

MAFAC MEETING
October 13, 2021
10:21 am CT

Coordinator: Welcome and thank you for standing by. Today's call is being recorded. If you have any objections, you may disconnect at this time. I would now like to turn the call over to Erika Feller. Thank you. You may begin.

Erika Feller: Thank you. Welcome back, everybody. We have a bit of an agenda today. The first thing we're going to do, well, this afternoon, my time is we've got an hour and a half working session to talk about our resilient seafood and fisheries project and how we might want to organize that building on the discussion we had early afternoon, some of the presentations that we heard yesterday.

And then we'll do this until about 2 o'clock or, I'm sorry, until 1:30, at which point we'll take a break for half an hour and then we'll go into getting some updates from, you know, kind of the usual suspects. We'll hear from Paul, the budget and administrative update.

We'll hear an update from the Fisheries Commission and also get the science update and a recreational fisheries update later on this afternoon. So we'll spend, you know, the next hour and a half hopefully making some progress on our little resilient fisheries project.

And so I kind of want to think about this maybe as a few chunks. I've been thinking about it in four parts. First of all, I think we should have a conversation about how to sort of structure this work and what ideas people have after yesterday's discussion.

And then revealing one of my assumptions upfront, I actually think we should tackle each one of these one by one and maybe allocate a little bit of time. I think they're all very different.

And so if we can kind of agree on sort of upfront what questions we want to answer then I propose that we spend some time talking about workforce, spend some time talking about infrastructure and then spend some time talking about offshore uses.

I'm not expecting that we will necessarily complete work, like have a full scope of work, on each of these by the end of this session. But I think if we can kind of frame out how we want to go forward then perhaps there can be a little bit of work that we do between now and tomorrow afternoon to flesh these things out a little bit better. Does that sound acceptable to people?

Jennifer Lukens: Erika, this is Jennifer. This is Jennifer. I just wanted to offer up an idea that I had on this work here. And I don't want to overtake what direction MAFAC wants to go by any means. But I wanted to offer up a proposal and it kind of - it doesn't - it wouldn't be in each one of the four buckets so to say. It is my reflection after hearing the presentations yesterday and what is in the draft outline to date, some of my thoughts that could be helpful to you all. So I can do that now or later. Is that okay? What would you like to do, Erika?

Erika Feller: Yes. So let me - I think that what I'm sort of thinking of what you're proposing kind of together. So just in terms of organization and then, Jennifer, I'm going to call on you next so you can explain what you're thinking. So what I'm sort of thinking, one of the things that hit me after this is I think there should be sort of an overall, what is the thing that we're aiming at? What's the problem? What's the relevance of what we want to address in each one of these areas?

And I think the idea of kind of having a problem statement and some clear idea of maybe not necessarily the audience for the recommendations, but sort of some thought to what it is that we want, you know, where we think that we can help, where we think that NOAA can play a role in these various issues and where we would like to provide some input into the agency, that would be helpful.

I think we need to kind of think through that. I think that'll help us aim our efforts. And then I think we can kind of think a little bit more about like, okay, well, then what would

we do that would help us address that? What could that product potentially look like?
How would we tackle it?

And then maybe we can also talk amongst ourselves about who wants to pop their hand up and say, oh my God, I'm totally motivated by this workforce stuff, or we can voluntell somebody that you're going to be in charge.

So that's what I'm kind of thinking is if we can kind of - if that sort of structure works for people in terms of how to frame our discussion and what are the questions we need to answer on each one of these, then we might be able to sort of roll into talking about our three topics. Does that make sense?

So what is kind of that big problem statement and how is it? What is it? What is sort of the relevance of it? I think if we can figure that out, that might help. Okay. Jennifer, your hand is up. Save me.

Jennifer Lukens: Okay. I'm not sure if it fits in with what you just said or not. You might think it does.

But anyway, I'll offer this up. I was trying to walk through what some of the questions are to be addressed and answered by MAFAC looking through the outline itself of which - Heidi, can you put up the link in the chat so everybody has easy access to the outline if they don't have it at the top of their inbox?

And then I went through all of the slides from yesterday, all of the different highlights from the public comments on Section 316 (c), the climate executive order. I also went through the slides from David O'Brien in the Aquaculture Workforce Development Economic Development Plan that they talked about. And I was trying to look for areas of overlap with what you all had been talking about.

And what came to me, and this is just for prompting you all, was underneath of workforce development more of the question of what is the current state of fishing, fresh seafood, fresh aquaculture workforce and what are the gaps that need to be filled or the changes that need to be made to ensure the resilience and adaptability to changes in the climate/ecosystem and market?

And then that's a big, really, really big, right, diving down to be more focused, which is specifically, what can NOAA do to assist these industries in preparing for the future? That is what I came to particularly because you'll see in the document underneath of it the slides that I called out from in the Aquaculture Development Plan Goals 2 and 3. The Economic Development Plan, those goals are supporting infrastructure and workforce development, expanding market opportunities.

In climate it's underneath of Number 6, the buckets that they came from. The executive order comments is under economic considerations and investment and community-based fisheries and working waterfront, job training and the next generation of seafood harvesters and switching fisheries, the ability to be resilient and switching that there and then funding needs and explicitly looking at equity inclusion in grants.

I think the question that I put here is and what I would propose to MAFAC to talk about in that are a lot of the things that are in the workforce development section. And some of the ones that are in the infrastructure section would fall under what MAFAC would explore in order to answer that question.

I think we need to have - we would need to have very strong guideposts of keep asking the question throughout the conversation. What can NOAA do about this because there may be other threads that go off that we might not be able to assist with or do? But how would you advise us in that?

So that is what came to me after reflecting over everything that I just wanted to put that out there. I saw that not anybody had put in any comments or suggestions overnight. So I just wanted to throw that out there as something to think about. So I guess, Erika, it kind of does fit under your question for workforce development and maybe a little bit more.

I'll say one more thing, which is I don't think we have to have everything solved and fixed at this meeting. But I think everything in this document is great and there's potential in all of them. So if we only get to picking one thing that doesn't mean the others get

forgotten. It means that we're going to focus on one first and could go on to other things. So I'll stop talking now. Thank you, Erika.

Erika Feller: Yes. I think that that is a much better thought through and articulated way of what was sort of going on in my head of trying to sort of articulate - trying to figure out like, where can NOAA assist on these things? So if you guys are okay with sort of that as a framing question then maybe we want to focus specifically on the workforce development section in here and brainstorm a little bit about the answers to the questions that Jennifer has posed. That is what I would like to do next.

And if you guys are in the document, I have added Jennifer's question to the guide under workforce development. Oh, for Pete's sake. You cannot use right click to paste in Google Docs and I always forget that. It'll be there and we can take notes. And I'm now looking at who has their hands raised so, Jennifer, did you have another comment or was that from before?

Jennifer Lukens: That is a legacy hand of which I'm going to take down. And I see that Harlon has his hand up and Pat Sullivan does. If you want me to keep tabs on hands today, I'm happy to do that.

Erika Feller: Right on. Maybe we will turn it over to Harlon then.

Harlon Pearce: A couple of questions. Can you hear me yet? Not yet?

Erika Feller: Yes.

Harlon Pearce: Yes.

Erika Feller: Harlon, we heard you and now we don't hear you. I think you muted yourself.

Harlon Pearce: Better. No?

Erika Feller: Perfect. No, you're good. You're good. Keep talking.

Harlon Pearce: It's probably operator error, but my hand when it's white look forward to it. I can't seem to get rid of it. When you talk about workforce development, I think you got to start at the root. And I guess I'm talking about fisheries right now, and I'm talking about fishermen and entry into the market because we have a major (grain) of a fleet problem. And this may be an off the wall comment, but it has to start with balance on the council system. A lot of the councils aren't in balance, whatever component is not. But on the harvesting component side, there's an opinion that the council is not going to help them so they're not really interested in getting into the program.

So we've got to make sure we issue a balance on the council whatever we do. And when you do that, you see a lot better programs come out of that council system that will allow entry into the fisheries that I'm seeing people not going to get in because of that. Now that's an off the wall comment but that's just a start. So I'll leave you with that. Thank you, Madam Chair. If that makes sense.

