rich said it  
18 best, you know, managing expectations, being  
19 clear up front, here is what the intent of the  
20 data is. If it's not going to be used for  
21 management or it's a pilot study. I think being  
22 as clear as possible up front is an effective



1 strategy, you know, how to address the bias  
2 issues.

3 But I think it's also important to be  
4 clear that the citizen science isn't going to  
5 replace existing programs, it's there to  
6 supplement, a supplemental data source. The data  
7 quality is always going to be a question.

8 Will the zero values be recorded? If  
9 you don't catch anything, will somebody take the  
10 time to fill out an app and say, you know, it was  
11 zero that day?

12 And the ability to survive peer  
13 review. I think that's sort of the big question  
14 that, you know, watching what the South Atlantic  
15 Council Effort does will be interesting and  
16 revealing.

17 You know, and the costs. I mean, the  
18 California Collaborative Fisheries Research  
19 Program has been probably one of the best success  
20 stories, and still it's not trivial for them to  
21 seek out and maintain funding for it. And again,  
22 outreach to recruit and maintain volunteers is

1 sort of an art and a science in and of itself.

2 Anything you want to add?

3 MR. CODY: No I think you covered it.

4 MS. OREMLAND: And just, our last  
5 slide here. Again, I think citizen science is on  
6 the rise. Whether that's because of the Act or  
7 just people are interested, I'm not really sure.  
8 But it does seem to be on the rise. It's, you  
9 know, people are exploring better ways to use it.  
10 It's highly diverse, its diverse use is across  
11 region and species.

12 There are ways that it is being used  
13 in fisheries management, but there are challenges  
14 ahead at the peer review phase, but it can be  
15 done.

16 And I think we'll just wrap with this  
17 quote from the Thiel paper that, "The  
18 contribution of citizen science has greatly  
19 enhanced research capacity, providing an  
20 increased workforce over extensive spatial and  
21 temporal scales at relatively moderate costs."

22 So, with that, do you have any

1 questions?

2 CHAIR BEIDEMAN: Thank you very much  
3 for that presentation. It's very interesting and  
4 a lot more thorough and lots of action working.  
5 I have Harlon first.

6 MEMBER PEARCE: Thanks for your  
7 presentation. One of our tasks here, Task Force  
8 6 is really involved in more, better data  
9 collection, for sure. I think everyone in this  
10 room understands that that's the key to the  
11 success to any of the fish that we have. It's  
12 also involving different things at the council  
13 level, make it move quicker based on better data  
14 and more real time type science.

15 And it's not as easy to do as it  
16 sounds. Now citizen based science is part of our  
17 thought process, and our recommendations are  
18 going to be to be able to use more and more of  
19 that to get it done. But you described a lot of  
20 the problems and the pluses and minus of that.

21 In the Gulf of Mexico we've got the  
22 harvesting component is under mandated VMS-type

1 programs. The charter fishing program is now  
2 mandated to do real time data with some sort of a  
3 method to give them real time data. The  
4 challenge has always been in that the growing  
5 recreational fisherman, which is great to have  
6 that happening, to be able to let them be able to  
7 help us understand our fishery in a better way  
8 through some sort of a citizen science situation.

9 To me it's awful difficult to try to  
10 mandate something to that segment of our fishery,  
11 but I think that they all realize that we need  
12 more and more of that data that they're getting.  
13 And it's very difficult. The iSnapper app, these  
14 types of things like that.

15 You mentioned many things, bias, the  
16 inability to ground through, sometimes these  
17 things. And then the lack of training sometimes,  
18 as to what, to me that's a big part.

19 You know, for instance, there are some  
20 tagging programs that are going on in the Gulf,  
21 and it's great to do it. But the guy that's  
22 doing the tagging doesn't know he needs to

1 measure that fish, or do this or get other data  
2 out of it, of what use is this tool unless  
3 somebody catches it and we know where it was  
4 tagged and so on and so forth.

5           So I think there are many things we  
6 have to consider. Avidity, all these things are  
7 problems that we have to overcome in order for to  
8 better understand how our great recreational  
9 fishery is working right now in the Gulf. And I  
10 think all I see is it growing.

11           So if it grows, it really needs to  
12 grow in the right way when it comes to data. And  
13 I'm sort of at a loss sometimes as to how to  
14 solve that problem, how to help them solve that  
15 problem to get it done.

16           And anything you can do to help that  
17 through education components, or through  
18 different things in the Gulf, through the council  
19 level, or whatever, I think it's much needed.  
20 Very much needed.

21           And I think the ability to utilize  
22 that data, coming from our great recreational

1 fishermen is very, very important for all the  
2 battles that are being fought right now in all of  
3 our fisheries everywhere.

4 So I applaud your efforts, but I think  
5 you've got a lot of work to do. And I think that  
6 the Gulf is a great place to start because  
7 there's a lot of situation damage you mentioned  
8 with the iSnapper, the other things that are down  
9 there to get done or other ideas that may come  
10 out of it. But it's got to be good data. It's  
11 got to be unbiased.

12 It's got to be some sort of a ground  
13 truth and take avidity into consideration. All  
14 those things are important. I think that it will  
15 go a long way to solving our problems.

16 CHAIR BEIDEMAN: Bob?

17 MEMBER GILL: Thank you, Madam Chair,  
18 and thank you for the presentation. Two comments  
19 that you didn't mention that I'm sure you're  
20 aware of. And this comes mainly from the Cornell  
21 Liebert program.

22 And one is, what they found is that

1 feedback to the individual at the individual  
2 level in, I don't want to say real time, near  
3 time, you know rapidly, so that they can see  
4 their contribution, they find absolutely vital to  
5 the success to their program.

6 And the other one, I'm sure you're  
7 aware, and this relates in part to your comment  
8 about the apps is that as the scale of the  
9 citizen science project grows, the cost grows  
10 dramatically. So, you know, thinking about scale  
11 relative to what you're trying to accomplish is  
12 important in terms of your ability to actually do  
13 it.

14 But I think citizen science, much as  
15 Harlon said, is going to be important in the  
16 future. Managing those expectations, I don't  
17 know how you're going to do it because I think  
18 the average stakeholder thinks that oh, I'm going  
19 to input into the stock assessment directly and  
20 I'm going to have that impact. And he's thinking  
21 catch and effort, right? So that's a huge  
22 challenge.

1                   Exactly how you work around that beats  
2 the heck out of me. But if you don't, you know,  
3 you may start off well, but you'll hit a big  
4 ditch. So, well done, thank you.

5                   CHAIR BEIDEMAN: Peter?

6                   MEMBER MOORE: Yeah, that was great,  
7 thank you. I'm thinking about getting back I  
8 think to some of Mike's comments about SK and  
9 industry involvement.

10                   I'm thinking about the electronic  
11 monitoring that's coming along and the reviewing  
12 of that information, those films. And how could  
13 that effort be sort of implanted within the  
14 citizen science community.

15                   And in particular, I know this is  
16 going to sound like, you know, fox guarding the  
17 hen house potentially, but how could this be  
18 something that is a talent that's imbedded in the  
19 industry so that they can actually do their own  
20 review with some kind of checks and balances like  
21 Randy was talking about yesterday.

22                   Where, you know, every so often, you



1 know, enforcement looks at the reviews and  
2 decides okay, this is working or it's not in  
3 terms of species ID and the quantitative aspect  
4 of that.

5 What made me think of it was that I'm  
6 familiar with a guy at the University of  
7 Delaware, Art Trembanis, or Trembanis who has an  
8 ROV that has a camera on it. He does a lot of  
9 scallop surveys for, I think it's for the  
10 industry. And he has a crowd of people that go  
11 online and they just review all his films and  
12 they identify, they're counting scallops. And  
13 it's actually incredibly effective.

14 And I don't know how he does the QC  
15 part of that, but you know, to Mike's point about  
16 sort of industry participation in its own  
17 welfare, if you will, it's just something that we  
18 could think about going forward. How can that  
19 not be externalized out to an agency or some  
20 other entity when, you know, it's part and parcel  
21 of the operations of the company?

22 There's a company in Seattle called

1 Sea State that I'm familiar with that does quota  
2 management cooperatively with NMFS on a lot of  
3 the pollock fisheries. And I don't know how, I  
4 think they get their information from federal  
5 observers on the vessels. But it's just sort of  
6 thinking creatively about how we can sort of move  
7 to the sort of next level of industry taking  
8 responsibility for its own business.

9 CHAIR BEIDEMAN: Mike?

10 MS. OREMLAND: Is it okay? No, I  
11 think the mechanism used I think is on SciStarter  
12 and there's a Seafloor Explorer on SciStarter.  
13 And that's an interesting, because -- I think, if  
14 I understood your point was how can industry  
15 explore ways to kind of take this on their own.  
16 And one thing that is interesting is, it's a new  
17 feature and again, maybe a small start. But I  
18 just wanted to at least share this information.

19 Zooniverse, which is the same thing  
20 that's another mechanism. You can use SciStarter  
21 or you can use Zooniverse as a tool to do exactly  
22 that scallop, the sea floor bottom images,

1 counting scallops or identifying other organisms  
2 in them. It's just sort of like a competing  
3 platform.

4 But one of the things that they just  
5 did, it used to be that that platform used to  
6 have to have a required number, used to have to  
7 have, I don't know, 10,000 images. You had to  
8 pay some money to do it. They've opened it up so  
9 it's entirely free now.

10 If you want to put a project on there  
11 and do it, and they actually have these data  
12 quality control mechanisms so that a certain  
13 number of people -- in other words before the  
14 data point is accepted, either, like, five people  
15 have to agree that no scallops were in the image.

16 Or if you were saying there were  
17 three, there have to be like, I think, seven that  
18 agree that there were seven scallops counted  
19 before that data point is registered on. Anyway,  
20 it's just another resource that they've kind of  
21 opened up a little more broadly.

22 MEMBER MOORE: Can you provide the

1 link to that?

2 MS. OREMLAND: Oh, absolutely.

3 MEMBER MOORE: It was on one of your  
4 slides, right?

5 MS. OREMLAND: Yes, actually it's just  
6 Zooniverse.

7 MEMBER MOORE: Zooniverse.

8 MS. OREMLAND: Yeah, but I'll be happy  
9 to email that to Heidi or to whoever --

10 MEMBER MOORE: Okay, great.

11 MS. OREMLAND: -- you guys, to email  
12 that to.

13 MEMBER MOORE: Thank you.

14 MS. OREMLAND: And I also just want to  
15 second the comment about the real time  
16 notification. I thank you for bringing that  
17 point up. The California Collaborative Fisheries  
18 Research Program just invested in a new dynamic  
19 site to share the results in a more timely  
20 manner. So that really was an important point to  
21 raise.

22 MEMBER OKONIEWSKI: You know, thank

1 you for your presentation. I think one of the  
2 benefits I'm seeing, or think I will see more of  
3 is when I first entered into the, I guess, the  
4 science realm of, was totally uninitiated outside  
5 or I was overwhelmed and almost felt like there  
6 was a fence, or they were insulated in this kind  
7 of tower.

8 But you didn't, like the whole, the  
9 high priesthood that you didn't approach. Or if  
10 you did you did it very carefully and at your own  
11 risk. And to the point where one star panel, I  
12 remember, where they gave us 30 seconds to make  
13 our public comment on a very sensitive issue.  
14 And didn't go over well.

15 But I think I've seen a lot of  
16 changes, at least on the west coast. And I have  
17 to thank Cisco for part of that, just with his  
18 leadership. But it was underway, I think, before  
19 he got on board too. Just because there's a lot  
20 of acrimony going around and which I think is  
21 just, you know when the taxpayer is funding this  
22 stuff, it's some level of transparency of process

1 is good to have.

2 But more to the point, I think you're,  
3 the approach of citizen science is going to have  
4 a lot of benefits just from, if nothing else,  
5 just from an object standpoint. And I'm really  
6 happy just to kind of see this process evolving.

7 So let that be -- stop there I guess  
8 on that piece. But I do have one small question  
9 I guess. What is a non-probability sample? I  
10 mean, I don't quite, I can imagine --

11 MR. CODY: Yes.

12 MEMBER OKONIEWSKI: -- what it might  
13 be.

14 MR. CODY: It's a term that's coming  
15 to use lately, but it really just refers to  
16 volunteer samples that don't follow, you know,  
17 strict sampling protocols. So for instance, a  
18 probability based sample would be you have a  
19 population and each sample or each individual  
20 population has a certain probability of being  
21 selected.

22 And you can either have unequal

1 probabilities where you weight one part of the  
2 population higher than you do the other. Or you  
3 can have equal probabilities where everybody has  
4 the same chance of being selected.

5 Or you have volunteer surveys or self-  
6 selected surveys where you have, it depends on  
7 the angler actually just signing up for something  
8 and then submitting data.

9 You don't really have any control over  
10 your sample. You basically get what you get. So  
11 you have to rely on other kind of sources of data  
12 to kind of characterize what you're getting or  
13 who you're getting it from.

14 So that's a concern that a lot of the  
15 survey scientists have right now is how do you  
16 categorize, or how do you characterize the  
17 suppliers of the data, so to speak, so that you  
18 can account for some of the biases that might be  
19 inherent in that kind of a process? So I hope  
20 that makes sense.

21 MEMBER OKONIEWSKI: Thank you for that  
22 explanation. I would think then that there's

1 some measures being undertaken that there are  
2 some minimal protocols that maybe the data, maybe  
3 some of that data can be a little more utilized,  
4 because it sounds like basically you couldn't  
5 really utilize it much at all.

6 MR. CODY: It's difficult to say.  
7 With that earlier paper, that paper rose out of,  
8 partially out of a study that we had funded with  
9 the University, or we being MRIP, with University  
10 of Florida through Rob Ahrens there.

11 And basically what the way, the  
12 approach he took was he looked at ways to  
13 evaluate those kinds of data so that you could  
14 make comparisons. And he said, you know, this  
15 isn't the answer to everything, but it's a start.

16 So what they did was they, you know,  
17 they tried to get the best comparisons they could  
18 get by going down to different regional or sub-  
19 state levels where you had good comparisons.

20 And for a species like snook, for  
21 instance, that occurs in southeast and southwest  
22 Florida and the fact that you have a bunch of



1 very motivated anglers to provide data, you can  
2 match up the samples pretty well with MRIP in  
3 terms of their comparability.

4 So as I said, he didn't prescribe that  
5 as the way to go forward, but just a start,  
6 really. So there are investigators are looking  
7 at ways to maximize the potential of those kinds  
8 of data.

9 CHAIR BEIDEMAN: Well, thank you again  
10 very much for your presentation. It sounds like  
11 there's some interest in, you know, perhaps  
12 having some further conversation with MAFAC in  
13 the future as this is rolling forward. So, you  
14 know, we'll probably be back in touch to see how  
15 the progress is going. And thanks again.

16 I wanted to tell Members that we're  
17 going to work through our break because we have -  
18 -- Dick has a report that he has to give then he  
19 has to leave. And we have to call in Rasela who  
20 wants to be on the plenary portion of our working  
21 group.

22 So I am going to say if you need to

1 use facilities, get up and go, but not all at  
2 once, if you could. And so we're going to move  
3 ahead. And I assume we're going to go to the  
4 subcommittee reports and we're going to bump Dick  
5 forward so he can present his recreational  
6 fisheries subcommittee report.

7 MEMBER BRANE: We ready?

8 CHAIR BEIDEMAN: Yes.

9 MEMBER BRANE: Thank you, Madam Chair.

10 We had a meeting yesterday of the recreational  
11 subcommittee and got an update from Russ Dunn on  
12 recreational fisheries. And the first thing he  
13 said is he thought there were positive things  
14 happening in recreational fisheries both within  
15 the administration and the agency. He thought  
16 things were looking up.

17 Tim Sartwell gave us an update on  
18 regional roundtables. The meeting in each  
19 region, have a meeting in each of the eight  
20 regions to see what the issues were, and we got a  
21 good update from Tim Sartwell.

22 He also gave us a brief update on the

1 8th World Recreational Fishing Conference. And  
2 there were at least a dozen, give or take, NOAA  
3 presenters or poster people there who were well  
4 represented.

5 He also showed us that they've  
6 developed these regional recreational fishing  
7 snapshots, these papers about what's going on in  
8 each region. And that was very well received.  
9 And he talked about the national implementation  
10 plan status update, completed or stat substantial  
11 progress over 80 percent of them are done.

12 Next he talked about the upcoming  
13 Recreational Fishing Summit which will be March  
14 28th and 29th here in the Crystal City Westin in  
15 Arlington. And the theme is opportunity and  
16 stability in recreational fisheries.

17 They put together a ten member  
18 advisory panel that has been selected and is  
19 working to develop objectives for the conference.  
20 One objective, or the main objective, is to  
21 identify discrete suite of challenges where  
22 tangible partners can be made through

1 collaboration.

2 And the number of us, I'm sure, will  
3 attend that meeting in March. It's the third  
4 Recreational Fishing Conference? Yes, the third  
5 one. And this one wants to have some discrete  
6 outcomes, which I think is good.

7 And then lastly we got a very good  
8 MRIP update from Richard Cody. Basically NOAA  
9 fisheries has addressed the National Academy of  
10 Sciences recommendation, the survey is more  
11 precise and accurate. That's the general outcome  
12 of it.

13 It will likely produce higher  
14 estimates of effort and probably catch. The new  
15 estimates will be available starting in 2018.  
16 And then there was a lot of discussion on how to  
17 communicate the changes in MRIP to the public.  
18 There was a lot of people that felt there needs  
19 to be better communication about what's going on  
20 with MRIP. And that concludes my report.

21 CHAIR BEIDEMAN: Well, thank you Dick  
22 for a very thorough report. I was kind of hoping

1 I could pop in there, but you worked through your  
2 whole meeting pretty much. So, thank you very  
3 much for telling me what we missed. Does anyone  
4 have any questions for Dick?

5 MEMBER GILL: Thank you, Madam Chair.  
6 Not a question but a comment, and it relates to  
7 Jennifer's email last night. And two stalwarts  
8 out in the subcommittee are gone, so the remnants  
9 that are left are few and far between. So that  
10 subcommittee needs some populating.

11 MS. LUKENS: You are correct. And  
12 that's one of the things I was going to bring up.  
13 So we'll talk about the email that I sent out  
14 last night and subcommittee chairmanship and  
15 representation members at a point later on today  
16 before we adjourn. Thank you for raising that,  
17 though.

18 CHAIR BEIDEMAN: And have safe  
19 travels, but you're still officially here until  
20 February, right? I'm just reminding all you  
21 folks. You have plaques and you have coins, but  
22 you're not completely sprung yet.