Erika Feller: Oh, yes. Pat?

Dr. Sullivan: Yes. Great. Thanks, Erika. And thanks, Jennifer. I like the idea of what would Jesus do? And I would suggest we follow that. But I am aware that, you know, there are, like with competing offshore uses, we need to talk with BOEM and with regard to infrastructure, we need to talk with USDA. We've got some really good presentations on that. I'd like to ask the question of whether we want to delve into that or not or just let that alone.

Erika Feller: I would like to focus on workforce development for the next 20, 25 minutes because I think the question you just asked, Pat, is kind of exactly what we're going to need to wrestle with on infrastructure. But I actually just think it will be a really good exercise for us to think through workforce development and how this might work in something that is very much in our lane. Does that make sense? Like let's use this to get ourselves warmed up to how we might figure this out and then take it on to something more complicated.

Dr. Sullivan: Sounds good to me, Erika. Thanks.

Erika Feller: Yes. This is Erika. And I'm not speaking as any official representative but just as somebody who's listened in to a lot of council meetings. Particularly in the Gulf, I know there's been a lot of conversation around the council table about how to help new entrants into the commercial fisheries in particular and looking at ways to allow for low cost entry, particularly into IFQ systems.

And so I think maybe a review of those comments or reaching out to the Gulf Council for a summary of some of that conversation could be really helpful. I've kind of been looking at the what would NOAA do part of it there. Megan?

Dr. Davis: Thanks, Erika. I like the charge that that you and Jennifer put together, you know, what can NOAA do to assist with the workforce development? And so I'm thinking back on a couple of presentations that we had. We had one specifically from Sea Grant talking about, I think it was early career - I can't remember exactly the name of the program that they have in place.

But I'm also thinking that when we look at workforce development that we also want to look at the different levels of training, whether it be in the academic setting versus in vocational versus hands-on in the field and mentor/ mentorship type too. So I think that should also be looked at and looked at in terms of how NOAA approaches these different training levels and if there's any advice that we can give in those areas.

Erika Feller: So Tom and then (Sarah).

Tom Fote: Going back to my days when I first started doing the Mid-Atlantic Council meetings in the 80s is when the surfclam IFQs were started. And when I used to go to meetings, there was 150 captains and crews and a whole bunch of people sitting there and around the table. Now if you go to a surfclam meeting, there's the lawyer, the processor and the bank because they bought up all the quotas, consolidated all the industry and put most all those captains who were shortsighted at the time because they sold all the quotas.

So that's when I saw a loss of industry in the surfclam workforce because there was no method to get in. When we do limited entry because we've done that over the years in a

lot of states, we basically affect the people trying to get into the fishery. They have to buy someone's other permit or things like that.

And then I looked at certain situations. We went to a sector separation and basically looked at the charter boat fleet. And some of the charter boat fleet that basically supports it because they want a value for their permit because then somebody has to buy them when they want to get out of it.

And, you know, I come from the school that this is a public resource, deer, antelope and fish. And we shouldn't be selling the public resource without limits on it. Like we all did when we basically supported IFQs or any individual quotes. We said five years and then it goes back up to auction because it's part of the public property.

So that's just my opinion and what I've seen over the years. When we do limited entry, when we do IFQs, we basically cut back on workforce and we do the same thing in sector separation. We put limited entry.

Erika Feller: (Sarah) and then Stefanie.

Dr. McDonald: Two things. I wanted to piggyback on what Megan was saying and talk about increasing the DEI when it comes to vocational and educational training and making sure that the agency is also reaching out to underserved communities when it comes to that training. And then the other thing I just wanted to repeat actually, not anything I've said in the past, but what Kellie and Richard said in a previous workforce call, for the recreational community.

I thought it was really interesting that there's a shortage of people who know how to repair boats. There's a shortage of people who are making equipment. And I don't know if this is under NOAA's jurisdiction or not, but it goes into that broader like vocational training. So I just wanted to raise that issue again. I just didn't want it to get lost again. I can't take credit for those comments, but just wanted to add those in there.

Erika Feller: Stefanie?

Stefanie Moreland: Thanks. I also support thinking about skilled trades and the gaps that we have in the processing sector. We heard it also with respect to aquaculture and some of the barriers for developing that industry. So vocational skilled trade development is an area that I think needs significant attention. But I also feel like fisheries communication is really important.

And so we talked a lot when we were looking at marketing about the value of NOAA fisheries communication and increasing information available that's accessible to the public on management and some of the successes in U.S. fisheries. Getting that into high schools, getting that into grade schools, having material where people can be exposed to some of the marine conservation work, both from the scientific fisheries and management side as well as from the stakeholder community harvesting opportunity processing sector.

These jobs are evolving. They are interesting. There are careers available to people. People can go to Vo-Tech. They can go to college and they can come back into this industry with a bright future. I think it's really important that people be exposed to that. And I think the types of work, imagery and description about conservation efforts from NOAA has been a positive contribution and a good base to work from for exposing kids, youth and people interested in a college alternative to a good career path.

Erika Feller: Harlon?

Harlon Pearce: Just to follow-up on Tom's comments on the IFQ program and difficulties for people to get into that program and the high cost of leasing shares from different individuals who have shares. It's always been my thought that any new allocations, and if we do a good job in our fisheries and develop our fisheries, we have increased allocations as we have had in the Gulf. That new allocation should go to new entrants but new is the wrong word.

Entrants were actually kind of bumped off because their catch levels weren't high enough to be part of the referendum. But I think that if you start giving somebody extra shares coming from new allocation to fishermen that were there before, you'll see people jump

back into the fisheries, whatever fishery it is that's under that program. So I just think that's an important fact to think about. Thank you, Madam Chair.

Erika Feller: I'm going to call on some people who haven't talked yet before I go back to people who've made a comment. So I'm going to go to Joe.

Joe Schumacker: Thanks, Erika. Mine is more of a question. I brought this up before, but it's about the barrier to entry into fisheries per capital, capital loans for young people and other people to get into the fisheries and especially out here on the West Coast. And I just don't know what NOAA can do in that regard. So that's kind of my question there if this isn't something we can really address in these type of recommendations.

Erika Feller: I think it's a good question so I'm writing it down. I've got Megan and then Stefanie again.

Dr. Davis: Okay. Thanks, Erika. Yes. So to build upon what Joe was just mentioning how to get - and all of us have been touching on it, you know, how to get workforce training and get people interested in taking on these various types of positions in both aquaculture and the fisheries industries.

So as many of you know, we did a clam retraining in Florida with the displaced fisheries. And the Department of Labor and Education came in with funding specifically to do a yearlong program. And so I think that's something that we could be thinking about, too, how NOAA could do some cohort training where you actually get paid to do the training and then at the end you get - in this case it was a lease site with clams when you graduated.

So it was actually - there were incentives all along to try to build the workforce and to move the workforce into an industry. So I use the clam aquaculture as one example there but also reaching out to both state and federal where the funding had come in to have those labor dollars and education dollars. Thank you.

Erika Feller: Stefanie.

Stefanie Moreland: Thank you. Just given the number of comments around that program design, I just want to comment that it's been my experience that MAFAC has generally been supportive of the Regional Fishery Management Council processes and wants to continue to voice support for that and understand the complexity of that program design and see that as quite different than workforce development conversations.

Certainly entry opportunity and opportunity for people to advance in their participation in fisheries is important. Financing a lot of the challenges and barriers to entry I see as appropriate here. But that program design is a bit of a different topic. That's really complicated to tackle and as notes are being taken I just want to recognize that that's not really within the scope of what is being addressed here.

Erika Feller: Yes. I think that's right. But I would just harken back to Harlon's comments and also - I'm doing this by initials and now I've forgotten whose initials KR are. Kellie Ralston talked about, you know, kind of council composition and program development and kind of thinking a little bit about how you consider access in a lot of these kinds of things.

I think there's a conversation here about like to what extent is that in scope versus out of scope? But I keep trying to maybe connect dots and recognize that these things are relevant to one another. That makes sense to me. Roger?

Roger Berkowitz: I think we got a report yesterday about the seven centers that are going to be opening up around the country and I'm wondering then is funding coming through, I think, was it to agriculture? And I'm wondering if there would be some synergy between NOAA and AG about developing some programs that can either be pursued on these centers or maybe alliances set up with different universities of bulk education.

Erika Feller: I have a question for you guys. I mean, one of the things that - and they probably kept saying this because I kept asking them. But one of the things that Sea Grant said a couple of times was, you know, help us look like 10 years down the road at what we might accomplish.

And because they're already working. I mean, they've got a plan for the next three years. You know, that's kind of out there. There may be other things, other places in NOAA that deserve some attention in that short-term time frame.

But if we look 10 years down the road, I mean, do we want to include in this, you know, some kind of idea, like, are there ways that we would want to - if you took a step back and thought about what we want the U.S. fisheries and seafood to look like, you know, are there some words that we could put to describing that in terms of setting sort of a guiding star?

I mean, you can kind of chip away at all these different pieces of it. But what does the big picture of this look like? What do we not have to want to have in 10 years? And how do we kind of - how might we describe that? Is that something we should - is that useful? Janet? Paul? I kind of go back to you guys if that's a helpful thing. Okay, people have opinions about that or something. Harlon then Stefanie then Tom.

((Crosstalk))

Janet Coit: It took me a while to get off mute. So I think that a 10 year type vision, Erika, Dr. Spinrad just asked us to do that. And it was super helpful. Obviously directionally we need to know where we're going, even if we don't get there all at once.

And I think given all the - I think it would be tremendously helpful to kind of think of this as a 10 year vision and then make sure that we're moving in the right direction through the various programs. So I just wanted to weigh in that I like that suggestion. And we just did a presentation. Paul was on point on the seafood side and the Brazilian coastal communities. But it was super helpful to think in those terms even if some of us may not be here in 10 years.

Erika Feller: Paul, did you want to add something?

Dr. Doremus: Yes. I perfectly agree. And I do think that that type of thinking would be very helpful both to the organization but also to a lot of our stakeholder community and to those in the

Secretary's office that are really responsive to what the committee provides, its perspective on the real needs of the agency and of our key stakeholder community.

And with that in mind to kind of build on some of the discussion yesterday, I do think that the work plan in some respects is a follow on to that broader description of what are the major markers and the sort of signs of what a healthy seafood sector would look like out in time.

And this current draft is pointing to some of the key areas that need to be attended to right now that don't have a real clear strategy. We have a very clear strategy and we've taken direction from the committee in a number of areas that are really important in aquaculture, in the National Seafood Council construct and our core work to better support the commercial fisheries in a variety of domains.

But there has been inadequate attention to aspects of infrastructure, aspects of workforce development and this whole challenge of managing competing uses, managing growth trajectories in the economy. That alone, I think, mapping out what those issues are and what their relevance is, as Jennifer was indicating, where the points to connectivity are to our organization would be, I think, quite helpful.

So to me, it's sort of a two-step process. It's helping provide the independent perspective that you can provide on the outlook for the industry long-term and for our sort of public stakes in the success of the industry. And then pointing to the areas that need particular attention in many respects to kind of add a little bit more color to Jennifer's earlier point even though in some of these areas, we might not have, you know, the direct lever for workforce development or a specific aspect of infrastructure to support industry.

There is no other agency that has a holistic perspective on the industry as a whole. And the communities that benefit from participating in this industry and health are changing. So I think that our role in articulating where the needs are and kind of cultivating a public sector response across multiple agencies, including across different parts of NOAA, could be a big part of what we need to get to that future vision that can help articulate a resilient seafood sector.

That's making it not just economically viable, it is also providing the types of spillover benefits to our resource management enterprise, to the overall environmental goals that we're trying to realize, which include climate resilience as well as to public health and nutrition as we're often pointing out. So I think that kind of pathway could be extremely beneficial as far as a work stream and one that we could pick up on and use very readily.

Erika Feller: Cool. Thank you. Going to the raised hands, I have Harlon and then (unintelligible).

Harlon Pearce: I just had trouble getting my hand down. You can see it's got a line through it now. So I'm okay. I'm just getting ready to think about this. Okay?

Erika Feller: All right. Cool.

Stefanie Moreland: I'm sorry. I didn't hear that.

Erika Feller: You had your hand up.

Stefanie Moreland: Great. Good. Thank you. I do. I guess as I think about 10 years out, the first thing that comes to mind is fisheries and seafood sector depends on fisheries management. And I guess just a gut check on how are we doing about a 10 year outlook on stock adjustment (authors), fishery managers, survey crews, just general attraction to the actual science side and ability to a support future in seafood. As we think about workforce development, it was my understanding that that's been a challenge that's being tackled, and there might be some lessons learned from state and federal resource management that also may be helpful for developing the commercial side of fishery opportunity.

Also, as I think about 10 years out, we're increasingly regulated. There's increasing expectation of transparency in seafood and seafood supply chains. Business is more complicated. And at least in our region, I think see, Sea Grant's focus has recognized that and has been increasingly trying to provide tools and support for small business owner operators and family operations that don't have the administration experience and business experience to try to overcome some of the barriers that just are part of a more

difficult regulatory environment to operate in. I don't see that getting easier. And as I think 10 years out that support on just education information and navigating regulatory requirements is important.

Erika Feller: I've got Tom and then Richard. Tom, you're up. Tom, did you have a comment? You guys can hear me right?

Heidi Lovett: Erika, I think Tom may have lost his audio so I would maybe move on.

Erika Feller: Okay. Yes, Richard.

Darius Thibodeaux: He put a note in the chat box that he lost his...

Heidi Lovett: Oh, he lost sound again. Darius, if Tom can have some assistance?

Erika Feller: Richard, are you there?

Richard Yamada: Yes. Yes, can you hear me?

Erika Feller: Yes.

Richard Yamada: So I'd like just to comment again in the line of workforce development, the relationship between commercial and recreational development. And maybe most of it is related to recreational because that's where I'm coming from. But we've always looked for, you know, the public to get more involved in outdoor recreational activities as a way to harvest fish for consumption in Alaska.

There comes a point where all the major tourist urban areas where the infrastructure exists for tourism is beginning to get crowded and very competitive, which works against the experience, I think. So if somehow NOAA would be able to help create the forum where we can spread this effort out into more rural areas, our communities have been suffering for economic bases for their communities.

There's a lot of commercial fishing that has dried up. The (Sea Trust) processing centers have closed up. And they don't have a lot of resources, fishery resources, to take advantage of. So in terms of infrastructure, if NOAA could maybe get involved in some of that ability to start exploring infrastructure for recreational opportunities in more rural communities or it can spread the effort out, there's still a lot of good fishing in a lot of rural areas but either they don't have the workforce that can develop that or the economic means or capital to develop that.

I think there's a lot of knowledge in the industry that could help, but I think there might be an advantage of spreading out that effort from, you know, very few urban areas that have developed docks and harbors and airport connections that can support recreational fisheries.

But I see a future where it's just going to get too crowded and the experience might be degrading and that more outreach to more rural communities could have a win-win toward the goal of getting more participation in the recreational fisheries in a more remote setting. But I don't know where that fits in, but just a thought. Thanks.

Erika Feller: Well can I ask a question about that? And I don't know if other people want to weigh in on this, but, like, I realize you're talking more about recreational fishing. But when, like, I was working in California, you know, one of the things that we kind of struggled with is like if you're in San Francisco, there's lots of places that you can deliver fish. If you were someplace like Port St. Louis, there's no place for you to deliver fish. There would be like one guy who might buy the fish.

And so, you know, I'm intrigued by this idea of how you kind of get that attention in rural communities because, you know, they're rural. There are not that many people there. You're not going to have necessarily a whole ton of infrastructure in those kinds of places.

And I don't necessarily - you know, it's just pointing to his spectacularly beautiful view behind him. But like, I guess, I'm kind of interested - you know, I'm sort of curious if there's sort of - if this is something like in terms of the vision, like how do we get more

investment in rural communities kind of recognizing that people may not necessarily be so interested in building a lot of stuff? People in rural communities may not be interested in having this stuff built.