1 MS. LUKENS: Let's take just a moment  
2 and do this.

3 CHAIR BEIDEMAN: Okay. We're going to  
4 take a really brief break while we try to do the  
5 technical phone thing.

6 (Whereupon, the above-entitled matter  
7 went off the record at 11:30 a.m. and resumed at  
8 11:31 a.m.)

9 CHAIR BEIDEMAN: Okay. So a little  
10 change.

11 MS. LUKENS: I'm sorry, did you  
12 announce?

13 CHAIR BEIDEMAN: No, I wanted to make  
14 sure that we got Dick in.

15 MS. LUKENS: Okay.

16 CHAIR BEIDEMAN: It's no problem for  
17 the rest of the subcommittees to wait until after  
18 we work on the resilience document, or are you in  
19 a big hurry to do your reports?

20 MEMBER BONNEY: If you're asking if I  
21 care about the order, I don't think our  
22 subcommittee cares. So it's at your discretion,

1 Madam Chairman.

2 CHAIR BEIDEMAN: Thank you for the  
3 clarity.

4 MEMBER BONNEY: Ditto on the commerce  
5 side.

6 CHAIR BEIDEMAN: Thank you both. So  
7 in keeping, I guess, with the way that we have  
8 done this before, we've been approving these, or  
9 reviewing and approving these tasks first and  
10 then now we're going to wrap it up with an  
11 executive summary that would be in front with all  
12 of these attached as an Appendix.

13 And I recognize that there are some  
14 new individuals that are coming in on the tail  
15 end of projects, and that's the nature of MAFAC,  
16 I guess. I had the experience as well.

17 But those of us who have been around  
18 through this process are, you know, we've done a  
19 lot of work. And I'm really appreciative of all  
20 of the leads and the tasks and all of the task  
21 force and individuals that stepped up.

22 It was a little bit like eating an

1 elephant, and I think we did a pretty good job  
2 finding our way through it. So, it's a big  
3 topic. And I view the points that we brought up  
4 as being very relevant and important for any  
5 administration to hear.

6 We're at, finally, Task 6. We've  
7 approved the other ones. And the very last ones  
8 we did were by teleconference in August. So this  
9 task report is the final one. I'm going to turn  
10 it over to Harlon to steer his hopefully last  
11 task group chair activity.

12 (Off microphone comments.)

13 MEMBER PEARCE: Speak for yourself,  
14 Bob. All right. How would you like me to  
15 proceed, Madam Chair? I think everyone's had a  
16 chance to see it, I would hope. I know we're  
17 going to have some additions to it based on the  
18 citizen science we just looked at, and we talked  
19 about that.

20 (Off microphone comments.)

21 MEMBER PEARCE: Well, I don't know. I  
22 know we talked about, yesterday we said we would



1 look at the presentation and see where it fit in,  
2 or if we had to change anything in the report, we  
3 would. That's the only thing I think that was  
4 left sort of in limbo.

5 CHAIR BEIDEMAN: Okay. Well I'm going  
6 to let you steer that though. My understanding  
7 is everyone has received this. If there is  
8 something you believe should be in there, we are  
9 going to vote on this verbatim. And, you know,  
10 if we have amendments, we need to get them up  
11 there, on there, and approve it as it's written  
12 as a task to complete this out.

13 So, anyway, if you have information  
14 you need think needs to be in there, there were  
15 opportunities yesterday and the day before to be  
16 a part of this.

17 And the only question is, based on any  
18 of the presentations that we received today, do  
19 you believe that there is something that is  
20 critically needed to be added in here that we  
21 missed. So I'm going to throw it back, oh, to  
22 Heidi.

1 MS. LOVETT: So, what you all  
2 discussed was, it's up on the screen, just  
3 whether or not you wanted to make any changes to  
4 the existing bullet on citizen science based on  
5 what you heard today. That's how you left it.

6 So it's not that it was vacant from  
7 the report. It's in the report. It was just  
8 whether or not you wanted to add anything to it.

9 MEMBER PEARCE: That's correct,  
10 because we didn't have the benefit of the full  
11 presentation that we just got. Does everyone  
12 have the recommendation? It's all the way at the  
13 end. And is there anything additional you want  
14 to do to recommendations which would be involving  
15 citizen science? If not, that's fine.

16 (No audible response.)

17 MEMBER PEARCE: Hearing anything from  
18 anyone? Robert? I see you thinking over there.

19 PARTICIPANT: It's just the heat.

20 MEMBER PEARCE: I'm fine like it is,  
21 but it's up to the rest of us, rest of the group.  
22 I voted up, ma'am.

1 CHAIR BEIDEMAN: Do you want her to  
2 read it out loud?

3 MEMBER PEARCE: Yes, please.

4 MEMBER BONNEY: So this particular  
5 recommendation is, I should say, so all of these  
6 say in support of our recommendations. So the  
7 recommendations were actually are included and  
8 referenced in some of the other work that MAFAC  
9 has completed. But in addition to those, there  
10 were certain principles of good data collection  
11 programs that you wanted to ensure was in your  
12 report.

13 And related to citizen science it  
14 says, "Increasing the use of community based  
15 monitoring, citizen science, and crowdsourcing  
16 can improve efficiencies, especially during  
17 periods of reduced resources, but also increases  
18 stakeholder and fisherman awareness, builds  
19 trust, and fosters improved relations between  
20 them, scientists, and managers."

21 MEMBER PEARCE: Yes, Pam?

22 MEMBER YOCHAM: I think that sums it

1 up pretty well. And if you look down to bullets,  
2 there's a mention again of citizen scientists, or  
3 citizen science that another principle of good  
4 data collection is to be aware of repositories of  
5 information that are not held by NOAA. And  
6 citizen science is one of those. So I think  
7 between those two, it pretty much covers it.

8 MEMBER PEARCE: Sounds good to me.  
9 Robert, any problems before we keep going?  
10 Sounds like we're all on board.

11 Madam Chair, I think we beat this up  
12 pretty good. Does anybody in the room have any  
13 changes to this document? We've read it numbers  
14 of times. I mean, do you have it, Liz? Last  
15 minute Liz.

16 MS. BURMAN: I wasn't able to be in  
17 the room for some of the final editing. But when  
18 we first talked about this and I asked if we  
19 could add some climate risk reduction information  
20 and folks said yes, go ahead and write it up and  
21 send it over. But it went into the executive  
22 summary, Heidi is saying.

1 MS. LOVETT: That's where I thought  
2 you wanted it, but if it's -- I can pull it up  
3 and show it.

4 MEMBER BONNEY: What did we talk  
5 about?

6 MS. LOVETT: It's up to you.

7 CHAIR BEIDEMAN: Julie?

8 MEMBER BONNEY: So I think the process  
9 would be to make a motion to approve the document  
10 for Task 6. So I would make that motion.

11 MEMBER BROWN: Second.

12 MEMBER PEARCE: Is it both Bobs over  
13 there yelling? I heard just one.

14 CHAIR BEIDEMAN: Is there any more  
15 discussion?

16 MEMBER PEARCE: All right, we have a  
17 motion, seconded.

18 CHAIR BEIDEMAN: Then I, we have a  
19 motion, and we have it seconded. Could I have  
20 please all those in favor signify by saying aye.

21 (Chorus of ayes.)

22 CHAIR BEIDEMAN: And those opposed.

1 (No audible response.)

2 CHAIR BEIDEMAN: Then the motion has  
3 passed.

4 PARTICIPANT: Well, we got the  
5 executive summary still.

6 CHAIR BEIDEMAN: Yes, we are not quite  
7 over the bridge, but we're getting there. So,  
8 this is a big deal. I'm very happy. That was a  
9 very difficult report to write. So here we come  
10 with our executive summary which has kind of two  
11 parts. It has the top kind of intro section, and  
12 also has a very brief summary of the tasks down  
13 below that are listed.

14 But this is the first part that we  
15 hoped would be read pretty widely. And my hope  
16 was to try to make it interesting, relevant, more  
17 current, bring up some of the real issues that  
18 this resilience needs are things that are  
19 affecting people now and later.

20 So this has also been circulated to  
21 all the members. And it's been revised to  
22 include some examples from the Pacific, from the

1 Atlantic, and also from the Puerto Rico, you  
2 know, the hurricane issues of Harvey, Irma, and  
3 Maria.

4 And a specific mention of the fact  
5 that there's things that we think are kind of  
6 unique about the situation in Puerto Rico where  
7 they can really put in a resilience starting from  
8 zero.

9 But the report is there. It stands  
10 for itself, and those are recommendation that  
11 will be coming from MAFAC. So if you have --  
12 yes, Bob?

13 MEMBER GILL: Well, Madam Chair, I was  
14 going to move we accept the final summary report.

15 MEMBER YOCHAM: I just wanted to  
16 comment that Heidi's put up the information that  
17 Liz was asking about. So if you want to take a  
18 quick look at that.

19 MS. LOVETT: This is an additional  
20 bullet added to what was finalized yesterday.  
21 Sorry.

22 MEMBER BONNEY: So, Madam Chair, I

1 guess I'm looking at the new addition. How do we  
2 feel that this is different than the other  
3 bullets that are recommendations, I guess was my  
4 question. And so Heidi is the master in terms of  
5 controlling all the opinions and putting it on  
6 paper so it all flows and fits together.

7 And I just want to make sure that  
8 we're kind of staying within the corral of what  
9 we've been talking about over this whole two year  
10 process, and whether that one's kind of captured  
11 in the ones above or if it is a standalone new  
12 and different addition. So, that's my question.

13 CHAIR BEIDEMAN: Well my reading of  
14 that is certainly some of the tasks that we were  
15 doing are specifically related to what risks  
16 might be being faced by fishing communities, the  
17 tasks particularly that you did where people were  
18 planning.

19 So I think reducing the risk would  
20 also be people planning. That would reduce risk.  
21 So I don't believe that it's a wide departure  
22 from our overall theme. That's my thought.



1 MS. BURMAN: It's all blurred. Two  
2 days ago when we first discussed this, I  
3 suggested or asked that we put in something about  
4 what's necessary societally to reduce climate  
5 impacts. I mean, we can prepare for risks, but I  
6 didn't want to miss the point that, you know,  
7 until we reduce our carbon output we're not --  
8 we're leaving ourselves at risk.

9 And I specifically mentioned a  
10 paragraph out of a report that we got on the  
11 webinar a couple weeks ago and was asked to write  
12 a paragraph to put in. So I did that a couple  
13 days ago, but I think it fell through the cracks  
14 in terms of getting submitted to the discussion  
15 yesterday. And I wish I could have been involved  
16 in the discussion. I missed it.

17 So I feel like this concept was  
18 introduced and supported a couple days ago. And  
19 to me, the most salient part of it is the last  
20 sort of half a sentence. But many of these  
21 ongoing ecosystem changes can only be avoided  
22 with substantial reduction and atmospheric carbon

1 dioxin emissions. And I'm hoping that MAFAC  
2 continues to make that point when possible, in  
3 light of how often this particular issue is  
4 denied.

5 MEMBER BONNEY: So I guess I'm looking  
6 at this and trying to tie it all together. So I  
7 don't know that we need the second sentence in  
8 here, because it's all throughout the document  
9 and all the recommendations.

10 So the point of this recommendation is  
11 conservation measures that deal with the carbon  
12 footprint. And I think it's lost in the way this  
13 is structured because you're trying to do point  
14 recommendations in the top. So I would think you  
15 would want to kind of rearrange it to get to that  
16 point.

17 MS. BURMAN: Yes, because this was  
18 written a couple of nights ago, it probably is  
19 lost in what the work you've done since. And I'm  
20 supportive of anything that makes it fit better  
21 into the document.

22 CHAIR BEIDEMAN: Mike?

1                   MEMBER OKONIEWSKI: I think I had to  
2 step out yesterday at the end of this. But I  
3 think Julie's points, well they made an  
4 impression on my mind anyway that in taking out  
5 the second sentence, I think, and I would  
6 recommend that we follow that, Julie's advice on  
7 that.

8                   But also the conservation measures,  
9 and now I'm beginning to understand it because  
10 the first thing is I had some alarm that further  
11 conservation methods or measures on fisheries  
12 themselves. If we could clarify that, that  
13 you're speaking to conservation measures as far  
14 as carbon emissions or whatever, I would feel a  
15 little more comfortable.

16                   And I'm also going back to the  
17 original charge, I think, which you sent out a  
18 couple of days ago, Heidi. And I didn't quite  
19 understand how that -- I'm not saying it doesn't,  
20 I just don't see the connection on the original  
21 charge in this paragraph.

22                   I'm not against it, but I would like

1 to see a second sentence come out and specify the  
2 conservation measures we're talking about a  
3 little bit more specifically so that we know it  
4 applies to environmental conservation measures, I  
5 think is what you're saying.

6 CHAIR BEIDEMAN: So -- go ahead,  
7 Heidi.

8 MS. LOVETT: So it seems like there's  
9 two, maybe I misheard. But either remove the  
10 second sentence or move it to the end, I guess  
11 are the two options? Just to be clear.

12 MEMBER MOORE: All right. Thanks.  
13 Perhaps this could be solved by leaving the ocean  
14 sentence, the second sentence in, and then  
15 eliminating Mike's issue. And I agree with him  
16 on this conservation measure is unclear.

17 You could say, if you leave the second  
18 sentence in and then start the third sentence  
19 with many of these ongoing ecosystem changes  
20 could only be avoided, and then you don't even  
21 get into the conservation question, because that  
22 might sort of muck up the whole bullet point.

1           But I think it's important to mention  
2 what these issues are because all of the ones  
3 mentioned in that second sentence are affecting  
4 recreational, commercial subsistence no matter  
5 what fishery. So, I think it's important to have  
6 those in as a sort of give some specificity to  
7 this.

8           CHAIR BEIDEMAN: Columbus?

9           MEMBER BROWN: I agree with you,  
10 Peter, and I think that it solves a problem for  
11 me in terms of not getting too deep into the  
12 doomsday approach because all change is not bad.  
13 It depends on where you are. And if you're  
14 catching more black bass in New England, that's a  
15 happy day for you. Right, Bob?

16          CHAIR BEIDEMAN: Go ahead, Mike.

17          MEMBER OKONIEWSKI: I think my comment  
18 will be along the line with what Columbus said.  
19 That -- now I just lost the damn thing ---  
20 increasing intensity and frequency are all having  
21 extreme negative impacts on fishing communities.

22           But like in the west coast, we're

1 coming out of, you know, a lot of stocks are  
2 rebuilt. The whiting is at an all-time high, or  
3 close to it as far as biomass goes. Pollock in  
4 the Bearing Sea, I believe is still way up there.

5 So yes, there's changes going on, but  
6 these aren't -- well, if we get into the POP in  
7 the Gulf of Alaska, or perch for Gulf of Alaska,  
8 we could have an offset to the cod. Just saying  
9 that they're all having extreme negative impacts  
10 on fishing communities, I think that's true in  
11 certain cases.

12 But on the other hand, we're hearing  
13 about evidence anecdotal, but nevertheless, you  
14 know, we're seeing other stocks of fisheries that  
15 are coming into some of these areas where they're  
16 losing other stock.

17 So I don't know that it's -- it sounds  
18 like kind of a catastrophic event to all fishing  
19 communities going on. And I don't know that I  
20 really want to portray that. Or at least, maybe  
21 that's just my interpretation, how it sounds.

22 CHAIR BEIDEMAN: Could we say extreme

1 negative impacts on some fishing communities?

2 MEMBER OKONIEWSKI: That would be an  
3 improvement over --

4 MS. LOVETT: Could we just take out  
5 "extreme"? I mean, frankly the domoic acid  
6 stuff, the effects on salmonids, crab, I can't  
7 speak to whiting and others, I won't. But if we  
8 took out the word "extreme," would that help in  
9 that sentence?

10 (Off microphone comments.)

11 CHAIR BEIDEMAN: And then the comment  
12 was also to maybe add negative impacts on some  
13 fishing communities or even many, but just to  
14 indicate that there are some haves and have not's  
15 as we heard. But some people are going to, or  
16 some regions may actually benefit as fish move  
17 into those areas.

18 MEMBER BROWN: I just say get rid of  
19 the negative. Just leave it neutral; they're  
20 impacts. And depending what community you're in,  
21 they differ widely.

22 CHAIR BEIDEMAN: Bob?

1                   MEMBER RHEAULT: I'm always a believer  
2                   that less is more. And I would suggest taking  
3                   out the first two sentences and just really  
4                   focusing on the fact that we can minimize the  
5                   risks of, you know, or the need for -- that  
6                   resilience in fishing communities is important.  
7                   But to significantly impact the climate change,  
8                   we're going to have to reduce the carbon input.

9                   I mean, let's put the main point up  
10                  front and not hide it at the end of the sentence.  
11                  All those points are made elsewhere in, you know,  
12                  I just think that the point we're trying to  
13                  highlight here is that if we really want to  
14                  address the problem, it's emissions. Keep it  
15                  simple.

16                  I fully support your point. I'm just  
17                  trying to put it out there -- not hide it at the  
18                  end of the bullet.

19                  MEMBER YOCHER: I was just going to  
20                  mention that you'll hear in a little bit from the  
21                  ecosystem subcommittee that the review of the  
22                  document on climate change includes, as one of



1 the bullet points that were pulled out of that  
2 report that we feel it's important to retain,  
3 specifically, that comment about the only way to  
4 avoid some of these problems is from emissions.

5 So MAFAC as a body is saying in  
6 another way, assuming everybody approves that  
7 language, that this is an important point.

8 CHAIR BEIDEMAN: So, should we tighten  
9 this up and just say that we're going to explore  
10 opportunities to -- it's good for them to explore  
11 it, but ultimately the ecosystem changes can only  
12 be avoided with substantial reductions and put  
13 that right in the front? I have a problem with  
14 climate change being capitalized in both places.

15 Craft the first sentence so that it  
16 flows into the second one. And make one or maybe  
17 those two sentences, again getting rid of the one  
18 in the middle. And it's true that we discussed  
19 all of those, except we don't really spend a lot  
20 of time on weather.

21 PARTICIPANT: Good bye, Dick.

22 CHAIR BEIDEMAN: Good bye, Dick.

1 PARTICIPANT: Good bye, Dick.

2 MEMBER OKONIEWSKI: Good bye,  
3 everyone. You've been very open.

4 CHAIR BEIDEMAN: What's your pleasure  
5 on this? Does anybody have -- Peter, sorry.

6 MEMBER MOORE: That's all right. I  
7 actually feel -- I'm not going to get into a  
8 battle over this, but I think it's pretty  
9 important to be specific to what we are managing,  
10 which is species in a body of water which is the  
11 ocean.