But is that like an area for innovation that can create more opportunities in rural communities to participate in fisheries? I honestly don't know, and I recognize I might be asking a really stupid question, but it's something I've heard come up over and over again.

Richard Yamada: Well that's the dilemma. Will investors invest? Will somebody go to a rural area that's very hard to get to build a sport fishing lodge? I mean, is the capital available? I think there needs to be some discussion or some ways of maybe looking at that and facilitating that. I do think, you know, development of tourism has always been a double edged sword. Small communities don't like to have tourists in their communities.

But sometimes that's the only way to support a community as far as a tax base is getting tourism there, you know, for small cottage industries to kind of surround. It's an economic hub. There's a lot of politics involved. But I think the cost of the infrastructure for developing a recreational fishery might be less than developing a commercial fishery. And there might be less impact on local resources potentially with a recreational type of fishery versus a commercial fishery.

And there has been a gradual switch, as I mentioned earlier, of the entry into recreational fisheries as far as the charter capital and a lot less than getting into the commercial fishery. So there's been a lot of people that really want - that come from Alaska that want to get into some kind of job that involves them being on the water. A charter fishery has been an easier industry to get into than commercial fishing.

So, you know, again, I'm obviously slightly biased here, but there is a way to get involved in the fishery. And if we can have that dialogue started and maybe some incentives, whether it's grants or just, you know, outreach to communities to look at the potential on economic studies for expanded recreational facilities in a community that might be a start.

It is a way to encourage economic development and potentially at a lower cost and maybe, you know, there are less obstacles than a commercial fishery. But it is a way to get communities still connected to the ocean economically.

Erika Feller: I'm going to call on more people who haven't talked yet. So I've got Donna and then Robert and then Sebastian.

Donna Kalez: Oh, hi. Sorry. Let me see if I can turn this on. Thank you. So I put my comments in - can you guys see me? Yes. I put my comments in the chat in case I had to run. I just wanted to echo what Stefanie said. I think that - and I thought I heard somebody say that there's a program in Florida that talks about fisheries or training in the fisheries industry.

Maybe I just wrote that down. Maybe I was wrong. But it seems to me that workforce development in all commercial and recreational really needs to be addressed, and we should have programs that do that. Just as in my industry and the recreational industry, I see people all the time that might come in to get an office job and then they're very intrigued about a career on the water. They don't really know anything about it, but they really are intrigued about a career on the water working on a boat.

And so, as everyone knows, deckhand jobs lead to people getting their captain's license and that leads to people getting their own boat. You know, talking to Joe's point about boat ownership, all that comes into play. But if they're not introduced to careers on the water then that never happens. So they need to know that that path is out there. And it stems from recreational and commercial.

Lots of people go into the recreational world and then move into commercial. So there's lots of opportunities. I don't really know if that's a solution, but I'm just echoing what everybody is saying. And hopefully we can think about programs that introduce people to the world of working on a boat, working outdoors because that is really, really hard as we all know.

But people that you never would expect want to work on a boat, suddenly like a whole door opens to them. So I don't really know how we do that in that 10 year plan, but I thought I would just throw that out there.

Erika Feller: Thanks, Donna. Rob then Sebastian. You're on mute, Robert. Why don't you work on that?
We'll go to Sebastian. Can't hear you either. No.

Tom Fote: This is Tom. Can you hear me now?

Erika Feller: I can hear you now. Yes. While Robert and Sebastian work on their technical issues, Janet had her hand up.

Janet Coit: Yes. I just wanted to - I put this in the chat, you guys. It was federal money through the Department of Labor. But Rhode Island had a program, and I just wondered if we could tee it up in a plan, but it might not all be through NOAA fisheries.

So in this instance, the commercial industry was worried about just what several of you have highlighted, the green of industry and the need to get more new entrants to working on boats who would be the future captains.

And so we created a program for the commercial industry working with our Rhode Island Department of Labor. And Governor Raimondo at the time had all these programs where she was trying to match up areas where there were jobs with training programs.

And it wasn't huge. But the vast majority of people who did the program ended up working on boats. And one benefit of that was the majority of people in the program were veterans. And I know at the Port of Galilee, I was just talking to a processor on Monday who was talking about trying to attract and train veterans.

They really like working outside. It was just a nice pairing that happened organically. Anyway this came up in that session that Stefanie and I were at in Seattle. And definitely Secretary Raimondo is interested in seeing whether there's more we can do. And I don't

know if that would be at the Department of Commerce level or working, you know, across with labor or another agency.

So I would like to tee it up and then explore, you know, whether there's a way to get funding. It seems like these kind of programs benefit from federal funding but it would really have to happen at a state or regional level to train people for the type of fishery that is in that area. But I would like to explore it, and I know the Secretary is interested.

Erika Feller: So that that kind of raises two questions that I have. The first one is, I mean, you know, opportunities to work, I mean, it seems like a lot of these types of programs are delivered at the state level, right?

Janet Coit: Yes.

Erika Feller: So you probably have some kind of grant with the State Department of Labor so which kind of suggests partnerships with states, maybe conversations with governors. But it also kind of makes me wonder, like, has there - did Rhode Island do any kind of - I mean, was there any kind of study looking at like - you know, we talk about the graying of the fleet but what does that actually mean in terms of projected attrition from the fishery from, you know, people retiring?

And you know what do we think workforce needs are going to look like over the next 10 years? How many people do we need to kind of get our hands on and be like, don't you want to work on boats? Go work on boats.

If we could get like half a million people to go work on boats in the next 10 years, will that like get us where we need to go or what does that kind of, you know, big picture sort of look like?

Janet Coit: I wonder if - does anyone know? Has industry - I can tell you, Erika, in Rhode Island it was more a - there was no study. It was that people were having trouble finding folks to hire to go out. So it was just an immediate need that had been identified for years through the

Commercial Fishery Center, which had representation from many different types of fisheries.

But does anybody know? Has there been a study at the national level? I think it's an important question to answer. I do think delivering these programs through federal funding at a state level is probably the way to go.

Erika Feller: I mean, I tried to look at Department of Labor statistics to find out how many people are employed in the seafood industry, and it's terribly difficult to discern from the statistics.

Janet Coit: Well we have our Fisheries Economic Report. I think it's 1.7 million people with the 2017 report, how many people were employed in this industry. And the 2018 report should be coming out any week now. But yes, it probably doesn't capture.

Another thing Rhode Island has is a very fine grained report on our ag sector because the national statistics were so coarse that they were missing many, many, many people who were part of the industry. So I wouldn't be surprised if that was true in fisheries as well. I understand that Robert and Sebastian have found their voices.

Robert Jones: Can you hear me now?

Erika Feller: Yes. I'll hit those two and then I'll go back and get some of you guys who have your hands raised who we talked to before.

Robert Jones: Can you hear me now, Erika? Okay. Sorry about that. I signed in correctly, but they re-did it. So in the context of the request to think on a 10 and 20 or even 30 year horizon as the nexus of resilience, climate resilience, I think it's important for us to have an honest conversation about what fisheries are going to look like, especially in context of shifting stocks and in terms of workforce development.

I mean, there are going to be fisheries that don't exist anymore or that look very different in coming years. And I think NOAA could play an important role in helping commercial

fishermen or working waterfronts and people associated with fisheries transition as part of that change that's going to occur as part of a resilience plan.

I don't know what all of the answers are but, you know, those are tough conversations. But I think if we're thinking in a long horizon, we need to be having it.

Erika Feller: Great. Sebastian.

Sebastian Belle: Yes. Thank you. Can you hear me now? Okay. Good. First of all apologies to everybody as colleagues for being late to the party here. I had crazy conflicts over the last couple of days, but it sounds like you've had a productive discussion.

I do want to just make a couple of points. One is, and this is linked in part to what Robert has just said, you know, the whole issue of workforce around both commercial and recreational fisheries ultimately links to resource bases and our ability to manage them effectively.

And I think that really was where Stephanie was driving at as well in terms of resources within the agency and being able to effectively understand where populations are and how that relates to our ability to harvest them sustainably.

In a separate, but I think really important, point we are the only marine resource user sector that is not resource limited. You give us the space and we will grow the product and supply the market and employ people. And that's something which hasn't had a lot of discussion around it.