12 So you could drop the impacts from the  
13 impacts of climate change, and if you want you  
14 could simply say from the impacts of ocean  
15 warming acidification reduced oxygen in extreme  
16 weather events.

17 And then, you know, come up with why  
18 you need to reduce emissions. But I think if you  
19 remove that, unless there's somewhere but I can't  
20 see the bullets above -- even though we worked on  
21 this yesterday, I don't remember where we  
22 specifically addressed those issues.

1           You know I don't want to water this  
2 down. I think it's important. I mean, you know,  
3 it's fair enough in the Pacific or Alaska, things  
4 are going to be okay, you know, other species are  
5 coming in.

6           I can tell you on the East Coast, we  
7 aren't going to replace a billion dollars of  
8 fisheries. We aren't. Lobsters and scallops,  
9 we're not going to replace them with scup and  
10 croaker. Sorry.

11           And I think that it's important. I  
12 think the economic impact of this alone for  
13 fishing communities is massive. And I think that  
14 we need to be taking it seriously. I think we  
15 need to be making a statement that's as specific  
16 as possible.

17           I don't want to be offensive  
18 politically to anybody, but I think it's  
19 important to, we know what the issues are that  
20 are affecting, you know, to Bob's point with the  
21 exception potentially of the ocean acidification  
22 question, right?

1           But the others I think, particularly  
2           the warming and the reduced oxygen, we saw it in  
3           our ecosystem monitoring with the IOOS. You can  
4           see it. You can see the thermal habitat  
5           shrinking for certain species, and those are high  
6           value species. So I think it's important to be  
7           specific as to the point that we can without  
8           belaboring the point.

9           CHAIR BEIDEMAN: One moment. I think,  
10          Rasela, are you on the phone? Can she hear me,  
11          or are we on mute? We're on hold?

12          (Off microphone conversation.)

13          CHAIR BEIDEMAN: Rasela?

14          MEMBER FELICIANO: Hi.

15          CHAIR BEIDEMAN: Hi. This is the rest  
16          of the Members of the Committee. We're here.

17          MEMBER FELICIANO: Okay.

18          CHAIR BEIDEMAN: And we're discussing  
19          the final executive summary.

20          MEMBER FELICIANO: Okay.

21          CHAIR BEIDEMAN: So I think, do you  
22          have anything in particular that you would like

1 to say right now, and then we'll let you have  
2 that opportunity since you haven't been here.  
3 Have you, did she get the documents?

4 MEMBER FELICIANO: Yes, I received  
5 some of the documents and I have read -- I have  
6 not been able to read all of them. But anyway,  
7 my main concern is again, like, in our last phone  
8 conference call is the Pacific Island Nations and  
9 US Territories and Pacific Islands.

10 I somehow feel that there's a lack of  
11 or not enough assessment or knowledge as far as  
12 climate assessment is concerned in that area.  
13 And that is mainly my concern at this point. I  
14 don't know how if I would require to write a  
15 letter to make it official, or that's partly what  
16 I wanted to input.

17 Yesterday, unfortunately, I was unable  
18 to connect. So that summarizes. That's my  
19 concern at this point. I'm reading the report at  
20 the moment, and I'll have the assessment on, you  
21 know, mostly on the mainland in the U.S. But I  
22 am wondering if in the future what are the plans

1 of the MAFAC as far as assessment and analysis of  
2 the U.S. Territories.

3 MS. LOVETT: So is she talking, yes.  
4 Okay. So Rasela, we are talking about the  
5 resilience executive summary. I think what you  
6 were just referring to is dealing with the  
7 climate assessment report, which we will be  
8 getting to later on in the meeting.

9 MEMBER FELICIANO: Oh, I see. I see.

10 MS. LOVETT: So, we don't want to  
11 forget you, but sorry you didn't have context.

12 MEMBER FELICIANO: I apologize.

13 MS. LOVETT: No, no.

14 MEMBER FELICIANO: But and the same  
15 thing, I'm talking as far in the resilience is  
16 again to keep in mind that the U.S. Pacific  
17 Territories as far as that is concerned as well.

18 MS. LOVETT: Thank you.

19 CHAIR BEIDEMAN: Bob?

20 MEMBER RHEAULT: Thank you, Madam  
21 Chair. And I'm sorry that Peter left. I didn't  
22 realize he was departing.

1           The comment I wanted to make relative  
2           to Peter's comment is, that's certainly true, but  
3           it's also a localized thing. It's not 100  
4           percent across the board. And to Columbus'  
5           point, there are localized areas that are going  
6           to see some positive stuff out of this. So to  
7           paint it as all negative seems to me to be  
8           misleading.

9           And so I would support Columbus'  
10          suggestion of taking out the negative as well as  
11          the extreme to support that statement. So I  
12          differ from Peter's position and, you know, from  
13          where he sits, I understand. But I think there  
14          are also areas that are going to be better off in  
15          some areas than others.

16                 CHAIR BEIDEMAN: Heidi?

17                 MEMBER FELICIANO: Can I ask. I'm  
18                 having trouble hearing the, I'm sorry, the other  
19                 Members' comments.

20                 MS. LOVETT: Rasela, we're having a  
21                 hard time with our audio here. We'll ask people  
22                 to speak up, but I'm not sure if we're going to

1 be successful at that. We'll do our best.

2 MEMBER FELICIANO: Okay.

3 MS. LOVETT: And you might want to --

4 MEMBER FELICIANO: Okay. I'll just  
5 listen in and try to figure out what's going on.

6 MS. LOVETT: You might also want to  
7 put yourself on mute when you're not talking.

8 MEMBER FELICIANO: Okay. Thank you.

9 CHAIR BEIDEMAN: Heidi?

10 MS. LOVETT: So what I've heard so  
11 far, and what Peter said he supported before he  
12 walked out, was Bob's comment about moving the  
13 last sentence to the front and with the other  
14 recommendations -- louder, okay.

15 I will -- may I read this bullet from  
16 what I've heard from the conversation so far?  
17 And the one thing I wanted to note was, I think  
18 the point that Liz wanted to make is to include  
19 the term risk because that term is not  
20 necessarily brought up elsewhere in the report,  
21 even though that was the focus of the work over  
22 the last couple years.



1           So many of these ongoing ecosystem  
2 changes can only be avoided with substantial  
3 reductions and atmospheric carbon dioxide  
4 emissions. NOAA should -- I'll include the word  
5 "should" -- NOAA should continue to explore  
6 opportunities for reducing risks borne by fishing  
7 communities from the impacts of climate change.

8           Ocean warming and acidification,  
9 reduced oxygen, and extreme weather events that  
10 are increasing in intensity and frequency are all  
11 having impacts on many fishing communities.  
12 Maybe we should say, 'are having impacts on many  
13 fishing communities.'

14           (Off microphone comments.)

15           MS. LOVETT: So take out "many."

16           Okay.

17           CHAIR BEIDEMAN: Is this acceptable  
18 for those around the table? Does that work?

19           (No audible response.)

20           CHAIR BEIDEMAN: Okay. Bob, did you  
21 have your hand up?

22           MEMBER RHEAULT: I did. Similar, I

1 said this document outlines many approaches to  
2 minimizing the risks of perturbations to fishing  
3 communities. However, to minimize these risks  
4 would require global reductions in carbon  
5 emissions. But I'm perfectly happy with this.

6 MEMBER BONNEY: I think the concept is  
7 nested in each other.

8 MEMBER RHEAULT: Exactly.

9 CHAIR BEIDEMAN: Julie?

10 MEMBER BONNEY: So based on this  
11 conversation and sitting through two drafting  
12 sessions as a committee, I would make a motion  
13 that we approve the executive summary.

14 MEMBER GILL: Second.

15 MEMBER BROWN: Second.

16 CHAIR BEIDEMAN: So having a motion  
17 promoted and seconded, I'm going to move the  
18 question. Is there any further discussion?

19 (No audible response.)

20 CHAIR BEIDEMAN: Then all in favor of  
21 this document being the executive summary for our  
22 very consuming work that we've done on this issue

1 for the last two years. I know I'm dragging it  
2 out, but it's monumental and a miracle in my  
3 book. And so anyway, if you would signify please  
4 by saying aye, if you are in favor.

5 (Chorus of ayes.)

6 CHAIR BEIDEMAN: And anyone opposed?

7 (No audible response.)

8 CHAIR BEIDEMAN: And anyone  
9 abstaining?

10 (No audible response.)

11 CHAIR BEIDEMAN: Then it is approved  
12 by the Committee this day, 11/30/2017. Thank you  
13 again. I'm going to say, you know, on behalf of  
14 Ted who helped some on some of the groups, he was  
15 involved.

16 And I miss having him here, but I also  
17 appreciate very much the work that was done by  
18 the leads of the tasks and the people that filled  
19 in when staffing was low on the groups to try to  
20 make sure that we had the types of quality,  
21 oversight, and involvement from the panel.

22 So, I'm very happy to see this

1 resilience project come to its conclusion. And  
2 thanks again to everyone who participated in  
3 crafting or being part of the lead. Thanks.  
4 Julie?

5 MEMBER BONNEY: I was just going to  
6 call Heidi out because as task leader four, she  
7 was a big help in terms of all the interviews and  
8 writing assignments and all that. And I know for  
9 me as the task leader, I couldn't have done it  
10 without her help. So, thank you, Heidi.

11 CHAIR BEIDEMAN: And yes, that goes  
12 double from me. So I guess we're actually going  
13 to get a break this morning. And, do you want a  
14 break, or do you want --- do we have a few more  
15 things?

16 MEMBER BONNEY: How much time do we  
17 have left? Should we just push on through and  
18 get done or should we be breaking for lunch and  
19 coming back? That's my question.

20 MS. LUKENS: I'm all for ending early  
21 and working through lunch; however, I would like  
22 you all to take the time to talk about the

1 aquaculture letter and the summary from the  
2 ecosystem from the climate assessment report.  
3 But then also ideas for future topics from MAFAC,  
4 upcoming subcommittee assignments, and chairs,  
5 and the next meeting.

6 So I have a few things for us to talk  
7 about that I want you guys to get out of here as  
8 early as possible, but I think it would be good  
9 to take the time to have those discussions. So  
10 that's just my input, but I am not a Member of  
11 the Committee.

12 CHAIR BEIDEMAN: So, well that's quite  
13 a list.

14 MS. LUKENS: I've got a list.

15 CHAIR BEIDEMAN: Yes so, maybe we'll  
16 do just an hour for lunch and be back. How would  
17 that work? No, check back?

18 MEMBER BONNEY: I was just going to  
19 see if people would be up for, we do have an hour  
20 built in for the lunch break, but I'm wondering  
21 if people would willing to go out and get  
22 something and bring it back and work through

1 lunch.

2 CHAIR BEIDEMAN: I'm amenable to that.

3 MEMBER GILL: And the other question  
4 is whether we'll lose members by extending the  
5 time. You know, if we are, then I would suggest  
6 we work through.

7 PARTICIPANT: I think Pam's suggestion  
8 makes perfect sense.

9 MS. LOVETT: I agree with Pam, too.

10 CHAIR BEIDEMAN: So, 12:10. So if you  
11 grab your lunch and come back, we'll try starting  
12 at 12:30. Okay.

13 (Whereupon, the above-entitled matter  
14 went off the record at 12:10 p.m. and resumed at  
15 12:49 p.m.)

16 CHAIR BEIDEMAN: Okay, it's 12:49.  
17 And we'll be resuming our section. So this is  
18 the comments and I guess the cover letter,  
19 transmittal letter, cover for the comments. Do  
20 you want to walk through them Pam?

21 MEMBER YOCHER: Sure. Thank you.  
22 This is the comments on the draft climate

1 assessment document. And what the ecosystem  
2 subcommittee did yesterday was take the  
3 recommendations from the task force, which as I  
4 think everybody knows task forces work under  
5 MAFAC. They make their recommendations to MAFAC,  
6 and then MAFAC decides whether to pass those  
7 along or not.

8 And so after discussion, we took I  
9 think most of the recommendations of the task  
10 force with some minor wordsmithing. And then I  
11 wanted to show you, so Heidi sent that out last  
12 night. And then I believe the document that's  
13 on, so I hope everybody had a chance to look at  
14 that.

15 And I believe what Heidi has got on  
16 the screen now are some changes that came in  
17 after the first draft was circulated last night.  
18 So first, I'll ask if anybody has any additional  
19 kind of late changes or comments that they want  
20 to make. And if not, we'll just go ahead and  
21 review these that came in, I think this morning.  
22 Yes, go ahead, Bob.

1                   MEMBER GILL: Well, I don't need to  
2                   jump in line. I had a few comments, questions,  
3                   suggestions to make as we go along. So wherever  
4                   you would like to consider them, thank you,  
5                   ma'am.

6                   MEMBER YOCHER: Okay. It's a short  
7                   document. Then, let's just start at the top,  
8                   Heidi, and walk through it.

9                   Yes, so basically the introduction  
10                  just says that, you know, this is a memo that  
11                  will go from the Chair of MAFAC to the assistant  
12                  administrator. And really the only significant  
13                  thing here is that second paragraph during the  
14                  webinar.

15                  And then we heard yesterday also on  
16                  the presentation of this document that the best  
17                  way to get your comments heard is to submit them  
18                  through this website, because they're going to be  
19                  tabulated and officially transmitted.

20                  You can make comments outside the  
21                  website, but it's better if you do it through the  
22                  website, is my understanding. But MAFAC can't do



1 that directly, so we have to work through the  
2 chain of command. And so we're formally  
3 requesting that our comments be passed on in this  
4 way.

5 So then if you could just go down to  
6 the comment section. There's an introductory  
7 paragraph that talks about, you know, overall we  
8 thought the document was well done.

9 And again, a point that's been made  
10 multiple times is to make sure that you put in  
11 the parts that you liked as well as the parts  
12 that you didn't like, because they are severely  
13 space limited. And if you don't call out the  
14 sections that you like, it's possible that during  
15 the review process they would get edited out  
16 because nobody mentioned them.

17 So Heidi, thank you very much for  
18 setting this up so that it's really clear. The  
19 first section, series of bullet points are the  
20 things that we're referenced in the report that  
21 we think are important to retain, we in the task  
22 force. And then there's another section that

1 talks about things that we through were missing,  
2 or changes that we'd like to see.

3 And then before we go point by point,  
4 I want to make the further comment that both the  
5 task force and the subcommittee yesterday talked  
6 about the importance of focusing on very high  
7 level comments.

8 I know I, as an individual, had some  
9 specific comments about information that I  
10 through was incorrect in the report, and I'm  
11 going to submit those separately rather than  
12 getting down in the weeds. So this is supposed  
13 to be a bigger picture commentary on the report.

14 So with that, let's just go point by  
15 point. The first bullet point references the  
16 fact that the report made clear that some of  
17 these changes are happening now, and this isn't a  
18 future problem; it's a current problem. And so  
19 you can see the addition of the one sentence  
20 there; otherwise, this is pretty much as it came  
21 to us from the task force. Go ahead, Bob.

22 MEMBER RHEAULT: Thank you, Pam. A

1 suggestion on rewording on that added sentence.  
2 Put something like intensity and frequency of  
3 events is increasing, period.

4 MEMBER YOCHER: Okay. So intensity  
5 and --

6 MEMBER RHEAULT: And frequency.

7 MEMBER YOCHER: -- and frequency of  
8 events is increasing, period. Okay. Thank you.  
9 Any other comments on this one? Okay, moving  
10 down to the next point.

11 This one I think gets at something  
12 that came up during our last discussion, too,  
13 with regard to making sure that people recognize  
14 that some of the changes that occur -- anyway,  
15 spelling that out a bit more about what exactly  
16 is going to be happening to species as a result  
17 of climate change.

18 Some will do well where they are.  
19 Some may, you know, move and so on. So if  
20 everybody could take a minute to look at that and  
21 see if they are okay with the bullet point and  
22 with these additions. Yes, Bob, go ahead.

1                   MEMBER GILL: Thank you, Pam. The  
2                   only question I raise there is the last part  
3                   which says do not persist, the original intent  
4                   was thrive and those that don't thrive.

5                   By putting the "persist" in there,  
6                   you're talking about elimination as opposed to  
7                   minimal populations that are drastically  
8                   different and perhaps not as helpful as  
9                   previously. Seems to me that that is worthwhile  
10                  there. So my suggestion would be --

11                  MEMBER YOCHER: So you would --

12                  MEMBER GILL: -- take out the persist  
13                  portion, to allow for those populations that  
14                  still exist, but they're no longer are at the  
15                  level that they were previously.

16                  MEMBER BONNEY: So again, this poorly  
17                  written thing, again is mine. I'm not a writer.  
18                  There are salmon populations that are probably  
19                  going to go extinct. They're already on the  
20                  pathway. It's likely to happen.

21                  I mean, I can name a few right now  
22                  that are on a trajectory that are probably not

1 reversible. So that's where the -- there's some  
2 stocks that just aren't going to be there.

3 MEMBER GILL: And I don't disagree. I  
4 think you're exactly right. All I'm suggesting  
5 that by focusing entire on them and eliminating  
6 consistent of the others. And if you leave it as  
7 which do not in the future, doesn't exclude the  
8 ones that are extirpated, right?

9 So by doing that, you leave a little  
10 more room for the minimalist populations or the  
11 drastically reduced, plus those that no longer  
12 exist at all.

13 MEMBER YOCHER: So does anybody have  
14 some suggestions for wording it? Seems like you  
15 want to add.

16 (Off microphone conversation.)

17 MEMBER RHEAULT: If you look at, say,  
18 Long Island Sound Lobster, they're gone.  
19 Southern Main Atlantic Salmon, don't exist. So  
20 we've already seen the impacts of climate change.

21 MEMBER YOCHER: Well let's see, so  
22 what species thrive in their current locations,

1 where they may exist in the future, and where  
2 populations may decline or go extinct or  
3 something in the future. Or which will decline  
4 or cease to exist. Would that address both of  
5 your issues?

6 MEMBER GILL: Yes. That's fine.  
7 Sure.

8 MEMBER YOCHER: Because some of them  
9 will decline without necessarily ceasing to  
10 exist.

11 MS. LOVETT: Right.

12 MEMBER YOCHER: Okay. Any other  
13 comments or suggestions on that one? Okay, the  
14 next point gets at the fact that I think was  
15 mentioned during the presentation yesterday, that  
16 of the four reports that have been done, only the  
17 last two -- this one and the one previous -- even  
18 had an ocean chapter.

19 And so, you know, we just want to call  
20 out that we like the fact that oceans are under  
21 consideration. So any comments or changes with  
22 this one? Okay, and this one -- do we still have

1 our caller on the phone?

2 (Off microphone conversations.)

3 MEMBER YOCHER: Rasela, I was hoping  
4 you would take a look at this one in particular.  
5 It says it's important to identify the most  
6 vulnerable marine ecosystems, tropical and polar  
7 ecosystems in the U.S. And the document itself,  
8 I think on the very first page does call out, you  
9 know, the Caribbean, for example.

10 And then the tasks force, their  
11 attempt to capture the importance that some  
12 ecosystems are more vulnerable than others is  
13 with this bullet point. And I wanted to see if  
14 you had any --- or Raimundo -- if you had any  
15 other suggestions for how that could be  
16 strengthened or if you think that covers it.

17 CHAIR BEIDEMAN: Sorry. Pam wanted  
18 your input on the bullet on the current draft of  
19 the letter that will be going in as a comment,  
20 and the bullet says --

21 MEMBER FELICIANO: The current draft  
22 on the report?

1 CHAIR BEIDEMAN: The climate change  
2 report.

3 MEMBER FELICIANO: Climate change  
4 report.

5 CHAIR BEIDEMAN: Excuse me.

6 MEMBER FELICIANO: The climate system  
7 draft. I think my only informative input is the  
8 inclusion of the --- the inclusion of the U.S.  
9 Territories in the South Pacific region.

10 As I understand it, a lot of the  
11 impacts here is based on mostly the U.S. extreme  
12 weather. However, within our tropical weather,  
13 we face a slightly different ecosystem as well as  
14 the climate change.

15 And I would like to ask if we could  
16 include the inclusion of the U.S. Territories as  
17 far as the data, scientific data assessment and  
18 analysis --

19 (Audio cuts out.)

20 MEMBER FELICIANO: And that would be  
21 really appreciated. And I'm looking at review  
22 the whole assessment here and if it correlates



1 with that. But there are a lot of different  
2 applications.

3 And I am requesting that there's in  
4 the report for an inclusion of further assessment  
5 analysis, scientifically on the U.S. Territories  
6 in the South Pacific and speaking of American  
7 Samoa, perhaps.

8 I don't know, I can't speak for Guam  
9 and the other territories. But I specifically  
10 talking about our islands, our U.S. Territory and  
11 American Samoa. And that's one of my requests on  
12 the data points.

13 But everything else, I don't have any  
14 other comments on or any changes on the report  
15 except for the inclusion of an addition on the  
16 U.S. Pacific islands.

17 MEMBER YOCHER: Okay. Thank you. I  
18 just wanted to read the bullet point to you that  
19 the report did call out that some ecosystems are  
20 more vulnerable than others, and highlighted  
21 tropical. But I think we can find a place in the  
22 document to specifically mention the South

1 Pacific Islands or the U.S. Territories. And  
2 then, Raimundo?

3 MEMBER FELICIANO: Yes.

4 MEMBER ESPINOZA: So, thank you.  
5 Thank you, Pam and Madam Chair. I completely  
6 agree. I think we need to better understand the  
7 potential impacts to Native Americans is called  
8 out. I think a bullet specifically that says  
9 U.S. Territories' jurisdictions would be  
10 appropriate because I think when we talk about  
11 the vulnerable ecosystems, those necessarily  
12 don't include, or they could include but they  
13 don't necessarily call attention specifically to  
14 the jurisdiction.

15 So we could call attention, we could  
16 be tropical and do Florida and do Hawaii, but  
17 then some of the island jurisdictions could  
18 possibly be overlooked.

19 So I think it's important what our  
20 colleague Rasela says. And I think it's  
21 appropriate to also include northern Marina  
22 Islands, Guam, as well as American Samoa, Puerto

1 Rico, and the USVI. And instead of just having  
2 that list, I think U.S. Territories is  
3 appropriate.

4 One thing I didn't see that would also  
5 could play a role into this is one of the, that  
6 is also U.S. Territories but it includes other  
7 U.S. based communities is the impacts to islands  
8 specifically.

9 And so the islands, the geography, you  
10 know, while we do address the ecosystem, it's  
11 something that calling out specifically islands  
12 are places that we can have U.S. refugees.

13 I think, I believe it's Louisiana or  
14 Texas, I can't remember the name of the island,  
15 that there is said to be one of the first U.S.  
16 refugees due to climate change. Can't remember  
17 the name of this island.

18 So I think it's one of those things  
19 that for U.S. folks, for U.S. continental areas,  
20 if we also focus on U.S. Territories, we kind of  
21 neglect some of the first refugees in the U.S.  
22 will be due to climate change, will be on the

1 mainland.

2 So that's also important to consider.

3 And it's, you know, encompassing. So I'm not  
4 sure how to make a suggestion and how to include  
5 U.S. Territories as well as islands, but I'll put  
6 it out there for folks to think over.

7 MEMBER YOCHAM: Okay. Thanks. One of  
8 the things Heidi, if you can. It looks like  
9 you've identified a place where we can put this.

10 (Off microphone comments.)

11 MS. LOVETT: So, I just wanted to  
12 share what was reiterated at the front end of the  
13 webinar, which was that this document was not  
14 trying to illuminate or pull together all the  
15 science that has been done. It's really taking a  
16 high level look. And it looked at three key, and  
17 it identified three key messages.

18 And throughout the document, they do  
19 discuss Pacific Islands in three or four places.  
20 So when talking about the declining corals and  
21 that they are extremely vulnerable because they  
22 are in the topical areas. They are more

1 vulnerable than other areas.

2 So I didn't know where specifically  
3 people thought there was a lack of reference, and  
4 if there was something more specific because it  
5 is mentioned. So I just wanted to make sure that  
6 the comment is relevant to the reviewers.

7 MEMBER YOCHER: Okay, hang on just a  
8 second. Let's get her input first. Rasela,  
9 could you tell us what your comment was please  
10 now.

11 MEMBER FELICIANO: Yes. I just wanted  
12 to thank the gentlemen for his support and  
13 inclusion of the Pacific Islands. You know, we  
14 face a very unique -- the Pacific Ocean is one of  
15 the largest fishing grounds there is for the  
16 entire U.S. and certainly and for the entire U.S.  
17 facility and longline fleet.

18 And we are currently facing a lot of  
19 the, what they refer as the rise in temperature  
20 in the ocean and rise the ocean and, you know,  
21 also one of the islands, I don't know if they are  
22 a U.S. Territory on the verge of extinction.

1           In certainly you know the impact of  
2 climate change there is in the South Pacific,  
3 Pacific Ocean. And you know, Americans have a  
4 lot and I -- we're near the equator, and we feel  
5 the heat.

6           And if my main concern is we need  
7 scientific data that's more current than  
8 continuous because of the impact that we are  
9 facing right now with climate change and that the  
10 rise in the ocean levels that we're currently  
11 experiencing.

12           And that's my main point here is that  
13 we need to include within on that report that,  
14 you know, specifically the U.S. South Pacific  
15 Territories.

16           MEMBER YOCHER: Okay. Let me propose  
17 some language. I think Heidi has referenced  
18 where this is covered in the report. And so in  
19 this section, we have the opportunity to say what  
20 we like about it.

21           So on two of these bullet points here,  
22 I would suggest this first one, it's important to

1 identify, and perhaps we say and study the most  
2 vulnerable marine ecosystems. And then it says,  
3 for example, or e.g. tropical and polar  
4 ecosystems in the U.S. and U.S. Territories.  
5 That would be the first change. So in the  
6 parenthesis there.

7 PARTICIPANT: At the end.

8 MEMBER YOCHER: At the end. And U.S.  
9 Territories.

10 MEMBER FELICIANO: Okay --

11 MEMBER YOCHER: And then there's a  
12 bullet point further down that says the need to  
13 better understand the potential impacts to Native  
14 Americans. And then we would say and inhabitants  
15 of, or residents of U.S. Territories.

16 MEMBER FELICIANO: Yes. Thank you very  
17 much. I like that.

18 MEMBER YOCHER: I mean, I don't know  
19 if that's, if we need that if we say the other up  
20 above?

21 MEMBER FELICIANO: Can both be  
22 included?

1                   MEMBER YOCHER: Okay, so it sounds  
2 like it addresses your issues. Raimundo, does it  
3 address your issues, making these additions?

4                   MEMBER ESPINOZA: Yes, it does. And  
5 if it could say tropical, polar, and island  
6 ecosystems, because --

7                   CHAIR BEIDEMAN: Yes.

8                   MEMBER ESPINOZA: -- the island, it  
9 was Isle de Charles in Louisiana. And so that,  
10 no corals. Actually, that one, actually wouldn't  
11 be addressed in one of these.

12                   MEMBER YOCHER: Okay. Thank you.

13                   CHAIR BEIDEMAN: Heidi?

14                   MEMBER YOCHER: Okay, if we're good to  
15 -- woops, I'm sorry. Did Heidi miss something  
16 that --

17                   CHAIR BEIDEMAN: No. So Territories  
18 would be capitalized in both? I don't know.

19                   MEMBER ESPINOZA: Yes.

20                   MS. LOVETT: I'll check, but I think  
21 it would.

22                   MEMBER ESPINOZA: Yes.



1                   MEMBER YOCHER: The next bullet point  
2 talks about something that we liked in the  
3 document was the importance of fostering  
4 resilience in our marine ecosystems and resources  
5 by taking specific actions.

6                   And the report is not supposed to call  
7 out or recommend any actions. But we just listed  
8 as two examples things that have been considered,  
9 or are being tried, marine protected areas and  
10 climate ready fisheries. Any comments there?

11 Yes, Bob?

12                   MEMBER GILL: So my question is:  
13 what's a climate ready fishery?

14                   MEMBER YOCHER: Jennifer, you want to  
15 comment on that from NOAAs, the climate ready  
16 fishery concept?

17                   MS. LUKENS: I'm going to defer to  
18 Heidi on that, to answer that.

19                   MS. LOVETT: Okay. So it's something  
20 that Roger has presented to us almost at every  
21 single MAFAC meeting since he's come on board as  
22 the climate coordinator.

1           And our climate science strategy in  
2 particular speaks to climate ready fisheries,  
3 meaning that we incorporate climate change when  
4 we develop assessments, and develop -- I forget  
5 the term -- when we develop our targets for  
6 rebuilding that.

7           Besides just looking at the mortality  
8 of a specific fishery -- say natural mortality  
9 and fishing mortality -- that we include the fact  
10 that temperature is, for instance, causing  
11 populations of fish to shift. So it's the  
12 inclusion of climate-induced changes in our  
13 assessments. Does that --

14           MEMBER YOCHER: Thank you, Heidi.  
15 Bob?

16           MEMBER RHEAULT: Can I suggest,  
17 perturbation-resilient fisheries, is that better  
18 than climate ready?

19           MEMBER YOCHER: Yes, the only thing I  
20 would say is that that's how NOAA refers to it.  
21 And so that's why we -- I think that's why the  
22 drafters did that and the task force did that, is

1 because that's how it's called out as they're  
2 trying to incorporate that in their management  
3 actions. Mike?

4 MEMBER OKONIEWSKI: Well, if we have a  
5 difference of opinion on what NOAA thinks, is  
6 that permissible to express?

7 MEMBER YOCHER: Well, this is what we  
8 like about the document. And so there's a  
9 section in a few minutes about the things we  
10 don't like about the document.

11 MEMBER OKONIEWSKI: I think that this  
12 was pointed out as being one area that at least  
13 one person doesn't like about the document.

14 MEMBER YOCHER: Okay, well we could, I  
15 mean one thing we could do is not give any  
16 examples. We could take out the examples. There  
17 are also people who objected to marine-protected  
18 areas, specifically establishing --

19 MEMBER OKONIEWSKI: I just haven't got  
20 around to objecting to that one.

21 MEMBER YOCHER: Yes, specifically  
22 establishing, because that seems to be saying

1 that we should establish marine protected areas.  
2 Likewise, the idea of implementing or focusing on  
3 or something like that climate ready fisheries,  
4 was felt to be too strong of a comment.

5 MEMBER OKONIEWSKI: I think when  
6 you're being prescriptive, if you're just handing  
7 out drugs that any nature to handle disease you  
8 don't understand, you know, the cure could be  
9 worse than the -- so, I mean, I'm just saying  
10 that, yes, we know we've got this condition and  
11 we do have to deal with it, but getting too far  
12 ahead -- too prescriptive at this stage I think  
13 is maybe the wrong answer.

14 MEMBER YOCHER: Heidi, you've got a  
15 comment?

16 MS. LOVETT: So just to be clear, the  
17 term that is used in the report now is "climate  
18 ready fishery management", not just "climate  
19 ready fisheries", and that might make a  
20 difference to people. It might clarify. But  
21 anyway, that's the term that is in the document.  
22 So maybe this should read the same as it is in

1 the document.

2 MEMBER YOCHER: Erika? Erika and then  
3 Bob.

4 VICE CHAIR FELLER: Thanks. So I kind  
5 of like the idea of taking out the examples. The  
6 part I like about this is the idea of fostering  
7 resilience by taking specific actions. I can get  
8 behind that.

9 The idea of marine-protected, I don't  
10 know what a climate ready fishery or a climate  
11 ready fishery management is in terms of specific  
12 management measures. So I'm having trouble  
13 wrapping my head around that, and I'm not sure I  
14 buy the marine-protected area one.

15 I think it would make sense to keep  
16 that a little bit more wide open in terms of  
17 encouraging action to foster resilience. That's  
18 the part I like about it.

19 MEMBER YOCHER: Okay. Bob would that  
20 address your concerns as well?

21 MEMBER GILL: Yes.

22 MEMBER YOCHER: If we just took out

1 the parenthesis?

2 MEMBER GILL: Yes, I'm good with  
3 removing those. And I would comment to Heidi's  
4 comment that adding the word "management" after  
5 "fishery" changes the entire context. You notice  
6 Bob's proffered alternative was something totally  
7 different. So it seems to me that that's ripe  
8 for confusion, and taking it out is probably the  
9 best approach. So I would support that.

10 MEMBER YOCHAM: Okay. Anybody object  
11 to taking out the parenthesis?

12 (No audible response.)

13 MEMBER YOCHAM: Okay. They're gone.  
14 So the next bullet point talks about the  
15 importance of monitoring. And that in order to  
16 manage our marine resources in the future we need  
17 to, in the face of climate change, we need to  
18 continue monitoring. Yes, Bob?

19 MEMBER GILL: So word-smithing, change  
20 "managing" to "manage".

21 MEMBER YOCHAM: Yes, thank you. Any  
22 other comments?

1 (No audible response.)

2 MEMBER YOCHAM: The next one is that  
3 better understanding of the impacts of fisheries  
4 management and climate change is a key research  
5 priority. Yes, Bob?

6 MEMBER GILL: I think my take on this  
7 bullet is it could use some rewriting because I  
8 don't think it's saying what's intended to be  
9 said. Better understand the impacts of fishery  
10 management is a key research priority doesn't  
11 make a whole lot of sense to me.

12 So I think what's trying to be said  
13 here is: better understand the impacts of climate  
14 change on fisheries management is a key research  
15 priority. If that's not it, then I think we need  
16 to reword it to make clear what the intent of  
17 that bullet is. But as written, I think it's not  
18 getting to the point it's trying to address.

19 MEMBER YOCHAM: And if I remember  
20 correctly, this is one that was -- the  
21 subcommittee thought was even more confusingly  
22 worded in its first iteration from the task

1 force.

2 MEMBER GILL: Yes.

3 MEMBER YOCHER: So, I'm open to -- we  
4 did the best we could, but I'm open to other  
5 suggestions for how to clarify.

6 MEMBER GILL: Yes, that's what I  
7 thought, too.

8 MEMBER RHEAULT: So right, we went  
9 round and round on this for quite some time. But  
10 the point was is that both fisheries management  
11 and climate change have impacts on fisheries that  
12 need to be better understood. How's that?

13 Both climate change and fisheries  
14 management have impacts on fisheries that need to  
15 be better understood. Does that finally  
16 encapsulate what we argued about for ten minutes  
17 yesterday?

18 MEMBER YOCHER: I'm not sure if it  
19 does or not. I don't think so. I'm going to go  
20 back and look at the original. Mike?

21 MEMBER OKONIEWSKI: Well, to Bob's  
22 point, I think maybe you need to look at these



1 separately as he suggests, but also together.

2 MEMBER YOCHER: And I think that was  
3 the point of this bullet point was to look at the  
4 interaction between the two. So if you're looking  
5 at the resources, you need to examine not only  
6 the impacts of fishery management on the  
7 resources, but the impact of climate change on  
8 the resources and the interaction there, and that  
9 that should be a research priority. But I'm  
10 going to go back to the original now and see if I  
11 can --

12 CHAIR BEIDEMAN: Just a question, this  
13 is presumably in the section of things that we  
14 like that we saw in the document. So we're doing  
15 a 'me too' essentially on these things?

16 MEMBER YOCHER: Right, and I'm trying  
17 to find --

18 CHAIR BEIDEMAN: So I'm not sure that  
19 we have a 'me too' and we keep --

20 MEMBER YOCHER: Well I'm --

21 CHAIR BEIDEMAN: -- something it might  
22 be different.

1                   MEMBER YOICHEM: Yes, and I'm trying to  
2 find that original language. Or maybe Heidi can  
3 work on that and we can, if you can look for that  
4 in the original document. Okay.

5                   MS. LOVETT: In the original it said,  
6 "The importance of better understanding how  
7 fisheries management and climate change interact  
8 is a key research priority."

9                   MEMBER YOICHEM: Okay. Can you type  
10 that up there, Heidi and --

11                   MS. LOVETT: Sure.

12                   MEMBER YOICHEM: -- see what people  
13 think of it?

14                   MS. LOVETT: Sorry, "The importance of  
15 better understanding how fisheries management and  
16 climate change interact is a key research  
17 priority."

18                   MEMBER YOICHEM: I don't understand the  
19 importance of and then it's a key research  
20 priority. Is it -- did it just say "a better  
21 understanding of"?

22                   MS. LOVETT: No, it said --

1                   MEMBER YOCHER: It said, "the  
2 importance of"?

3                   MS. LOVETT: I've got -- yes. But  
4 they use that term in a few places.

5                   MEMBER YOCHER: Yes, Bob. Do you have  
6 some other tweaking?

7                   MEMBER GILL: No, I agree with you. I  
8 think you can delete "the importance of" and  
9 you'd have a better message than talking about  
10 the importance, because what you're really trying  
11 to do is say what do you do in the face of  
12 climate change in terms of managing your  
13 fisheries. It's not trying to research how  
14 important it is or isn't, it's the details.