But I think we are missing a tremendous opportunity as a nation if we don't have that discussion pretty much upfront. Our competitors are doing that and they're using aquaculture as a method to increase their marine resources economy, their blue economy, their working waterfronts.

And we just have, for whatever reason, we have kind of danced around that point for 30, 40 years ever since Magnuson was passed. And, you know, from a national point of view, it doesn't mean we have to take anything away from commercial or recreational sectors.

We should manage those responsibly sustainably. We should serve and ensure that our training systems serve the workforce needs of those sectors. But the only sector, frankly, which is going to expand and employ more people over time is aquaculture. And we have a choice to make.

And obviously it has to be expanded in a sustainable fashion. It has to be expanded in a fashion that fits in with other user groups. But we could easily double or triple the seafood production in this country with relatively small space usage. And we have made a choice from a policy point of view historically to not do that. And our competitors are eating us alive because of that choice.

And so I think when you start to talk about workforce training and development, you know, the training program in Florida with the clam folks that Megan alluded to was really kind of one of the first of its kind in the country.

We've been running a training program here in Maine for 15 years. We put 300 commercial fishermen through it. Harlon knows this. He came up and visited us and saw it.

And out of those 300 commercial fishermen, 200 of them now are in the aquaculture sector and their sons and daughters will likely inherit those companies and continue that tradition for the next generation.

We already have generational transitions happening here, even in a relatively short period of time. Now are those massive Bering Sea crab fisheries or Bering Sea, you know, Pollock fisheries? The answer is no, not now. But could they grow to that scale and generate that level of economic activity and that level of employment? The answer is yes. And we are making a choice to not do that.

And really, I mean, all this idea about workforce development is important in commercial and recreational fisheries. But the reality is if we really want to focus on growing the seafood sector in this country and protecting working waterfront infrastructure by creating businesses which are viable and can resist all the other residential development pressures that are occurring on those working waterfronts, we have to start to think a little bit larger than we are now and begin to embrace aquaculture as an economic development tool. And it's really that simple.

And again, I apologize for not being part of this discussion for the last couple of days. I feel really embarrassed by coming in at last minute here. But I just think that's a really important point.

And the training programs for workforce development, at least locally here where we are seeing the effects of those, we've now got standardized occupational standards for our sector. It's the first time it's ever been created to my knowledge in the seafood sector in the U.S.

Those occupational standards are now being embraced by our community colleges and even by our university system to produce kids who are coming out with credentials. That means that they will get paid more when they get hired by a company because they have professional credentials.

That's the kind of stuff that we've got to be thinking about. And like I said, you know, Europe and some of the other countries have been way ahead of us on this. We need to get with the program and take out - think more - the 10 year time horizon is great, but we need to do it now.

I'm done. Thank you. Thank you, Madam Chair.

Heidi Lovett: Erika, you're on mute.

Erika Feller: Not only am I on mute, but I'm using this new stupid Android phone I have and I cannot ever figure out how to wake the damn thing up because I am an iPhone user and you have to actually push buttons on this stupid thing.

You guys can hear me now, right? Okay, cool. So I just want to do a quick time check because I got a few more hands raised and I want to get to everybody. It is now three minutes after 1 o'clock. We're scheduled - three minutes after the hour. Sorry, time zones.

We're scheduled on this to go to 30 minutes after the hour. I really am kind of excited about the conversation we're having on workforce development, and I would like to stay here because I think we're getting some really good stuff that we can sort of start to frame.

I think, I don't know about you guys, but it's starting to become clear to me like what a work plan might sort of look like here to give us something to do tomorrow, which would mean that if we want to dig into - I mean, I still think the infrastructure and the offshore uses are really, really important.

But I also think that there's - this is something that really is kind of timely and we could probably get going this week. So if people are cool, that's the choice we're making is that we're really going to zero in on workforce. And then we can kind of schedule follow-up time to start to maybe have a similar conversation around the other topics later because those are also important.

Time is a limited resource and I sort of like how we're using our time right now so I want to stick with it. Is that okay? Okay. Shake your head no if you think that's a terrible idea. Okay. Cool. Awesome. So I'm going to go - I've got Harlon, (Sarah), Kellie, Tom and then Heidi. No. We can't hear you.

Man: I just have a comment when you get a chance.

((Crosstalk))

Harlon Pearce: I'm enjoying this conversation too, Erika. I think we're going in the right direction with a lot of things being talked about. And you know, Sebastian needs space. Robert needs changing stocks, a situation to look at different things and anybody that gets into this fishery needs a future.

Without a future you're not going to get a deckhand. You're not going to get somebody that wants come in. They're not here just to haul fish for somebody else. They want to own a boat. They want to do things they do. So the future is what they're looking for. In Sebastian's case it is space.

Robert, I agree with stocks. But one of the things I don't agree with what's going on now is that in the (councilmatic) system we tend to spend all of our time on 2% of the fish, fishery. We have data poor stocks that are never looked at because we eat up too much time doing the other things. We have to be, and we're continuing painting ourselves into a corner with different fisheries and not opening anything else that might be - have the ability to be opened up.

We have fisheries that are closed for 30 years and a closed fishery does - a fish (unintelligible) ban does not make. That's not - that doesn't make any sense at all. But because we focused on things that are high target items, whatever and do not allocate time, allocate science which I believe in, data which I believe in data, we don't go to those directions. We don't get that though.

We don't have new opportunities for some of these fishermen that want to get into the game. They need something to catch and they need other ideas to catch different fish. And I'm not sure exactly what fisheries I'm talking about but I know they're there and I know they're closed and could be open.

So we need to think about ways that give more opportunity to these people that want to get into this fishery that want to like said want - they want to go to on a boat because they come to your office they like the water but they want to see a future. And I don't think we're giving them a future now. I think we're doing the opposite.

All they're seeing is the hassle it goes through with trying to get into a fishery or the hassle it goes through to try and stay in a fishery whatever you can do. So I think we have to look at new opportunities.

As Robert said relook at our (live) stock see what stocks are there that we can do things with and the ones we can't fine I understand that. But because we close something it doesn't mean it shouldn't be looked at. And time after time the seasons ready to be opened up and if you close it should be growing to open, you know, but we don't do that.

It's not just in the Gulf it's across the country that we look at things like this. I'm a big aquaculture guy. I really believe in what Sebastian just said. We need all these things to work to get people interested in what we're doing.

But it's got - it keys in on future, on our future. You're not going to get anybody interested if there's no future for them in the business period. And that's what I see with the graying of the fleet that we have in the Gulf of Mexico right now. And we are losing fishermen and we're not gaining any behind them, none. I've got fisheries in inshore Louisiana, we can't get fishermen in shore Louisiana, great estuaries in both we can't get fisherman because of a lack of ability to get the species.

So we we need to look at that and we really need to not say take our focus off these fisheries that are high target fisheries but make sure we do enough work on the other species that we have in the Gulf or in northeast and northwest, wherever, and see what other opportunities could be there to help excite these guys to want to stay in the fishery. Thank you Erika. Okay.

Erika Feller: Okay, I've got (Sarah), then (Kelly) and then Tom.

(Sarah): Thank you. So at the risk of sounding like a broken record, and I'm also going to sound a little bit whack a doodle, but there are two things. First, broken record high level ten year goals we want a young - we want younger, we want more ethnically diverse, we want more women so we want more people of color so how do we incentivize that? So that's the big goal.

And then we talked about some of the how I really like what Sebastian was saying and piggyback on what (Ray) and (Megan) talked about yesterday, the integration of fishing with aquaculture, retooling fisheries when training fishers but that sort of that hybrid that integration of the - I see that as the future.

Here's the whack a doodle comment, take it for what it is, I don't know if any of you saw 60 Minutes this week but they had a university that was on a ranch in the middle of the desert and it was like they were training these students not only were they learning like philosophy and, you know, teaching coursework and calculus they were working on this working ranch.

They were, you know, learning how to ride a horse. They were learning how to milk cows. They were learning all this practical stuff. So as far as funding allocation I kept thinking like this could be translated to waterfront, this could be translated to teaching people how to drive a boat, teaching people how to fish, teaching people how to farm, you know, shellfish or, you know?

So I feel like if there's - that was a private university but there could be public funds. There could be funds that Department of Labor, and NOAA Fisheries and whoever to try and create, you know, a similar program. It was a two year program and then those students go on to - they matriculate to a regular four year university after they spend the first two years at this like very practical training.

So it's just something that it sparked my interest. So I just wanted to throw that out there to be completely wacky. But it was just a - that's a more of us implementation of how versus the goal of the whack so just wanted to throw that out there.

Erika Feller: We are pro whack a doodle ideas around here. (Kelly) and Tom. (Kelly), where are - there you are.

((Crosstalk))

(Kelly): Yes thanks Erika. And some of this will piggy back on what (Sarah) was saying and some of this is related to yours and (Janet)'s conversation from earlier. But I do think there's a real opportunity kind of with education to help train up kind of that next generation.

And just wanted to throw out there I know for a specific example, here in Florida, so Yamaha recognized that there was a need for engine technicians and that that category was not available for votech funding through the state university system. And so they worked really hard with our legislature to make sure, and the governor's office, to make sure that that was included as an eligible category for funding so that they could actually have people that were trained through the votech system here in Florida to be able to work on their engine.

So, you know, as you're looking at needs based, you know where the needs are certainly make sure that industry manufacturers are included in that because it may not be something that's recognized at a broader level.

And then I think to (Sarah)'s point at the recreational level RBFS actually helped fund fishing and schools in high school. And so it's not necessarily a commercial component but it is a fishing component is actually teaching people how to fish. And so that might be some sort of piggyback system that could be considered in the conversation. Thanks.

Erika Feller: Tom?

Tom Fote: I'm always afraid because I sound so depressant when I basically talk about fisheries because I've been around a long time. But ten year plan is let me see '92 what - in '94 we passed the Atlantic Coast Conservation Act which gave the Atlantic States Marine Fisheries Commission the power to do - to manage fisheries. And one of the reason it was passed because of Coffer and Whitefish.

So I am now sitting here 30 years later how deal with Whitefish we are still on a one fish bag limited and 100 pound bycatch for the commercial fishermen because no management tool could bring them back. The same thing with the flounder and the same thing with a number of species - lobster.

The whole, as (Janet) knows, the whole Southern New England should - if the Atlantic states wasn't managing in NMFS would have - they would have put a moratorium on five, ten years ago. We have - Atlantic states hasn't because there's no purpose in doing it because we can't affect the growth of lobsters because of climate change.

Same thing with surf clams along the bay. So I've lost probably about half of my party boat fleet or more every time I look at the numbers which drops every year and in New Jersey. I love to do the same thing with charter boat fleet and the same thing with commercial boats they just just can't make a living because of rules and regulations that we put in place.

Customers are not going out to fish because, you know, when you caught a bluefish bag limits of three we lose all the people that came from Pennsylvania and everything else to New Jersey to fish because they're not paying the money that it costs to get here to go out in the party boat to catch the fish because all again. And if they only catch three small ones (Carl) (unintelligible) just paid a lot of money to get three 12 inch fish.

So it's - that's part of the problem. We don't control, and I always - we've been saying this for 30 to 40 years, we don't control the agencies that make a difference.

Lisa Jackson would tell me you knew when she head of the EPA that I knew when she working at DEP New Jersey and actually ran DEP. And we talked about endocrine disruptors and what they were doing to the fish stocks. And, you know, one of our - one of colleagues I think of (Patrick) did a study of - with the flounder in Jamaica Bay. And instead of having more females to males we now have 13 to one, 15 to one, 16 to one females to males.

So when we start - until we start correcting those problems we're not going to rebuild the stocks and we're not going to do a lot of those things. We can only manage fishing. And that's what we at NMFS. And that's what we do with the Atlantic states.

But we can involve with the agencies that really controls with are EPA, the land use agencies that basically allow the pollution in all the basin estuaries. So it's hard when you look at ten year rebuilding plans and we set up and the models will do it. They'll tell you what you're going to get in ten years but the models don't work because we're not - the environment keeps changing.

And now had global warming to the mix and fish stocks migrating up from the south to the north it really creates many problems in workforce. I don't have a workforce problem I have a job problem that we're losing the jobs in both the commercial and recreational fishing sector because of the lack of availability.

Actually, I was going to say also have ASA which takes all the statistics of the US Fish & Wildlife Service and gives you the jobs in New Jersey and all the states up and down the East Coast when they give their annual report every five years so you can look at how many jobs are there, according to their numbers, US Fish and Wildlife's.

But we really looked at a lot of things that's going on. Now the only positive thing I've seen in the last couple of years because I serve also for many years in the Bodega Bay partnership which is Bodega Bay study group that's one of the - part of the estuary programs.

And in the last ten years we've had about eight different concerns actually start raising oysters in Bodega Bay. Now to the state thing they got training down in Haskin warehouse, they basically got their help with Sea Grant. But we now have about eight operations going on with oysters in Bodega Bay which wasn't going on ten years ago.

So those are both - those are working families that are basically doing that that weren't there, that's aquaculture. And I agree with Sebastian there's - the thing - the problem is - I mean I was listening to Richard and he's talking about Alaska now - I am familiar with both coasts.

Since in my younger days you won't, might not believe this now, but my wife and I pedaled from Seattle to San Francisco along the coast and then San Francisco to LA along their coast.

And what I noticed when I did the West Coast compared to the East Coast is the difference in ports. And this replaces the land fish and they actually would have put marines and things like that that's why we have much more boats between Massachusetts and Jersey than you - on probably the whole West Coast because just the access to the water.

So when you start talking about agriculture, and most of the agriculture that we have is in shore, you wind up competing with the other uses of the groups. And unlike Maine we're not spread out that much. And I fished up in Maine a lot. There's a lot of empty areas.

When you get into New Jersey every inch of bay or estuary is almost basically built on and it's the opposite. So and that's kind of long winded but I - when I start to talk - people start talking to you about ten year plans I'm looking at for me to be - need to get the agencies that basically control land use. That's what we did in the Atlantic states. We had the habitat committee we brought in people that work in the agencies do land use and habitat restoration.

Erika Feller: Thanks Tom. (Joe), I think you might get the last comment before I'm going to try to move us on.

(Joe): Wow, thanks. You know, great discussion. Yes, just so many good thoughts here coming across on all of this. Yesterday, Paul briefly mentioned looking at the example of COVID and how that has affected some of the supply chain issues and other issues within the fisheries, these bottlenecks that exist out there.

And what I'm thinking is for workforce development in the future, and thinking well out there, are there ways that NOAA can incentivize streamlining or innovations, new innovations in supply chain in buying, rural buying? We had that brought up earlier in this discussion today.

Are there new ideas that can be brought up through grants or whatever mechanisms are available that can at least begin to address some of these issues that would improve the ability of folks to enter into the fisheries workforces and maintain their jobs in there?

Yes, that's a real issue out here as some of you folks know in these rural areas as I liked (Michael Hymie) here.

And then the other one is not just the graying of the the fleet for the personnel but also for the vessels. And the vessels have, most vessels are old and very few new ones are coming into the fishery. There's programs across other agencies to green the propulsion on these vessels at least to some degree. We have I think it's EPA and DOE in the past have done the diesel improvements on these vessels.

Can NOAA continue to work with the other agencies to push for these types of innovations? And in fact if you're going to look far out let's look at going, getting off fossil for the fishing fleets at least on the smaller scale fisheries for the near term.

You know, it's going to be a great cost for people to continue on with fossil fuels. It's going to probably just continue to rise over time. It's a major piece of overhead for all the fisheries out there. So a couple of ideas might help I don't know. Thank you.

Erika Feller: So in our remaining ten minutes I'd like to figure out what we do next. Heidi, took over taking notes from me which is really good because it's hard to take notes and also talk to you guys at the same time. But there's - I think there's a lot of stuff I'm hearing in this conversation and I kind of wanted to just maybe reflect back a little bit what I'm hearing that might kind of comprise a scope of work.

And while I'm saying this I kind of A, I want your reactions but we also kind of one of you I - we need to think about who's going to lead this work. I actually think that there's a lot a role - this is probably something that doesn't neatly fit into any particular subcommittee but we should think a bit about how to organize that.