15                   MEMBER YOCHER: Okay. So the  
16 suggestion is to say a better understanding or a  
17 better understanding of how fisheries management  
18 and climate change interact is a key research  
19 priority. Okay, how do people feel about it now?

20                   (No audible response.)

21                   MEMBER YOCHER: Let's move onto the  
22 next one. It's sold. This one is one that we've

1 already edited, so I'll just ask people to look  
2 at it again. The need to better understand, and  
3 again, this is a topic that we agree with, that  
4 there is need to better understand the potential  
5 impacts to Native Americans. And then the  
6 request was made to add the inhabitants to call  
7 out specifically U.S. Territories. Okay, good.

8 The next one was something that was  
9 added, and this is a statement that is made and  
10 emphasized in several locations in the report.  
11 The acknowledgment that many of the ongoing  
12 ecosystem changes can only be avoided with  
13 substantial reductions in atmospheric carbon  
14 dioxide emissions. I think that was a key part  
15 of the first key finding, if I'm not mistaken.  
16 Any issues with this one?

17 (No audible response.)

18 MEMBER YOCHEM: Okay. Hearing none.  
19 Now these are the things that we are suggesting  
20 that these be added to the report for these  
21 reasons to promote clarification, address gaps  
22 and enhance key points already made.

1           So this first one, in addition to  
2           expected impacts to fish populations includes  
3           specific examples of expected social, economic,  
4           and cultural impacts to fishers and fishing  
5           communities.

6           And this was one we heard yesterday  
7           some feedback that we got from NOAA was that this  
8           would be a helpful suggestion because I think  
9           it's something they considered and had to take  
10          out because they didn't have the room. And so  
11          recognition that kind of human component is  
12          important would be helpful to them. So any  
13          issues with this one?

14                   (No audible response.)

15          MEMBER YOCHER: Okay. The next one,  
16          share case studies of fishery management and  
17          technological advances relevant to climate ready  
18          fisheries. And this again was of the key  
19          findings, the second and third had some good news  
20          in the sense that they said that are things that  
21          we can do. We can have adaptive fishery  
22          management, and there are technological advances

1 that are helping.

2 And so the suggestion was that rather  
3 than simply stating this that some specific  
4 examples be given, and one of these was the level  
5 of harvest being adapted to the warm blob in the  
6 Pacific. Yes, Mike?

7 MEMBER OKONIEWSKI: I don't want to  
8 get too deep into this, but I think there's more  
9 of a tendency to ratchet down when you see  
10 something cod happens. I mean, you don't have  
11 much choice.

12 But on the same token, there seems to  
13 be pretty strong evidence that others -- perch,  
14 for example, in the Gulf of Alaska has taken a  
15 big turn up, but nothing is really, the spigot is  
16 not being opened in that direction.

17 So I don't know how you get that in  
18 there or if you even want to, but it's, at least  
19 I'll make note of it, I guess, because it has to  
20 be kind of a two way street in that process.  
21 Your protection part, but also your ability to  
22 harvest when it's warranted and backed up by good

1 science.

2 MEMBER YOCHER: So that an example is  
3 levels of harvest are being adapted to the  
4 Pacific warm blob. Would you suggest you say and  
5 could be adapted, or should be adapted where  
6 populations are increasing? Heidi's got to --

7 MEMBER OKONIEWSKI: I would like  
8 Julie's help on this one because it's her back  
9 yard.

10 MEMBER YOCHER: Okay, Heidi and then  
11 Liz, and then Julie.

12 MS. LOVETT: I think yesterday during  
13 the conversation, I might be wrong, but I thought  
14 people felt this was encompassing of both harvest  
15 levels could go up or it could go down. It sort  
16 of opens the door, but doesn't say either  
17 direction specifically.

18 MEMBER YOCHER: Okay, Liz?

19 MS. BURMAN: And I don't know if these  
20 are notes from when we had our webinar or not,  
21 but we were asked to provide some examples of  
22 climate ready fishery management. And at least

1 to the North of Falcon it's pretty real time,  
2 which I consider climate ready when you're  
3 responding to what's happening right then and  
4 there. So I think that's where that came from,  
5 but I'm not sure.

6 MEMBER OKONIEWSKI: So, I'm going to  
7 be laborious a little bit.

8 MEMBER YOCHER: It's Mike, okay. If  
9 you've got a specific suggestion, let's get it in  
10 there.

11 MEMBER OKONIEWSKI: Well you can  
12 phrase it, but the case studies is what worries  
13 me because where's the case study that we've  
14 responded by raising quotas for a fishery?

15 MS. BURMAN: We do that too now.

16 MEMBER OKONIEWSKI: I'm sorry.

17 MS. BURMAN: We do both in North of  
18 Falcon. If there's more fish, the seasons are  
19 extended. If they're not showing up as  
20 predicted, which the variability is, we don't  
21 know which way it goes, but it is done in real  
22 time.



1                   MEMBER OKONIEWSKI: I'm suggesting  
2                   that when there's a market increase in the stock  
3                   assessment, that that's a pretty good sign that,  
4                   you know, maybe you could be fishing on at a  
5                   little higher level. It seems like there's, you  
6                   know, in halibut we used to call it, or they call  
7                   it the fast decline in quotas when there's  
8                   evidence that the population is shrinking and is  
9                   slow.

10                   But in this case what we're having is  
11                   climate change effects and impacts. And for the  
12                   communities to be resilient, they need some kind  
13                   of economic income as an offset. So if there's  
14                   evidence that we, in nimble, flexible fisheries  
15                   management, if we had that then we should be able  
16                   to respond more quickly to raise quotas where  
17                   it's warranted.

18                   That's all I'm saying. It would have  
19                   to be proven in a stock assessment or some type  
20                   of science that would make sure you're still  
21                   hitting your targets for sustaining fisheries in  
22                   the future. But, that's all I'm saying.

1 I don't know if any case studies so  
2 far that you can point to that says. So and  
3 quite the opposite, I think in some cases they're  
4 dragging their feet, you know, on the up-ticks  
5 that are happening in the stock assessments.

6 MEMBER YOCHER: Is it, from what  
7 you're saying, Liz, then can we say that levels  
8 of harvest are being adjusted up or down in  
9 response to, or something?

10 MEMBER OKONIEWSKI: If we were to take  
11 that approach, I believe you're right in the  
12 vicinity of I would like to be. It's just that  
13 to point it out that we need to be responsive in  
14 both directions. And that is where, you know,  
15 this continual harangue I've done on the  
16 regulatory side about not being responsive comes  
17 into play here.

18 MEMBER YOCHER: Okay, Heidi are you  
19 going to try to do that, or Liz do you have  
20 suggested way to word this?

21 MS. BURMAN: Well, I think we've heard  
22 over multiple meetings that the council process

1 isn't a climate ready fishery management. North  
2 of Falcon, which has to be consistent with but it  
3 is separate to, is very responsive to up or down.

4 But at the council process, I mean  
5 when Ted was here, I think it was, he went on  
6 about that quite a bit. So you're saying the  
7 same thing. I think you just -- we were looking  
8 at examples of where it works, and the council's  
9 an example, I think what you're saying, where it  
10 doesn't work.

11 CHAIR BEIDEMAN: So, Pam?

12 MEMBER YOCHAM: Yes, Julie, do you  
13 have some suggestions?

14 MEMBER BONNEY: Well, I think that on  
15 this point, we're asking them to put case studies  
16 in. And so we're not, we shouldn't be, I can  
17 think of three different case studies or ideas.  
18 One is the way that they shift opening dates to  
19 get around certain effects in the ecosystems in  
20 terms of demoic acid, for example. And then the  
21 shell condition, and lobster fishery in Maine.

22 And then I can also think of the

1 response that they found when they had the survey  
2 in the Gulf and there was no cod, the cod  
3 recruitment failed. I can also think of the  
4 maturity studies that have been done that find  
5 that some of the stocks are more resilient now in  
6 the climate change than they were in the past.

7 So I think the key here is to make  
8 sure that we give them examples of all three of  
9 those varieties because when I look at the first,  
10 I think of adapted to the Pacific warm blob says  
11 to me that it's all negative. So I think if we  
12 could address the example and give them some of  
13 that range of ideas, then it wouldn't be all  
14 negative.

15 MEMBER YOCHER: Okay, how about this:  
16 levels of harvest are being adapted to the  
17 Pacific warm blob, and then, Julie, you give an  
18 example of one where it's been adjusted up and  
19 we'll add that as a second example.

20 MEMBER BONNEY: Thinking of the  
21 seasonal dates is one. You know, adjusting  
22 timing.

1                   MEMBER YOICHEM: Opening fisheries  
2 earlier --

3                   MEMBER BONNEY: Fishery timing.

4                   (Simultaneous speaking.)

5                   MEMBER BONNEY: And they've changed  
6 maturity curves. I don't know what the right  
7 terminology would be to put in here, but they've  
8 shown that the fish are maturing at a younger  
9 age, meaning that they are adding to the  
10 population and so therefore you can have a higher  
11 uprate. But I don't know how you put that in a  
12 e.g.

13                   MEMBER YOICHEM: Okay. So we've got  
14 one negative example and one positive example.  
15 Mike, would that address your concern?

16                   MEMBER OKONIEWSKI: Partially. We've  
17 been talking quite a bit about adaptive  
18 management practices that could be utilized to be  
19 responsive to climate change. And in some cases  
20 framework actions, which would presumably move  
21 faster than the council process. At least West  
22 Coast process moves like a glacier.

1                   So in the case, I guess what I'm  
2                   saying is is if we just mention that we're  
3                   bringing attention to some of these adaptive  
4                   management measures throughout -- or these  
5                   reports we're giving in that if we employed some  
6                   of that to effect, we would be right on target, I  
7                   think of what this message is designed to  
8                   deliver.

9                   So if even mentioned a couple of those  
10                  adaptive management itself is a tool to, in that  
11                  response mechanism.

12                 MEMBER YOCHER:   Okay, so we'll have  
13                 e.g., adaptive management, levels of harvest  
14                 adapted to the Pacific warm blob, fishery  
15                 openings shifts --

16                 MEMBER BONNEY:   Fishery timing, just  
17                 do it that way.

18                 MEMBER YOCHER:   Fishery timing?

19                 MEMBER BONNEY:   Yes.

20                 MEMBER YOCHER:   Shift?   Or just  
21                 fishery timing, period.

22                 MEMBER BONNEY:   Well I don't believe

1 fishery timing and -- I don't know that the right  
2 word is.

3 MEMBER YOICHEM: Okay. Bob, did you  
4 have another suggestion?

5 MEMBER GILL: Yes, ma'am. I just  
6 noticed that once again we have our climate ready  
7 fisheries at the beginning of the sentence. And  
8 based on what Heidi read, I'm assuming it's the  
9 same as before, which means we need to add the  
10 word "management" because it's a totally  
11 different thing.

12 MEMBER YOICHEM: So we put in climate  
13 ready fisheries management?

14 MEMBER GILL: Yes. I still don't know  
15 what a climate ready fishery is.

16 (Off microphone conversation.)

17 MEMBER BONNEY: I think it works there  
18 because of the lead in of the sentence.

19 MEMBER YOICHEM: Because management is  
20 addressed earlier.

21 MEMBER BONNEY: Yes.

22 MEMBER GILL: Doesn't to me.

1 CHAIR BEIDEMAN: Or you could say:  
2 share case studies of technological advances  
3 relevant to climate ready fisheries management.

4 MEMBER BONNEY: There you go.

5 MEMBER YOCHER: But it's more than  
6 technological advances though. Technological  
7 advances were the example that was given was the  
8 monitoring device for harmful algal blooms, that  
9 that's an actual new instrument. And under the  
10 other point, the management is along the lines of  
11 what we were talking about, the adaptive  
12 management technique. So I think there's two --

13 MEMBER BONNEY: Well you can put that  
14 --

15 MEMBER YOCHER: -- different things  
16 there.

17 MEMBER BONNEY: You could just say  
18 share case studies of adaptive fishery  
19 management.

20 MEMBER YOCHER: And technological  
21 advances.

22 MEMBER BONNEY: Yes.



1                   MEMBER YOCHER: Yes. I think that's a  
2 good idea.

3                   MEMBER OKONIEWSKI: Or you could say,  
4 of management actions and technological advance  
5 relevant to --

6                   MEMBER YOCHER: Okay, share case  
7 studies of adaptive fisheries management and  
8 technological advances. I'm wondering if we just  
9 say relevant to climate, or climate impacts on  
10 fisheries or something like that if people don't  
11 like the ---

12                   And then do we need adaptive  
13 management as an example, because we've already  
14 called that out as the overall process. And so  
15 an example of adaptive fisheries management would  
16 be the levels of harvest being adapted and then  
17 changes in fishery timing. So take a second to  
18 read that and see if anybody's got any additional  
19 tweaks to suggest. Yes, Mike?

20                   MEMBER OKONIEWSKI: Just a question  
21 for Julie. In the case of the perch, did I or  
22 did I not hear that the stock assessment shows

1 that there's a much higher level perch. We could  
2 be possibly going after as many as 200,000 tons,  
3 and we're going after how many?

4 MEMBER BONNEY: Yes. The problem that  
5 I'm seeing, and I don't know how you capture  
6 this, but because of the uncertainty, everybody's  
7 adding uncertainty buffers to push you lower, but  
8 nobody's celebrating the idea that things are  
9 changing in a positive way and release of getting  
10 rid of that, what, restriction.

11 You know, they don't want to swing  
12 high because they're worried about the  
13 uncertainty to try to make those adjustments, but  
14 I don't.

15 MEMBER OKONIEWSKI: Well I see that as  
16 kind of a cover your behind mode, but we're  
17 having similar issues on the West Coast, I  
18 believe. And that's all I'm attempting to get to  
19 is under an adaptive management schematic that is  
20 intended to hit the goals and objectives in a lot  
21 of these FMPs and also of the national standards.

22 Then it's just that if we're going to

1 -- we know we're going to have some negative  
2 impacts, and we're probably going to have some  
3 positive impacts on fishery stocks. We know that  
4 income is a key role of keeping communities  
5 resilient.

6 So we have to take advantage when  
7 these stocks are going up as well. If we put all  
8 these buffers of uncertainty in there, it could  
9 be years before we actually get out there and  
10 start, you know, harvesting at higher levels on  
11 those stocks that have come up.

12 MEMBER YOCHER: So does nimble and  
13 adaptive address that. Nimble in terms of the  
14 time crunch.

15 MEMBER OKONIEWSKI: It certainly goes  
16 in the right direction. Yes. Just simple yes.  
17 Okay.

18 MEMBER YOCHER: Okay. All right.  
19 Great.

20 MEMBER BONNEY: So can we add one more  
21 example. So updating life history  
22 characteristics because what's happening is

1 energetics change or whatever that you're getting  
2 different characteristics out of the fish because  
3 they're responding differently to climate change.

4 MEMBER YOCHER: Okay, and then Roger,  
5 I think you had another suggestion.

6 MEMBER BERKOWITZ: Yes. I mean in  
7 terms of adaptability, how about the word  
8 "flexibility"? I mean, because that takes in the  
9 consideration up and down and then you can be  
10 nimble in that regard.

11 MEMBER YOCHER: So nimble, flexible  
12 and adaptive fisheries management and  
13 technological advances? Or is flexible implied  
14 with adaptive?

15 MEMBER OKONIEWSKI: Personally, I like  
16 "flexible" better than "adaptive". So if you  
17 want to take "adaptive" out and leave "flexible"  
18 and "nimble" in, I'm fine by that.

19 MEMBER YOCHER: Okay, what do others  
20 think about that?

21 (Simultaneous speaking.)

22 MEMBER YOCHER: Okay, so I'm hearing

1 disagreement about taking "adaptive" out. So  
2 Ray, and then Columbus.

3 MEMBER ESPINOZA: So I mean, I don't  
4 have a disagreement, it just depends on what you  
5 mean. Nimble or flexible, the definition of  
6 those words you know just means that you can bend  
7 them and rearrange. But adaptive, when you talk  
8 about adaptive management, that's an actual  
9 definition of a whole process that it is  
10 involved.

11 So it means starting that whole cycle.  
12 So, which is what I think, you know, management  
13 for specifically for this is what's needed. But  
14 again, if that's not what you're referring to,  
15 that's what you do not what, it's something  
16 that's different.

17 There are some as terms adaptive or  
18 flexible, you could interchange them. It could  
19 be something different. But "adaptive  
20 management" is actually, you know, a term that's  
21 something that brings a lot of specific action  
22 and mechanisms of a cycle that needs to be put in

1 place for fisheries management.

2 MEMBER YOCHAM: Okay. We'll leave  
3 that in. Columbus? Columbus agrees. Okay, so  
4 now the question is whether we need to include  
5 "flexible", and Heidi's got a thought on that.  
6 No. Go ahead then with what your thought was.

7 MS. LOVETT: Well I just wanted to  
8 help people or reflect back that what this  
9 document is that you're commenting on. It's the  
10 National Climate Assessment. And the goals are  
11 to summarize the impacts of climate change on the  
12 United States and its communities now and in the  
13 future.

14 So I just didn't want you to get too  
15 worried and think about this isn't directing just  
16 NOAA, it's really the aim is the assessment as a  
17 whole and what are the risks and the impacts to  
18 the U.S. from these changes.

19 So I understand the degree of interest  
20 by everybody on this, but I just wanted to make  
21 sure that you kept in mind what your comments are  
22 on, that original document.

1 MS. LOVETT: Well, I just wanted to  
2 help people, or reflect back that, what this  
3 document is that you're commenting on. It's the  
4 National Climate Assessment. And the goals are  
5 to summarize the impacts of climate change on the  
6 United States and its communities now and in the  
7 future.

8 So, I just didn't want you to get too,  
9 yes, too worried, and think about the -- This  
10 isn't directing just NOAA. It's really, the aim  
11 is the assessment as a whole. And, you know,  
12 what are the risks and the impacts to the U.S.  
13 from these changes?

14 So, I understand the degree of  
15 interest by everybody on this. But I just wanted  
16 to make sure that you kept in mind where, what  
17 you're referring to, what your comments are on,  
18 that original document.

19 MEMBER YOCHER: Okay. So, would  
20 people be comfortable then with just the fact  
21 that we have called out that we would like to see  
22 examples of both adaptive, nimble and adaptive

1 fisheries management, and technological advances  
2 related to climate?

3 And the examples that we've given make  
4 it clear that we want to hear situations in which  
5 fisheries have been restricted. But also  
6 examples of where climate has been, or climate  
7 changes have been included to expand fisheries.

8 Because we do, I'm concerned about  
9 getting this done, so that we can get the other,  
10 get on to the other things that we need to vote  
11 on today. Mike, did you have one, another  
12 comment that you wanted to make? Or can you live  
13 with this wording?