But one thing, you know, it strikes me that we potentially have a scope of work that has about I think six different components to it. And this is kind of the outline I've written down.

The first one, the first part of it is really kind of laying out what that workforce vision is. You know, kind of what the problem is, the attrition of the fleet, what are the kind of the needs in terms of workforce going forward? In terms of numbers I think there's probably some regionalization to this.

I think there's also a skills component to it like what are the skills we need to bring in to the fisheries and seafood sector in order to get to where we need to go, something kind of big and reflective of what you guys are thinking in terms of, you know, what the industry needs.

I think there's a theme in here kind of getting at for how things are going to change going forward. Like where the sort of question about how stocks are shifting. Where are our workers today versus where are they going to be tomorrow because of, you know, how things are changing over time? What kind of impact does that have? I have no idea what the answer is to that but I think it's a really good question and worth thinking about in this context.

I think there is some section here about talking about what are the types of incentives that can be useful for bringing people into the sector. And that can include things like what (Megan) was talking about, you know, different ways to provide incentives for people to get in.

But also who do you want to incentivize to get in? Like, you know, if you're sort of thinking, wow, there's a real opportunity here with providing workforce opportunities for veterans and here's incentives that could be made available to veterans then maybe you're kind of giving (Janet) a list of things to go talk to the Department of Veterans Affairs about maybe, right? So that's - I think it might be worth it to kind of think about how incentives may be brought to bear. I'm going a little bit out of order, sorry.

I think there is a big theme in here on access. Access has come up in a number of different ways. It's come up in terms of program design which NOAA, it has a lot of direct, I don't want to say control over, but influence over because this is what the councils do.

And if there are things that NOAA can do in terms of providing guidance about how to design programs that provide opportunities for new entrants now might be a really good time to get that stuff together and write it down and start talking to councils about how to do it because you guys are right, councils have been struggling with this stuff for 30 years and it's really, really, really hard to do.

I think that there's also I mean it's come up in the context of aquaculture, it's come up in the context of underutilized species but we may also want to think a little bit about access in terms of the types of training you provide. Like what are the - I think one of the skills we might find ourselves needing, we've talked about science and management and those technical skills, but then also things that may be more on the vocational end of it. So how do we get people access to those and increase those kinds of opportunities I think all kind of fits under that bucket more or less.

And then I really, really, really think that there is something here we might want to think about in terms of rural communities. And sort of are there particular things we would want to call out because there are, you know, fishing is pretty different between more developed versus less developed communities. And I want to kind of be sensitive to that, that there are some parts of the country that some of the things we're talking about may not touch because of their rural character.

And then I think there's kind of a final thing in here like this is - I sort of see this as being a bit of a ten year vision but I think there's probably room in here to say okay here are the next three to five things that the agency could do to start moving down this road. You're implementing the Young Fishermen Development Act, fantastic. Here are a few other things we might want to put on your radar screen.

That's really rough. I'm sorry it's written in like six different places out of order on my notebook which is why that came across is so completely disorganized. But did anything I - did I miss anything? Did I make anything up that doesn't reflect what you guys are thinking? (Pat), validation please.

(Pat): Yes Erika I think this was great. I just wanted to reflect on what Paul had said about guidance in terms of like issues, listing issues.

And so it seems like a lot of what we're talking about today could be put together in a broad note. It wouldn't need to go to a subcommittee or something like that just reflecting what we're all thinking as opposed to let's say doing, you know, three to five months of research on it or something like that.

So I want to put that out there see what what folks in terms of like, you know, I'm kind of thinking of the community public response review that was - which was just a bunch of ideas like put forward. We could probably do something similar but maybe more organized, you know, in terms of what we're thinking of in that sense. So just a thought but I like where you're going with this.

Erika Feller: Other reactions? So maybe, I'm trying to think about next steps, Heidi, Jennifer help me out here.

Jennifer Lukens: Heidi, do you want to go first or you want me to go first?

Heidi Lovett: Why don't you go first?

Jennifer Lukens: Okay. I'm thinking about the next step. So I think this is technically right now we are working through subcommittee work and tomorrow we will come back as a whole and we need to have a proposal for MASAC to approve, disapprove for the work plan.

So I would say as far as what's needed for tomorrow is the question that I outlined or change it the way you want or modify it based upon questions. And maybe some of the rough ideas of what would go into a work plan.

A full work plan does not need to be fully fleshed out or maybe here's the question using the notes that, using the notes from today's discussion we will establish a group to start work on a work plan by next date and bring that back to MASAC.

That is what I'm thinking is a goal that we would need to do for tomorrow but something to make sure that everybody officially is on the same page with this. Heidi, did you have any other thoughts or agree, disagree?

Heidi Lovett: So I guess to just build on that a little bit. I think if there's a quick question and maybe an itemized list of the main topics that you all might like to dive into. I'm not sure we need to, I don't want to necessarily put off kind of getting you all, you know, sort of working on something between now and your next meeting.

So - and work plans in the past when they are really jelled we do bring them forward but there - it's not mandatory that they get approved by the group as a whole. It's more the the concept and the ideas of what you're working to address you want general consensus agreement on that.

So maybe if we look through and cull down or just consolidate this, what has become a pretty long list I'm assuming because I've just been typing madly, consolidate it around a few key themes that can be shared tomorrow and get agreement, consensus agreement on that I think everybody might feel better.

And then importantly it would be good to identify who might like to take the lead on those individual key, you know, ideas or topics because we need some people to spearhead this from among you. So does that make sense?

Jennifer Lukens: Yes, I like that Heidi. I think I would also add we have a lot of different staff that are available and subject matter experts to bring in and help. But really this is a MASAC product so that's why we need you all to step in and contribute towards this whether it's becoming a leader or a workgroup participant or a co-leader that's what we'll be looking for tomorrow.

So I think that's next steps Erika, is we can work on pulling something together officially for approval at tomorrow's meeting. That is the concept to go march, and marching forward with the workgroup on this topic.

Erika Feller: Okay. Yes, so maybe, Heidi, if you and I can kind of put our heads together I've got sort of this rough list of questions that I think might make up that scope of work so between the two of us maybe we can kind of get that written down and shared around to the rest of the group for people to provide input into before we get to tomorrow's discussion. Okay?

Heidi Lovett: I can have help with that.

Erika Feller: That would be so great. It is now 1:30 and it is time for a break which will last for I think, I think 30 minutes. Yes, 30 minutes. So I will see you guys back here at I don't know, 2 o'clock Eastern Time wherever that is, whatever that is where you are, half an hour from now.

Please as a reminder don't hang up. Don't hang up, just mute.

((Crosstalk))

Erika Feller: And we'll see you in a bit. Thank you.

Heidi Lovett: Thank you everyone.

Erika Feller: Great, thank you and welcome back. I hope everybody had a nice break. I'm going to turn it over to Paul Doremus who's going to talk about the budget outlook and administrative update. Paul, over to you.

Paul Doremus: Thank you, Erika, and great to connect with everybody on our favorite topic, the budget. This is really two pieces a bit of a focus on where we are fiscally and certainly with FY '22 in particular a little with more detail on that and then a discussion at the end about

where we are operationally. We're pushing forward in the context of the continued evolution of the pandemic.

So in the, right up front here, our first slide is our kind of multi-year. We're closing out FY '21 at this point in time right now. FY '22, I'll get into in greater detail. And FY '23 is deep into formulation already with NOAA having made its initial decisions and the process of further deliberations with the department and subsequently OMB before that goes forward early next year to the Hill to start that whole process. And believe it or not we're at the frontend of FY '24 already.

This has been, just generally speaking in terms of transition timing, this has been a process in effect of the budget catching up with the administration getting into place and taking full command of the executive branch. Twenty-two was clearly very early and rapidly put together but '23 is the first budget where we - it will be a product of a more substantial complement of appointees being in place not just in the department and in NOAA but elsewhere in the government.

This is the first budget that will come out under the leadership of our new administrator, Dr. Spinrad, as well as (Janet) on the call here with us today as the Fisheries Assistant Administrator and a number of others as well. So looking forward to stepping through that process and getting initial congressional reaction and advancing from there.