14 MEMBER OKONIEWSKI: I can live with  
15 it. Just one quick comment. It, and I can't  
16 even remember when we came in the door here. But  
17 it seemed like we were kind of pointing out the  
18 negative impacts that climate change could have  
19 on our communities and fisheries.

20 And that's the part I wanted to  
21 balance out. If we totally just talked about  
22 nothing but climate change, and didn't refer to



1 communities and how it's going to affect  
2 fisheries, then that was, it's pretty simple. We  
3 just stick with climate. But once we open the  
4 door I just want that balance to occur in there.  
5 So, I think we've captured it, or come close.

6 MEMBER YOCHER: Okay. Thank you.

7 MEMBER OKONIEWSKI: And that's it.

8 MEMBER YOCHER: Thank you. Roger, did  
9 you have another comment?

10 MEMBER BERKOWITZ: Yes. I'm stuck on  
11 the word flexible. Because right now I don't  
12 think it is flexible. And I think that, you  
13 know, having that word in there along with nimble  
14 allows for, you know, looking at it a little  
15 differently.

16 MEMBER YOCHER: Okay. Does anybody  
17 have any heartburn with adding that word?

18 MEMBER OKONIEWSKI: I said it was my  
19 key word to begin with. So, I'll leave it at  
20 that.

21 MEMBER YOCHER: Okay. Great. All  
22 right. Anything else? All right. We're going

1 to move to the next point. And the comment here  
2 was that the relationship between climate change  
3 and ocean acidification, discussion of the  
4 chemistry of the water, and so on, is, the task  
5 force felt that that was buried in the document,  
6 and that it should be mentioned earlier. Terri.

7 CHAIR BEIDEMAN: This is just  
8 smithing. I think it would be a better sentence  
9 if it said, either clarify or make the  
10 relationship of climate change and ocean  
11 acidification clear early in the document. And  
12 instead of --

13 MEMBER YOCHER: Period.

14 CHAIR BEIDEMAN: -- all of that. Yes.  
15 Just, you know, that just states it.

16 MEMBER YOCHER: Okay. Then we don't  
17 need the parentheses. Any other suggestions or  
18 comments on this one? Okay. The next bullet  
19 point gets at the fact that the document mentions  
20 that fish distributions are shifting.

21 And the suggestion was made that it be  
22 pointed out, since this is a document that's

1 talking about climate change overall, and this is  
2 the ocean piece of that overall document, that it  
3 be pointed out that changes are happening in the  
4 marine community.

5 A lot of people aren't aware of that.  
6 And in some cases they're happening faster than  
7 they are in the terrestrial environment. So,  
8 take a minute to read this, and see if you've got  
9 any suggestions about wordsmithing or changing  
10 that.

11 Okay? If people can live with this  
12 one, let's put the next one down. This one talks  
13 about dealing with uncertainty, actually kind of  
14 the last two bullet points address that. So, why  
15 don't you take a look at these together, and see  
16 what you think. Yes, Bob.

17 MEMBER GILL: Thank you, Pam. If  
18 you're going to combine them my question on the  
19 last bullet is, I agree with the intent. My  
20 question is, how the heck are you going to do it?

21 MEMBER YOCHER: I think the, what we  
22 talked about yesterday is that there are some

1 examples. Peter mentioned a couple. And so, he  
2 thought that that would be helpful if those could  
3 be incorporated into the document, situations  
4 where that's been done.

5 Any other comments on these last two?  
6 Or anything else that you saw that was not  
7 included in the document that you think we should  
8 mention?

9 MEMBER OKONIEWSKI: Just --

10 MEMBER YOCHER: Yes, Mike.

11 MEMBER OKONIEWSKI: On the sentence at  
12 the end there, first sentence on the first  
13 bullet, and the potential role of management  
14 strategy evaluation should also be specifically  
15 raised, or applied. Or are we thinking --

16 MEMBER YOCHER: I'm sorry. Are you on  
17 the second bullet or the final bullet?

18 MEMBER OKONIEWSKI: The second. I  
19 guess the second one. The one above in that  
20 screen. The top one.

21 MEMBER YOCHER: The top one. Okay.

22 And what, can you say again what language you're,

1 or how you're, what you're recommending change?

2 MEMBER OKONIEWSKI: And the potential  
3 role should be raised, specifically raised. MSE  
4 should be specifically raised. I, isn't that  
5 more or less ready for prime time already?

6 I mean, in other words, it could be a  
7 valuable tool in this case. I think you were  
8 asking whether it would be a tool as a role.  
9 Maybe I'm reading it wrong. But --

10 MEMBER YOCHAM: I think what, if I  
11 remember correctly, what we're trying to get out  
12 here is that incorporating climate change factors  
13 into fisheries assessment is important. But that  
14 we also need to deal with uncertainty around some  
15 of that information, and then evaluate it.

16 So, I guess it's getting at adaptive  
17 management. Don't just incorporate it and move  
18 on. But evaluate whether it's having the desired  
19 impact. And then, I think Heidi's got some input  
20 for us.

21 MS. LOVETT: I was just going to say  
22 that the way I interpreted this was that MSEs are

1 not mentioned in the document now. I haven't  
2 checked that point. But that it's not in the  
3 document now.

4 And the commenters suggested that it  
5 be identified as a good tool, and to invest in  
6 it. It's not, it's at the cutting front edge  
7 now. I guess they're saying, you know, we should  
8 continue with that.

9 MEMBER OKONIEWSKI: I think the way  
10 you just phrased that is a better way to phrase  
11 it than what's up there right now. In my  
12 estimation.

13 CHAIR BEIDEMAN: So, maybe we don't  
14 need the leading clause. And we could go right  
15 to the actual.

16 MEMBER YOCHER: Okay. Mike, does that  
17 make it clear, make it more clear? And Terri?

18 MS. LOVETT: May I read it out loud?  
19 "While authors raised the importance of  
20 incorporating climate change factors into  
21 fisheries assessment, the role of management  
22 strategy evaluation should be specifically raised

1 as an important area of scientific investment."

2 CHAIR BEIDEMAN: Well, for me I think  
3 it loses the idea that we have to look at the  
4 uncertainty. And that was I thought the point of  
5 the bullet.

6 MEMBER YOCHER: Well, the, yes. And  
7 that does, the last bullet point is kind of  
8 talking about uncertainty as well. So, I don't  
9 know if we want to add it back in on that final  
10 bullet point, and go for two topics on  
11 uncertainty, or if you want to figure out a way  
12 to put it back in. Columbus, do you have a way  
13 to put it back in?

14 MEMBER BROWN: Well, I think that  
15 sometimes we talk too much about quote, unquote  
16 uncertainty as opposed to what we really need.  
17 And is that lack of information and data that we  
18 need to procure to move systems further?  
19 Uncertainty is only a symptom of the lack of  
20 data.

21 MEMBER YOCHER: Yes, Bob, do you have  
22 a suggestion for how to word this?

1                   MEMBER RHEAULT:  So, this was my baby.  
2                   And it's morphed into somebody else.  So, if we  
3                   want to go this route I'm going to propose  
4                   another bullet, and get it back to my baby.

5                   But the problem that I see is that our  
6                   current vulnerability assessments are being  
7                   driven largely by fisheries' responses to  
8                   perturbations that we don't understand well, such  
9                   as the response of high value species to OA.

10                  The science on this is weak.  And  
11                  that's my point.  The vulnerability assessment is  
12                  driving a lot of what's coming out of NOAA now.  
13                  And it's based largely on the responsive things  
14                  like these very high value fisheries, such as sea  
15                  scallops and lobsters, to OA.

16                  And it's, there's a lot of fear.  And  
17                  that's very justifiable.  Because the impacts are  
18                  vast.  But the scientific knowledge of the  
19                  response of these organisms to the perturbation  
20                  is not solid.  And I don't know how you want to  
21                  word that.  But it's lost there.

22                  MEMBER YOCHAM:  Okay.  So, while



1 others raise the importance of incorporating  
2 climate change factors into fisheries assessment,  
3 the role of management strategy evaluation and --

4 Well, that's a, MSEs are a thing, and  
5 they're not in the original document. So, Mike  
6 was wanting to make sure that they were in there.  
7 And the uncertainty around, and how do you want  
8 to put that?

9 Uncertainty around something should be  
10 specifically raised as important areas of  
11 scientific investment. So, you could say  
12 uncertainty around something, and then give your  
13 EG the impact of ocean acidification on blah,  
14 blah. So, put the EG up there. And then --

15 MEMBER RHEAULT: How about --

16 MEMBER YOCHER: -- move the  
17 specifically raised as important areas of  
18 scientific investment at the end.

19 (Off microphone comment)

20 CHAIR BEIDEMAN: And we could say, the  
21 uncertainty surrounding our current understanding  
22 of the impacts.

1 (Off microphone comment)

2 MEMBER YOCHER: Well, we're trying to  
3 get the uncertainty and your specific example  
4 both in this statement. So, if you can, now that  
5 Heidi's done that, let's see if we can clean it  
6 up a little bit. Mike.

7 (Off microphone comment)

8 MEMBER YOCHER: Okay. That's one  
9 suggestion would be, while authors raised the  
10 importance of incorporating climate change  
11 factors into fisheries assessment, the role of  
12 management strategy evaluation should also be  
13 specifically raised as an important area of  
14 scientific investment. The next bullet point,  
15 read it out loud.

16 MEMBER RHEAULT: Vulnerability  
17 assessments are being skewed by assumptions on  
18 the impacts of ocean acidification on high value  
19 species that are not well understood.

20 MEMBER YOCHER: So, impacts of ocean  
21 acidification on high value species, e.g.,  
22 scallops and lobster, that are not well -- So,

1 vulnerability assessments are being skewed by  
2 assumptions of the impacts of ocean acidification  
3 on high value species. And then you'd have EG  
4 scallops and lobster. And then, what was the  
5 very last part of it?

6 (Off microphone comment)

7 MEMBER YOCHER: Should we say untested  
8 assumptions? Because I think you had something  
9 in there about needing more information. And  
10 then, Columbus had a comment too.

11 MEMBER RHEAULT: That's fine.

12 MEMBER YOCHER: Okay. Columbus.

13 MEMBER BROWN: Every time I hear the  
14 word uncertainty the hair just goes back on the  
15 back of my neck. We need more data. What kind  
16 of data do we need? Can we get it? And, you  
17 know, what will it take to make somebody happy?

18 And, you know, is it doable? So, I --

19 MEMBER YOCHER: So, Heidi, you need to  
20 delete some of that stuff in the top bullet.

21 (Off microphone comment)

22 MEMBER YOCHER: Okay.

1 MEMBER BROWN: So, you know --

2 MEMBER YOCHER: I think that's what  
3 he's getting at.

4 MEMBER BROWN: I think that, you know,  
5 you can't keep cutting research budgets, and  
6 provide the level of information that you need to  
7 make good decisions.

8 MEMBER YOCHER: And that's why I put,  
9 I thought putting untested assumptions would be  
10 important. Because that implies more research is  
11 done. And then, we have the scientific  
12 investment needed in the other one. Rai, did you  
13 have another suggestion for tweaking? Okay. Or  
14 something else that you feel is missing? If so,  
15 hold that point, and let's go to Mike. Do you  
16 have a tweaking suggestion?

17 MEMBER OKONIEWSKI: No. I'm going to  
18 leave the tweaking to somebody else. But the  
19 point I would like to bring out is, it's not just  
20 data. That's the raw material.

21 The methodology, and the assessment  
22 process itself is key to organizing that data to

1 a conclusion, or at least a better assumption, if  
2 nothing else. And so, I don't want to lose sight  
3 of that.

4 That's one reason I was kind of  
5 emphasizing the management, MSE. Because that is  
6 a tool that I think could be affective in some  
7 cases. I really like what Bob did there.  
8 Because I totally agree with what he's saying on  
9 that point.

10 MEMBER YOCHER: Okay. So, we do have  
11 MSEs. And we've got the, I think the untested  
12 assumptions in there. Any other wordsmithing on  
13 these two before we move on to something else  
14 that folks feel is not included, or needs to be  
15 added? Rai, yes.

16 MEMBER ESPINOZA: Yes. So, I agree  
17 with that. That's what I was going to say, that  
18 we do have data on acidification. We just don't  
19 understand it. We don't know how it's moving.

20 But, and that's what's creating  
21 uncertainty. So, that's, I mean, and so with a  
22 lot of the procedures that we're seeing. The one

1 thing I think maybe, see if you agree with me  
2 with this, Bob.

3 With the validity assessment being  
4 based by untested, instead of skewed, just as, I  
5 feel that skewed is kind of a, you know, a strong  
6 word that might --

7 MEMBER YOCHER: Good point. Are being  
8 based on. Okay. Bob, is this a wordsmithing  
9 thing, or a new thing?

10 MEMBER GILL: Neither. I'm a broken  
11 record. Last bullet. First of all, I think the  
12 wording is really cumbersome. Really cumbersome.

13 MEMBER YOCHER: The wording of the  
14 last bullet?

15 MEMBER GILL: But --

16 MEMBER YOCHER: So, it's a  
17 wordsmithing thing.

18 MEMBER GILL: No.

19 MEMBER YOCHER: Two thumbs up.

20 MEMBER GILL: No, it's more than that.

21 MEMBER YOCHER: Oh, okay.

22 MEMBER GILL: But beyond that, I have

1 real heartburn with that thing. And I apologize  
2 for missing what Peter had to say, because I  
3 would have loved to have heard it. And so, I  
4 don't know the examples that he's used.

5 But I think it's a good idea. But  
6 practically speaking it's probably worthless.  
7 And I can't think of any example that would  
8 render that statement not true. So, I'm really  
9 having trouble with that last bullet.

10 MEMBER YOCHER: I don't remember the  
11 specific examples that he mentioned. But he  
12 talked about the fact that past projections with  
13 regard to changes in ocean temperature, for  
14 example, and certain things that were supposed to  
15 happen at three years, five years, seven years,  
16 or whatever, have been --

17 In other words, people have put the  
18 models out there. They've made the projections.  
19 And then they've gone back and looked at how good  
20 those models were.

21 And so, that's all that is being  
22 suggested, is that we, besides doing all this

1 modeling, we make sure that we go back and test  
2 those assumptions. But then, furthermore than  
3 that, we make it clear that they have been.

4 So, in other words, I think what he  
5 was trying to get at there is that some people  
6 think that the models are completely worthless,  
7 and that they're always wrong.

8 And he wanted to make sure that  
9 they're, or was suggesting that we include some  
10 examples of where, in fact, they, you know, how  
11 well they have matched what actually happened.  
12 Columbus.

13 MEMBER BROWN: Yes. When I think back  
14 on what Peter said, and I look at my phone, and  
15 look at the weather, you know, you've got a 15  
16 day forecast, and you've got a one day forecast.  
17 And the one day forecast is a hell of a lot  
18 better than the 15 day forecast. It sort of  
19 gives you the ballpark.

20 And so, I think in terms of the point  
21 that he's trying to make, I don't even know if we  
22 need to deal with it. I think it's just a



1 natural situation that you deal with, with  
2 projecting the future. And as you get closer to  
3 real time moments, you have a better clue of  
4 what's going to happen in the next few seconds.

5 MEMBER YOCHER: Mike.

6 MEMBER OKONIEWSKI: Two minor tweaks.  
7 On the last sentence you've got over project --  
8 or not quite the last. Over projecting, under  
9 projecting, and future projections. I'd say  
10 outcomes instead of projections. And on the last  
11 word in the second sentence I might use format  
12 instead of form.

13 MEMBER YOCHER: Okay. Heidi, you were  
14 part of the discussion. Did you have a  
15 clarification you wanted to mention? And I can't  
16 remember, Jennifer, if you were here or not, if  
17 you remember? Okay.

18 MS. LOVETT: Yes. I think he was, I  
19 think you've described it pretty adequately. I  
20 think the, what you said, that models are always  
21 being updated.

22 But what, I think his point was that

1 last part. Visuals help tell the story was sort  
2 of what he was striving at. And it's what we do  
3 in fisheries management, as I understand it, all  
4 the time.

5 You're always going back to see how  
6 well your future projections were in a certain  
7 kind of fishery model, so that you -- No? Okay.  
8 Well, oftentimes. Retrospective analyses.

9 So, usually going back to see, did you  
10 project correctly what the stock was going to do  
11 as you move forward? But I think that's what he  
12 was getting at.

13 CHAIR BEIDEMAN: Madame Chair. So, it  
14 just says straight out, ground truth. Are we  
15 like demanding that they ground truth something?  
16 Or, I mean, it seems like there is some sentence  
17 structure missing.

18 MEMBER YOCHER: Yes. I agree with  
19 you. I was trying to think about how to do that.  
20 Well, in, yes. What have we said where we had  
21 suggested something be included?

22 (Off microphone comment)

1                   MEMBER YOCHAM: Well, let me just put  
2                   it this way. Do you have a suggestion for how we  
3                   could better state this? Should we say include  
4                   examples where past projections have been ground  
5                   truthed?

6                   (Off microphone comment)

7                   MEMBER YOCHAM: Include examples where  
8                   past projections have been, I don't know if  
9                   ground truth's the right word, or been evaluated  
10                  to determine whether they were over projecting or  
11                  under projecting outcomes.

12                  And then, they, it sounds like Bob's  
13                  not aware of any examples of where this has been  
14                  done. But, and unfortunately Peter's not here  
15                  anymore. But I know he gave several examples of  
16                  where it has been done. And Bob is not, or like  
17                  you've seen them before too. So, are you  
18                  comfortable if we leave this?

19                  MEMBER GILL: I think we're getting  
20                  closer. And from the explanations both Columbus  
21                  and Heidi mentioned, I think what you're really  
22                  saying here isn't what I got out of the original

1 wording of the bullet.

2 But what you're really saying is,  
3 incorporate the latest information and techniques  
4 to improve past projections. But that's  
5 different than trying to ground truth them.

6 MEMBER YOCHAM: No. Yes. Actually,  
7 no, that's not it. It was specifically to give  
8 examples where it has been done, and they've been  
9 evaluated.

10 So, I think maybe, so include examples  
11 where past projections have been evaluated to  
12 determine if we are over projecting or under  
13 projecting. And I think you just better say  
14 outcomes. Because projecting --

15 Okay. So, how are, yes, we need to  
16 kind of move on. So, if people can live with  
17 this? Okay. Bob. Bob and Bob. If you don't  
18 have any other wordsmithing issues, I think we're  
19 going to move, we need to move on. Because  
20 that's our last bullet point. And we have other  
21 documents that we need to review and vote on.  
22 Okay. I'm going to turn it back to --

1                   MEMBER RHEAULT: I make a motion to  
2 accept this as written.

3                   (Off microphone comment)

4                   MEMBER YOCHAM: And edited. I second.

5                   MEMBER BONNEY: I'll second it.

6                   CHAIR BEIDEMAN: Okay. Well then,  
7 there's a motion on the floor from the, to accept  
8 the subcommittee's report to submit these  
9 comments as they currently read. They'll be  
10 revised to reflect our discussion. And I'm going  
11 to ask all those in favor signify by saying aye.

12                   (Chorus of aye.)

13                   CHAIR BEIDEMAN: And those opposed?  
14 Anyone abstaining? Then the motion carries.  
15 Thank you. So, we have one more document. And  
16 that would be from the Commerce Committee.  
17 Julie. Then the aquaculture.

18                   MEMBER BONNEY: I don't even have it  
19 open here. But basically it's pretty  
20 straightforward. Bob and Sebastian, who are the  
21 two aquaculture guys, worked back and forth to  
22 modify a letter to basically say to NOAA that

1 they're doing a good job, and we're ready to move  
2 forward with a aquaculture initiative.

3 But we need to have, the initiative  
4 needs to be worked together with the industry, in  
5 terms of a direction. And I'll look at Bob if he  
6 wants to add anything.

7 MEMBER RHEAULT: So, Sebastian and I  
8 chatted about this. It was just a few comments  
9 that I recall from our discussion at the bar,  
10 where Sebastian pointed out that he had added, 90  
11 percent of the fish that we eat are imported.

12 And I edited it back to 80 percent.  
13 Because I didn't want to contradict the Admiral's  
14 presentation. But it's absolutely correct that  
15 the latest assessment says it's something like 92  
16 percent.

17 So, I, you know, I'm willing to go  
18 either way with that. Sebastian had some  
19 concerns about, I'll let him speak for himself.  
20 Excuse me.

21 MEMBER BELLE: Well, the one other  
22 thing I pointed out was that the \$4 billion is a

1        typo. It should be \$14 billion. Or \$14.6  
2 billion I think is the latest accurate figure.

3                    And then, the other piece is that in  
4 the original version that I forwarded to Bob and  
5 the rest of the committee, I did not specifically  
6 use the terms, and where are we here? I think  
7 we've got to scroll down a little bit, if you  
8 wouldn't mind. Yes, the National Aquaculture  
9 Initiative.

10                    And the reason I didn't is because  
11 although NOAA's staff presented to MAFAC that  
12 initiative, from my perspective the specific  
13 ingredients of that initiative, the National  
14 Aquaculture Initiative, haven't really had the  
15 level of industry input that probably they  
16 require.

17                    And so, I didn't want to reference  
18 that specifically. And I had I think in my  
19 version some kind of weasel words that didn't use  
20 National Aquaculture Initiative, but recognized  
21 that NOAA would be taking the lead on this.

22                    So, I don't honestly even remember

1 what my original language is. I can pull it up  
2 on my computer maybe. But I just felt it was  
3 premature to specifically recognize that  
4 particular term. Because it was a term that was  
5 used to specifically reference four things that  
6 NOAA staff was proposing to do.

7 And I talked a little bit to both  
8 Michael and to Paul about this. And, you know,  
9 my take is that it's not, I do not want to in any  
10 way not support what they're trying to do.

11 I just want to make very clear that  
12 MAFAC is not, per se, endorsing the specifics of  
13 what they put up on the screen as their proposal,  
14 until it's gone through further industry input.

15 So, what we're suggesting from a MAFAC  
16 point of view is that that's the next step for  
17 them, is to go out and get industry input, to go  
18 and talk to some of the state regulators and  
19 managers who have been involved with aquaculture  
20 management for many years, get their input.

21 And I realize it sounds a little bit  
22 like parsing. But unfortunately, in my world



1 specific words come back to haunt you, and they  
2 mean something.

3 And so, that's why I proposed a slight  
4 change there. So, if it's helpful I can drag up  
5 the verbiage that I had, and put that out there  
6 as well.

7 MEMBER RHEAULT: Well, if it's  
8 important we can do that. And happy to pull it  
9 back out.

10 MEMBER BONNEY: So, I'm going to  
11 recognize Pam.

12 MEMBER YOCHER: I was just wondering,  
13 Sebastian, if you don't capitalize National  
14 Aquaculture Initiative? And if in the last  
15 sentence we should ensure that this process  
16 should not derail? Does that make it general  
17 enough to you?

18 So, instead of National Aquaculture  
19 Initiative like a thing, take away the caps. And  
20 then, rather than referencing the initiative with  
21 a capital I, say process down below.

22 MEMBER BELLE: Sorry. I'm fine with

1 that. I would ask NOAA staff if that gives them  
2 what they need. Because the justification for  
3 using those three words, as far as I was told,  
4 was that they need to encourage the Secretary to  
5 take this seriously, and to move forward with it.  
6 And so --

7 MEMBER YOCHAM: And I agree. The  
8 three words are still there. But they're, by  
9 capitalizing them it makes it seem like more of a  
10 done deal. I don't know. Michael Rubino's in  
11 the room. Maybe he can weigh in on that. Or  
12 Paul.

13 DR. DOREMUS: From my vantage point  
14 the main thing that needs to be communicated,  
15 that we would recommend that the group  
16 communicate, based on the briefing that you heard  
17 from Michael and our related discussion, is that  
18 visible, bold support by the Secretary to advance  
19 domestic aquaculture is warranted.

20 This has, I think the highlighting  
21 here of regulatory streamlining opportunities,  
22 and the other kind of substantive comments that

1 were made are spot on.

2 I don't, we're using the general  
3 phrase National Aquaculture Initiative. I think  
4 that's valuable. But I don't think that it's  
5 necessary for you to communicate to the Secretary  
6 that you are recommending as a body that he  
7 visibly and boldly support the aquaculture  
8 initiative, charge NOAA to streamline  
9 regulations, work with industry, improve the  
10 science base, however you want to say it. That  
11 to me is most important. Whether the words  
12 National Aquaculture Initiative are in there is  
13 less important.

14 MEMBER BELLE: So, from my perspective

15 --

16 DR. DOREMUS: And I'm hoping Chris  
17 concurs.

18 MR. OLIVER: Yes.

19 MEMBER BELLE: That's what I like to  
20 hear. No wordsmithing, just yes. So, from my  
21 perspective I really appreciate, Paul, how you've  
22 articulated that.

1                   And I think, you know, if there's a  
2                   way that we could actually strengthen our request  
3                   to the, to ensure that leadership recognizes that  
4                   they need to highlight that as a priority, I'm  
5                   open to that.

6                   But I, you know, I think the fact that  
7                   you guys don't necessarily need those specific  
8                   words helps me in terms of my angst. And I  
9                   apologize to my colleagues on the Committee.  
10                  This is kind of the world that I live in. And  
11                  perhaps I'm being overly paranoid. But I, it is  
12                  my world.

13                  MEMBER BONNEY: Go ahead, Paul.

14                  DR. DOREMUS: Thank you, Julie. I'm  
15                  sorry for barging in again. One thing I'd like  
16                  to highlight that came out of various discussions  
17                  we've had with the Secretary, including one with  
18                  members of the NAA Board that I think is  
19                  important to communicate here.

20                  And I've heard it from many, many  
21                  people in industry. And I think it's a  
22                  difference in perspective between where industry

1 is and the Secretary right now. And it's why  
2 this communication can be particularly valuable,  
3 in addition to the fundamental content that is  
4 provided here.

5 Industry tells us, and it's been the  
6 experience of the shellfish industry, that high  
7 level political leadership is in itself a very  
8 valuable thing. It focuses effort. It focuses  
9 organizations. It focuses people.

10 So, I think if this communication  
11 says, effectively says, we need your leadership,  
12 and we need you to direct NOAA to do these  
13 things. Also, maybe semantics.

14 But I do think the team needs to be  
15 aware that the Secretary of Commerce standing up  
16 in whatever words says, we want more seafood  
17 production in this country, is in itself a very  
18 valuable thing. And your voice to that effect  
19 would be a great contribution.

20 MEMBER OKONIEWSKI: I think that's an  
21 excellent comment to make. Just one quick thing.  
22 Does it say 80 percent of the seafood is

1 imported? Is that what I saw up there? And  
2 everything I look at on Google that I can find  
3 says 91 percent. So, I'm, by value.

4 CHAIR BEIDEMAN: I think there's a  
5 little confusion. Because some of the things  
6 that are import, they're actually exported from  
7 U.S., and then processed, and comes back --

8 MEMBER OKONIEWSKI: It still --

9 CHAIR BEIDEMAN: -- as an import.

10 MEMBER OKONIEWSKI: It's still  
11 imported back into the U.S. And it transforms  
12 through a major value added process in doing so.  
13 And that is loss to the country as well, that  
14 process. Not just the value of the seafood, but  
15 the jobs, and everything else that go with that.  
16 I concur.

17 CHAIR BEIDEMAN: So, Bob.

18 MEMBER RHEAULT: So, let's  
19 decapitalize national aquaculture initiative once  
20 again in the top paragraph. And perhaps add a  
21 sentence to that top paragraph saying, your bold  
22 leadership in this effort would be welcomed.

1 (Off microphone comment)

2 MEMBER RHEAULT: By the U.S. industry.

3 Or, I don't know if we can speak for the entire  
4 U.S. industry from the MAFAC. But it certainly  
5 would be welcomed.

6 MEMBER BONNEY: So, one other thing I  
7 was thinking too is that MAFAC believes that  
8 these trends highlight, strongly believes. I  
9 would add, you know, so the next paragraph down.  
10 Probably, your bold leadership in this effort is  
11 welcomed by MAFAC. Because we can say that for  
12 certain, right?

13 Any other thoughts? Just trying to  
14 make it a little more along what Paul was  
15 recommending, just to do the double trump down,  
16 so to speak.

17 MEMBER BELLE: Can we just go back up  
18 to the first paragraph? Sorry. The rolling out  
19 a national aquaculture initiative, that to me  
20 again sounds like we are endorsing what was  
21 presented to us here. So, I think, how about  
22 supporting a national aquaculture initiative?

1                   MEMBER BROWN: Paul, would it be  
2 helpful to refer to the EEZ in specific in this  
3 letter? Because that's really the area where  
4 there's a paucity of aquaculture facilities.  
5 And, you know, worldwide that seems to be where  
6 things are shifting. And we need to be on the  
7 forefront.

8                   DR. DOREMUS: In my view that wouldn't  
9 be necessary. I think we want to entertain  
10 aquaculture production in the coastal zone, as  
11 well as out in federal waters.

12                   So, I wouldn't, especially for this  
13 letter I don't think that it would be necessary  
14 to divide the two in that respect. So, I would  
15 leave it at that,

16                   MEMBER BONNEY: So, any other  
17 thoughts? I guess I would ask that we look at  
18 the bottom, since I think we've fixed the top.

19                   MEMBER RHEAULT: My only question is  
20 whether we need a punchy sentence at the end or  
21 not. But --

22                   CHAIR BEIDEMAN: I have a, Julie, I



1 have a -- Do we make, and I've read it. But I  
2 like the idea. And a lot of what resonates with  
3 people is food safety and food security issues.  
4 And that's one of the areas where the U.S. is  
5 quite outstanding.

6 And I don't know if that's  
7 incorporated in here. And, you know, or how we  
8 could fold that in. I know we've already got a  
9 lot of long, commaed sentences. But I'd love to  
10 see that in there. I think that's a powerful  
11 piece.

12 MEMBER RHEAULT: Now, we're struggling  
13 to keep it to one page.

14 MEMBER BONNEY: Erika.

15 VICE CHAIR FELLER: This is partial a  
16 pet peeve, and partial answer Bob's desire for a  
17 punchy last sentence. Just, MAFAC believes, if  
18 MAFAC's sending the letter. I think it's  
19 implicit that MAFAC believes that. So, we can  
20 get rid of that.

21 I mean, I think it's a little bit more  
22 impactful to say, there are significant

1 opportunities to streamline existing regulations.  
2 And then I might wrap it up with, you know, MAFAC  
3 --

4 Per Julie's comment on the first day,  
5 MAFAC stands ready to work with you to, you know,  
6 get this done, or however you want to do it.  
7 Like, I think some kind of offer or, you know,  
8 expressing a desire to engage in this would be  
9 good.

10 DR. DOREMUS: There's another issue  
11 from many discussions with industry that I want  
12 to recognize here, and make a small suggestion  
13 for your text.

14 There's a lot of sensitivity. And one  
15 of the things that was a big factor in our most  
16 recent conversation with the Secretary is concern  
17 that this would be viewed negatively by the wild  
18 catch based industry.

19 Indeed, one of the reasons we think  
20 it's valuable for this body to speak on the  
21 matter is because you cut across all sectors.

22 And we don't, and industry doesn't,

1 nor does NOAA want to imply that imports are bad,  
2 and domestic production is good. It's a global  
3 industry. The key point is that supply is  
4 insufficient to meet demand.

5 And I think if you took, if you moved  
6 up, hang on right there. This paragraph right in  
7 the middle there that says, MAFAC strongly  
8 believes that these trends highlight the need to  
9 substantially increase domestic aquaculture  
10 production.

11 This would reduce our seafood trade  
12 deficit, while advancing the blue economy,  
13 generating thousands of jobs, preserving working  
14 waterfronts, and complementing, I would say at  
15 the end perhaps, a recommendation. And  
16 complementing the economic contributions of wild  
17 capture seafood industry, or wild capture  
18 producers.

19 Something to that effect. Recognizing  
20 that MAFAC endorses, as I hope you do,  
21 sustainable seafood broadly. And we don't, we  
22 simply cannot meet demand.

1           The point about the trade deficit is  
2           less that imports are bad, and more that demand  
3           is far outstripping supply. We've been replacing  
4           it largely with farmed product from other  
5           nations. And we could build our supply, meet  
6           future demand, et cetera.

7           So, I just wanted to draw your  
8           attention to that sensitivity, and suggest some  
9           reference here to wild capture producers.

10           MEMBER BONNEY: So, Mike is typing  
11           that. As one of the few wild capture people  
12           right here at this point in time, I think it's  
13           potentially complementing. Because it would  
14           depend on what the production is, and the  
15           seasonality.

16           So, you could have an issue where you  
17           are competing with wild capture. But you could  
18           also develop a system that complements wild  
19           capture.

20           And so, I think to say it boldly that  
21           it will happen and it will complement wild  
22           capture, I think it depends. So, I think, and

1 potentially complementing the economic  
2 contributions of wild capture producers, I can  
3 live with that.

4 MEMBER BONNEY: Eddie.

5 MEMBER OKONIEWSKI: I'd just like to  
6 point out that for those optimists, which I still  
7 am, in the industry, if you look at 91 percent  
8 there's a hell of a lot of room there to take  
9 aquaculture and wild capture to much, much higher  
10 levels of consumption than what we're seeing  
11 here.

12 And we've got a better product. We've  
13 got, all the way around we've got things going  
14 for us that we can compete. So, let's get game  
15 on.

16 And I'm not fearful about aquaculture  
17 stealing our thunder. Because we, the  
18 potential's there to have both, and to, and a  
19 larger market share, period. And that's where  
20 the real reward lies.

21 MEMBER BONNEY: Go ahead, Erika.

22 VICE CHAIR FELLER: I have maybe a

1 friendly amendment.

2 MEMBER BONNEY: Okay.

3 VICE CHAIR FELLER: Maybe in the name  
4 of kind of making this positive, instead of  
5 without negatively impacting to say, you know, in  
6 a way that complements the economic contributions  
7 of wild capture producers. So, it's sort of like  
8 it's less of a trade off, this or that. It's  
9 more kind of a, we're all in this together.

10 MEMBER BONNEY: Yes. I like that. I  
11 guess I should be asking other folks. But I'm  
12 trying to walk that line, being from Alaska.

13 MEMBER BELLE: So, this is Sebastian.  
14 I absolutely like that addition. I think it's a  
15 great addition. And it's, it helps from the  
16 perception point of view, which I think really  
17 this issue is a matter of perception, not of  
18 reality. But I think that that's, it's important  
19 to deal with that.

20 MEMBER BONNEY: Any other comments on  
21 the letter? Are we getting --

22 MEMBER RHEAULT: I think we just need

1 to unstrike the and.

2 (Off microphone comments)

3 MEMBER RHEULT: You struck out the  
4 and. And we kind of need to -- I think so. And  
5 if anyone else doesn't have any objection, I  
6 would make a motion to accept the letter, forward  
7 it to the Secretary with all due alacrity.

8 MEMBER BONNEY: So, we have a motion -  
9 -

10 MEMBER BROWN: I second.

11 MEMBER BONNEY: -- on the floor. And  
12 who seconded it? Columbia, Columbus --

13 MEMBER BROWN: Cleveland.

14 MEMBER BONNEY: -- seconded it. And  
15 is there any -- All in favor say aye.

16 (Chorus of aye.)

17 MEMBER BONNEY: Any opposition? Done.

18 CHAIR BEIDEMAN: We did it.

19 MEMBER RHEULT: Thank you.

20 CHAIR BEIDEMAN: We don't have to do  
21 it again, right?

22 MS. LUKENS: No.

1 CHAIR BEIDEMAN: -- the wrap up. So,  
2 there you go. Turn it over to our --

3 MS. LUKENS: What's my name?

4 CHAIR BEIDEMAN: -- leader, our  
5 fearsome leader here.

6 MS. LUKENS: Co-leader.

7 CHAIR BEIDEMAN: Jennifer.

8 MS. LUKENS: All right. First of all,  
9 thank you all so much. You guys have worked so  
10 incredibly hard at this meeting. Out of the  
11 handful of MAFAC meetings I've been with you all,  
12 you really, at this meeting I've seen a lot of  
13 sweat and effort go into this.

14 So, I appreciate the time today. I  
15 know it can be painful. But sometimes we do need  
16 to go through that Committee editing to get it  
17 out the door, and really close out the resilience  
18 tasks that you all have been working on for two  
19 years. So, kudos to you all, and congratulations  
20 to you all, I wanted to say.

21 We don't have too many follow-up  
22 items, action items from this meeting. There's



1 some little things that we need to have some get  
2 backs on, like some of the, sharing some papers  
3 that Roger had from his presentation. And some  
4 little things like that.

5           However, I'm going to get back from  
6 Dan on the composition of the regional grant  
7 dollars by region, a different way of looking at  
8 it than he displayed earlier today. So, we have  
9 all of those in the meeting minutes. And we'll  
10 be following up on those.

11           I did want to go over with you all  
12 real quickly, because I know you're, we're  
13 getting towards the end of our time. The email I  
14 sent out last night about Subcommittees, and how  
15 we are missing several chairs. And there is  
16 about five different things I was looking for.

17           I have heard back on the membership  
18 folks that are interested. From Protective  
19 Resources, Columbus has volunteered to chair that  
20 subcommittee. So, I haven't heard any other  
21 volunteers for that. Yes, Bob.

22           MEMBER GILL: Are you talking

1 specifically Protective Resources, or any of the  
2 others?

3 MS. LUKENS: I'm talking Protective  
4 Resources.

5 MEMBER GILL: I'm sorry.

6 MS. LUKENS: I'm going to get to other  
7 ones in a second. So, just wanted to cover that  
8 and see if there was any other takers there. I'm  
9 also looking for people to be on that  
10 subcommittee. Because it is very sparse. Rai.

11 MEMBER ESPINOZA: Yes. I was also  
12 interested in that. But we can fight it out.

13 MS. LUKENS: Okay. I'm going to put  
14 Rai down there also for that. For the  
15 Recreational Subcommittee, I know there was, we  
16 had a 50/50 thing going on over --

17 (Off microphone comment)

18 MS. LUKENS: So, it looks like that  
19 Rip, we've all, we nominate Rip. And he's not  
20 here. But I think he's okay with that.  
21 Likewise, I think, Bob, if you would be on the  
22 Subcommittee that we're looking for other

1 members.

2 We do have, with the departure of a  
3 great amount of members, we do have likely eight  
4 new folks coming on board after this last  
5 solicitation, which just closed this week. So,  
6 after you all cycle out in February we will be  
7 having eight new members. And hopefully we'll  
8 have some folks on there for that.

9 Our next victim, I mean member,  
10 volunteer, Mike's not laughing yet, for the  
11 Columbia Basin Partnership Task Force. He has  
12 volunteered to stand up and be MAFAC's liaison to  
13 that task force. So, I know you have to, do you  
14 have to consult anyone else before that  
15 volunteering is full, you mentioned yesterday?

16 (Off microphone comment)

17 MS. LUKENS: Yes. Or we --

18 (Off microphone comment)

19 MS. LUKENS: Okay. Okay. All right.

20 Be there.

21 (Off microphone comments)

22 MS. LUKENS: And then that leaves, the

1 Ecosystems Chair is going to be vacant, of which  
2 I have not heard anyone for -- Sorry, Mike. Yes.

3 (Off microphone comment)

4 MS. LUKENS: Yes. Okay.

5 (Off microphone comment)

6 MS. LUKENS: Okay, great. Thank you,  
7 Mike. I appreciate. And then, the one last  
8 chair that we are going to be losing is the  
9 Commerce Committee. So, I did not have anyone  
10 step up for that. But we will be soliciting this  
11 again. But I will follow-up with you all. But I  
12 appreciate those who have volunteered and stepped  
13 up for that.

14 MEMBER BELLE: Jennifer, can I just  
15 intercede?

16 MS. LUKENS: Yes.

17 MEMBER BELLE: I'm not volunteering  
18 for Chair of the Commerce Committee.

19 MS. LUKENS: Okay.

20 MEMBER BELLE: Because time is  
21 precious in my world, as it is in everybody's.  
22 But I would like to be on that Committee, as a

1 member of that Committee.

2 MS. LUKENS: You may certainly be on  
3 that.

4 MEMBER BERKOWITZ: Can I make a  
5 recommendation?

6 MS. LUKENS: Yes, sir.

7 MEMBER BERKOWITZ: I'd co-chair it  
8 with Sebastian.

9 MEMBER BELLE: I'm going to get you,  
10 Roger. I would be glad to do that.

11 PARTICIPANT: All right.

12 MS. LUKENS: Sweet. Yes, Mike.

13 MEMBER OKONIEWSKI: I'm not sure if  
14 I'm not sure if I'm on that committee already,  
15 but --

16 MS. LUKENS: I think you are on that  
17 committee. So, we'll get this all straightened  
18 out afterwards. But I really appreciate you  
19 stepping up to the plate there.

20 And, yes, your question for me  
21 earlier, Roger, on Laurel and what she was  
22 talking about earlier. I do believe that issue

1 would fall underneath as a Commerce Subcommittee.  
2 So, you're good to go on that.

3 So, with that I just want to move on  
4 to, we, since, in the interest of time, which we  
5 are five minutes over our ending time, I had  
6 talked about dedicating some time at this meeting  
7 to talk about new topics.

8 I think at this point in time a lot of  
9 us are ready to walk out the door. So, I'd like  
10 to open up, and we'll follow-up with an email, is  
11 for you all to go back, reflect on this meeting.

12 And go back to your recommendations  
13 that you made in December of 2016, and what you  
14 heard from three different presentations  
15 reflecting on those comments that you,  
16 recommendations you made.

17 And think about how you all might want  
18 to suggest adding value to the administration and  
19 any other advisory capacity. I need to, future  
20 topics that you might want to take on more in  
21 depth for us to discuss.

22 I also need to take back what has

1 happened at this meeting, and share that with our  
2 broader leadership. And see how MAFAC may be of  
3 use to us as we move forward, and work with you  
4 all on that.

5 I'd like to, after we have the new  
6 members on board, and well in advance of our  
7 spring meeting, have a teleconference call where  
8 we talk through, and the new issues you might be  
9 taking on. And really tee that up cleanly for  
10 our late spring, early summer meeting that we'll  
11 be having. Yes, Mike.

12 MEMBER OKONIEWSKI: So, are you  
13 looking for hints of what directions we might  
14 take now? Or you just want to do it in a email  
15 later? Or --

16 MS. LUKENS: I think at this point, if  
17 you really are dying to say something right now,  
18 that's, I'm not going to stop you from that. But  
19 I think I want to make it open to all members,  
20 and not, we don't have a full membership here  
21 right now. I don't, I want to make sure  
22 everybody has a chance.

1                   MEMBER OKONIEWSKI: Well, as an  
2 official victim I do think that, you know, we've  
3 had a change of administrations. And obviously  
4 there's some new guidelines out there that the  
5 administration, from the top down, would like to  
6 see accomplished. Seafood trade deficit, those  
7 kind of things.

8                   Just leave it in a general sense that  
9 I think it would behoove us to be cognizant of  
10 what their goals are. And to at least spend some  
11 time seeing if we can engineer some different  
12 projects that might enhance achievement of those  
13 goals.

14                   And I'll leave it at that. But it's,  
15 I guess it would be, focus on the economics, and  
16 areas where they're not performing as well as  
17 they might. And how we would reduce that seafood  
18 trade deficit. And I'll just leave it at that.

19                   MS. LUKENS: Thanks for sharing that,  
20 Mike. Paul, did you have, what to say --

21                   DR. DOREMUS: Just as a point of -- I  
22 think it's a great suggestion. There is a



1 meeting tomorrow of all of NOAA's leadership with  
2 Rear Admiral Gallaudet about the details under  
3 that third priority, about increasing the  
4 sustainable economic contributions of fishery and  
5 ocean resources.

6 So, and that's going to lead to a  
7 guidance memorandum that will be put out. And we  
8 can provide that to the Committee, as a way of  
9 focusing the effort that I think you just  
10 advised, which is a good idea.

11 DR. DOREMUS: Yes. This aquaculture  
12 piece is undoubtedly a major component of that.  
13 There may be other pieces. Some might be related  
14 to trade. We're doing a lot of work, as you  
15 know, with traceability, particularly seafood  
16 inspection monitoring program.

17 There may be other aspects of  
18 fisheries. I know that the Rear Admiral has been  
19 asking a lot of questions about how we can  
20 improve through technology and other kinds of  
21 ways our core stock assessment work.

22 So, there may be other dimensions that

1 emerge from this. But for sure aquaculture will  
2 be a big piece of it.

3 MEMBER OKONIEWSKI: And, Paul, I'll be  
4 so bold as to say, it's not may, there are other  
5 dimensions that we can look at. It's,  
6 underutilized species for one.

7 DR. DOREMUS: Oh, absolutely. Yes,  
8 yes. I was just speaking to what I have heard  
9 from Rear Admiral Gallaudet. But there are other  
10 contributions certainly that we could focus on,  
11 if the Committee would like to go in that  
12 direction.

13 MS. LUKENS: Okay. Thank you. Chris  
14 Oliver was able to come back with us for a short  
15 time. He had a very small window, and now has to  
16 leave. But I just want to give him a chance to  
17 say something before he departs.

18 MR. OLIVER: It was good to meet those  
19 of you I haven't met. And I really appreciate  
20 the opportunity to get more up to speed on what  
21 MAFAC does, and the importance of what you do,  
22 and the different issues that you tackle.

1                   And as Mike said, and Paul elaborated  
2                   on, I think there's an opportunity here to maybe  
3                   further focus your efforts in the future on some  
4                   of those key important things that Mike was  
5                   speaking to.

6                   So, again, I appreciate your, a big  
7                   part of my learning experience in the new  
8                   position. And I appreciate the, some time I was  
9                   able to spend with you here this week. And look  
10                  forward to the next meeting. Thanks.

11                  MS. LUKENS: Thank you, Chris. Okay.  
12                  Okay, thank you. One last thing, which is really  
13                  important, which is our next meeting, and  
14                  scheduling our next meeting.

15                  Right now we are currently looking at  
16                  the week of June 25th as our next in person  
17                  meeting. And we have not identified a location  
18                  yet.

19                  We had talked a little bit about  
20                  syncing it up on the West Coast with one of the,  
21                  with the Columbia Basin Partnership Task Force  
22                  meetings. We were unable to find a week where we

1 could have a joint meeting, or a sequential  
2 meeting.

3 So, another idea that folks had put  
4 forward, I heard earlier today, several people  
5 expressed an interest in Puerto Rico. So, as  
6 being our next thing.

7 So, I wanted to see if anybody else  
8 had ideas or thoughts on the next location. And  
9 just for your input before we depart today.  
10 Raimundo's smiling, but does not have his hand  
11 up. I'll go with Mike, and then Bob.

12 MEMBER OKONIEWSKI: I think an  
13 opportunity to see some fishing production in  
14 Alaska would be really interesting for a lot of  
15 you folks. So, and I'd --

16 MS. LUKENS: Thank you, Mike.

17 MEMBER OKONIEWSKI: -- spent 17 years  
18 in production up there. So, I mean, it's on a  
19 scale that I don't think -- Some of you were  
20 impressed when you saw a little operation there  
21 in Clackamas.

22 MS. LUKENS: Yes.

1                   MEMBER OKONIEWSKI:  Imagine something  
2                   50 or 100 times that big.  So, that's -- Well,  
3                   and the other one's Westport, Washington.  But  
4                   they, I mean, I'm just saying that some exposure  
5                   to industrial fishing, without the bad vibes that  
6                   sometimes come off that, would be I think good  
7                   for everybody.

8                   MS. LUKENS:  Thanks, Mike.  Bob.

9                   MEMBER RHEAULT:  I was enticed to come  
10                  on this body by someone who told me you had met  
11                  in Hawaii.  And as someone who's rotating off  
12                  after six years of meeting in Silver Spring, if I  
13                  find out you go to Hawaii, I'm going to kill  
14                  somebody.

15                  MS. LUKENS:  Rai.

16                  MEMBER ESPINOZA:  In light of murder, I  
17                  think Puerto Rico's a good option.  I'm sure it  
18                  will still make him angry, because it's tropical.  
19                  But on the bright side, a June meeting in Puerto  
20                  Rico, it seems that it would, it could entirely  
21                  be done.

22                  Right now I know of two possible

1 venues. One of them is where the Coast Guard is  
2 currently using for their base of operation, the  
3 folks that are down there.

4 So, it has, we've had several NGO  
5 meetings there, sector meetings, vessel removal  
6 meetings. So, it's something that I think could  
7 be seen as a different type of fishery that  
8 occurs in the U.S.

9 It's a commercial, entirely artisinal  
10 fishery. And besides the boost to the economy  
11 that it could be. But I think it's also one of  
12 the places that MAFAC has never actually met.

13 And being the first member from Puerto  
14 Rico, and the second one from the U.S. Caribbean,  
15 you know, not counting you, Columbus. But Dr.  
16 Laverne Ragster that was on a while ago. I think  
17 it would be something that could be very  
18 interesting on who it could be -- But, yes,  
19 thanks.

20 MS. LUKENS: Thank you, Rai. Yes,  
21 Erika.

22 VICE CHAIR FELLER: I've been one of

1 the agitators for Puerto Rico. And I'm always  
2 excited to go to Alaska. But one thing I'd love  
3 to see, if there's like a chance for a field trip  
4 when we go, is I've never actually seen finfish  
5 aquaculture at any kind of scale. So, if there's  
6 someplace we could go to take a look at that,  
7 that would be a really interesting criteria for  
8 selecting a site.

9 MS. LUKENS: Great.

10 MEMBER BELLE: Thank you so much.  
11 You've played right into my hands. I want to  
12 offer Portland, Maine as a venue for -- No. I'm  
13 only kidding.

14 MS. LUKENS: And you guys are making  
15 this way too difficult for me. But this is great  
16 to have your input. So, we'll put that one down  
17 there too.

18 There's a lot of different things we  
19 go through in terms of venue, how it relates,  
20 syncs up with what the Committee is looking into,  
21 and the interest of the membership. So, and then  
22 also cost, time of year, and a lot of different

1 factors. So, I appreciate your input. And we  
2 will use that as we get the next meeting  
3 scheduled.

4 So, one last thing I wanted to add.  
5 And I feel horrible, because most of these people  
6 that I'm about to say here aren't here. I was  
7 unable to miss, I was unable to make the happy  
8 hour we had earlier this week for our departing  
9 members.

10 And I know Paul said a few things  
11 about them. But I really wanted to thank Ted,  
12 Peter, Heather, Dick, Pam, and Liz, who just  
13 walked out the door, and Julie, of course, and  
14 Bob. And I hope I hit everybody on that list.

15 But I, as they were running down the  
16 elevator there, I wanted to thank them. This  
17 Committee has evolved over the two and a half,  
18 three years that I've been in this position.

19 And I just have seen fantastic  
20 contributions from each and every one of you.  
21 And not just individually representing your  
22 stakeholder group and your interest, but also



1 working collaboratively as a group together, to  
2 get to those recommendations.

3 I was a little skeptical taking up  
4 this role, and having to deal with that in the  
5 beginning. But really, I've been so pleased and  
6 thankful for you all volunteering your time, and  
7 putting your effort into this.

8 So, it really is of value to fisheries  
9 and NOAA, and quite frankly the Secretary of  
10 Commerce. And the advice and insight that you  
11 provide, that we can't get living in our little  
12 bubbles sometimes, of the Beltway here.

13 So, I really do appreciate that, and  
14 wanted to say thank you for your time and your  
15 efforts. So, with that, I think we covered all  
16 of the last minute details I had. Heidi, did I  
17 forget anything? I'm sure I did.

18 MS. LOVETT: Just, since there's a  
19 couple of new people here, we have a voluntary  
20 form that I will send to you all. But it helps  
21 you develop your reimbursement paperwork that we  
22 need to have. And we'd like to get that within

1 five days of your completing your travel.

2 So, I'll send that out to everybody.

3 And it's just a guide to help you remember all  
4 your expenses. And in this case there shouldn't  
5 be hotel expenses. It will be your local travel,  
6 parking. And we'll provide the per diem. So,  
7 that was all I wanted to share.

8 MS. LUKENS: Terri said I've missed  
9 one thing. And it's a very important thing.

10 CHAIR BEIDEMAN: Yes. Before I handed  
11 it over, I believe that with the tasks of the Ad  
12 Hoc Working Group for Resilience having been  
13 completed this day in the year 2017, that we  
14 would be in a position to disband, with my great  
15 appreciation and relief.

16 The Ad Hoc Working Group, I would need  
17 to entertain a motion, second, and a vote. But  
18 before I do it, I just want to thank again Bob,  
19 Julie, Erika, Harlan, all the people on the  
20 Committee that worked so hard, Mike, you know,  
21 coming in.

22 Even the new folks that helped us

1 craft our final document were exceedingly  
2 helpful. We worked very well together. And we  
3 had, it was a big, as I said, a big elephant.  
4 And we ate it one bite at a time. So, I'm ready  
5 to entertain a motion, should someone please  
6 offer a motion.

7 MEMBER BROWN: So moved.

8 MEMBER RHEAULT: Second.

9 CHAIR BEIDEMAN: Okay. Then I'm going  
10 to say, this is the motion to disband the Ad Hoc  
11 Working Group that was formulated in 2015, for  
12 the express purpose of completing the tasks that  
13 we have finalized. All those in favor?

14 (Chorus of aye)

15 CHAIR BEIDEMAN: Anyone opposed? Any  
16 abstention? Thank you very much. The Committee,  
17 the Ad Hoc Working Group is dissolved.

18 MS. LUKENS: Yes, Julie.

19 MEMBER BONNEY: So, I'm wondering  
20 about the, what is it, the Climate Subcommittee  
21 under us. Does that still have a role? Or are  
22 we --

1 MS. LUKENS: Yes. That is still up  
2 and running. And that was created separately  
3 from the Resiliency Group. So, yes, that still  
4 is ongoing. Paul, did you want to say anything  
5 before we adjourn?

6 DR. DOREMUS: I think everybody's  
7 ready to go. I can only reiterate Chris' thanks.  
8 This has just been a fabulous committee, and very  
9 promising work coming forward from the work that  
10 you completed this week. And thank you very  
11 much.

12 MEMBER BROWN: I just want to say, on  
13 behalf of others, you know, Kudos to Neery who  
14 does such a wonderful job with our vouchers and  
15 handling our travel.

16 MS. LUKENS: Thank you for  
17 acknowledging that, Columbus. And then, I would  
18 be totally remiss without saying thank you to  
19 Heidi for everything, and Adele for helping  
20 support this meeting. So, this is why we're all  
21 here. So, they get us here. So, thanks to you  
22 very much. All right. It's a wrap.

1                   CHAIR BEIDEMAN: Do I have a second to  
2 adjourn this meeting? All in favor?

3                   (Chorus of aye)

4                   CHAIR BEIDEMAN: Walk out the door.

5 Thank you.

6                   (Whereupon, the above-entitled matter  
7 went off the record at 2:50 p.m.)

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Before: DOC/NOAA

Date: 11-30-17

Place: Silver Spring, MD

was duly recorded and accurately transcribed under  
my direction; further, that said transcript is a  
true and accurate record of the proceedings.



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Court Reporter

**NEAL R. GROSS**

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