So our following slide there's more detail on '22 where the real focus is right now that is currently under consideration in the Hill. And you last heard from us, you heard from (Brian) acting in my capacity a while back in May, about the - and got an overview of the president's budget request. So this is a little bit of a refresh.

And in particular a reference that we do have available is the house mark that came out in July. And also hanging out there is the sort of implications for NOAA yet to be determined, for the department, for many federal functions of the Senate budget resolution that was passed in August and currently is very much the talk of the town as far as the so-called reconciliation process continues to be debated on the Hill.

We also have the added dimension of the debt limit that was pushed to the right. So our next big moment for budget pyrotechnics is in December, in early December when our current continuing resolution lifts, the debt limit gets discussed and we will need to see the resolution of the overall reconciliation package as well as the infrastructure discussion and there are potential NOAA equities in both those domains.

So a lot of uncertainty big issues being discussed across all of all of government. And in that are a lot of considerations for our mission function. So we will stay in touch as this whole situation evolves but right now we're in to a certain extent a bit of a holding pattern.

I do want to emphasize, in the next slide, that you can get into at greater depth the full dimensions of the president's budget proposal for FY '22 in the blue book with the link right there. And I just want to make sure that everyone was aware of that resource as is customary for us to point out in all of our briefings.

So the priorities this '22, as I mentioned before, was the first time that - and in a very, very short time after the administration came into office it's always the case with these transitions was an effort to come up to speed with the priorities being driven by the Biden-Harris administration.

And very, at a very, very high level captured here, we've been talking at great length yesterday and this morning about key elements of the blue economy as a - one of the sectors of building back better, to use the administration's moniker for the overall economic strategy that's been advanced both to recover from the pandemic, but also to take advantage of and execute against major opportunities for economic growth and modernization in a number of areas, not the least of which is the seafood sector.

And we have a continued benefit from MASAC weighing in on what the path ahead looks like there and before the continued evolution of the discussion today. We certainly - and I think you are all very familiar with the major dimensions of our long standing focus on the competitiveness of the seafood sector as a whole.

First and foremost our sort of core mission support for commercial fisheries ranging from our survey and scientific assessment work all the way through to our management machinery and locked in motion there. Secondly, on aquaculture. Third, our continued efforts to follow through on and see what the opportunities are for responsiveness to your recommendations for a national seafood council.

And then also continued discussion that's in effect being restarted around some of the international dimensions in particular trade issues that affect the industry. Lot's more as you well pointed out in our discussion today around workforce infrastructure issues around some of the major aspects of blue economy evolution that we need to and growth path such as navigating competing ocean resources that we need to take advantage of in the course of the coming months and years.

So lot's there under blue economy and certainly a big focus on science. And we'll get into various dimensions of this.

A lot of it is evolving work and accelerating work that we've had underway for some time to move our science into a place where it can better support ecosystem based approaches to management and better understand the enormous changes that we're seeing in the abundance and distribution of marine resources driven in large measure by climate changes and their kind of attendant processes in different ocean basins in different regions.

Certainly accelerating all the work (Cisco) has on briefed you on different occasions and will continue to on all the work that we've been doing to leverage and accelerate deployment of new technologies ranging from un-crewed systems, and Omics, and artificial intelligence machine learning all of these issues are going to open up and have opened up new opportunities for strengthening our observing capabilities and being able to better manage and interpret and use data.

And a lot of this, if not all of this, will have in large measure very significant partnerships not just with industry but also with the academic sector. Climate is certainly a giant focus and our particular angle on that it really centers on the impact of climate on fisheries and our protected species and the need to develop climate resilience if you will. Climate

related fisheries, we have a climate fisheries initiative that we'll discuss briefly as well as our contributions to the administration's objectives on conservation of ocean resources such as the 30 by 30 initiative.

Offshore wind, big focus. We've talked about that quite a bit as well as the administration significant attention to social environmental justice and the many ways that that shows up across our mission not just in fisheries but elsewhere in NOAA.

So these are priorities that we are coming to terms with in a variety of ways. And the FY '22 budget is a sort of initial indication of the direction that we are being asked to take and I'll get into some detail on that now.

So first off the president's request for a - budget for NOAA as a whole in FY '22 is the \$1-1/2 billion increase over our FY '21 enacted for NOAA as a whole.

This is a substantial change. And I think largely is emblematic of the magnitude of the issues and the need for investment in observing systems in science and modeling that goes along with that to get our arms around it better manage our response to climate. And inside of the \$7.3 billion proposal is a \$1.2 billion mark for all National Fishery Service for NOAA Fisheries. It's about 16% which is around normal for our overall share of NOAAs larger enterprise.

And that, in the next slide, is a is a significant change for us. And what we do have as an initial sort of orientation towards Congress's reception to this is the House mark which came through in July. And again this is just a reference point that we have it's nothing definitive.

We need Senate action and ultimately committee resolution to get to our appropriation. So we're a ways off from that. That'll happen post December 3. But this is a significant change in the budget pattern that we've seen. We had a series of years where the president's budget was well below enacted this is well above enacted.

The presidential request was quite a substantial add as is noted in the table here. So that was a, you know, significant mark for us, a net increase here of 80.6 above, \$80.6 million above our FY '21 enacted. So this is a lot from an execution vantage point to get our arms around, that's the House mark, substantially below what the president's budget requested, about \$55 million below but still an enormous increase over what we enacted in '21.

So some highlights here just wanted to give you a little side by side quickly to give you at least an initial indication of - from the health side the response very, very strong alignment of our - of interest on the part of the House with our proposals our three major components of our climate research initiative as well as offshore wind. And quite a bit less of the intended increase in what we have under restoration of resilience with species recovery grants and with habitat restoration.

Scalable activities proposed that are at a \$50 million level House mark at \$2.3 million. We'll see again where things come out with negotiation and navigation of the Senate response to this. And likewise in the environmental justice and equity territory not much reception there from this initial indication and that might - we'll see where that goes in terms of additional congressional interaction and discussion.

I do want to note here apropos of our previous discussion and you can look for further details in the blue book that I highlighted earlier around a proposal that did go forward for workforce training to support the seafood industry and to do that in the context of some of the broader environmental justice and equity considerations that the administration has emphasized as priorities.

A few other details in this next slide from the House mark just to give you a sense and a little bit higher relief summary, if you will, of areas where the House mark is well above our enacted level. Principally, some of the larger increases related to North Atlantic right whale monitoring and continued research. Major, major focus and a number wide array of congressional delegations focused on this as well as external stakeholders.

Likewise, different aspects of our responsibilities out West with Salmon, Pacific Salmon treaty Mitchell Act hatcheries being a substantial focus out on the West Coast for

increases. And likewise continued work to build out stronger capability and stronger collaboration across federal agencies on bayou fisheries and related enforcement needs as well as an increase in our habitat conservation and restoration function. So very significant and welcome areas of focus for us.

We do provide in this subsequent display, which you can look at it greater length, I mean this real, this is really a just an effort to give you a sense in '22 where we are in the major components of our budget for protected resources, for our core functions in fisheries science and research for enforcement habitat. And then in the top tier of course our larger funds with Pacific Coast Salmon Recovery Fund outside of our ORF, our Operation Facility Research spending and some attention to disaster mitigation and similar accounts.

So you can see where the changes are very concentrated in the president's budget on growth of our resources in fishery science and management as well as in protected resources and can see how literally how the House mark stacks up against that. So that's a good visual.

There is a new piece here that is worth noting because we anticipate, you know, further focus on what is now called community project funding in this next slide. So this is the new direction that the Congress has taken to invite members of Congress to request funds in their specific communities, and outside the president's budget request.

And these are very tightly controlled around accountability and transparency rules, some noted here, no more than 1% single year and not available to the private sector for profit sector generally. And there's a range of funds being proposed here by the House totaling \$4.2 million. And the next slide details what those pieces are.

So you're seeing projects here being driven by members capping the accountability and transparency test that exist on this new type of community project funding and where those things shake out in terms of some investments in the Northeast, Northwest, Southern California, Alaska different parts of the country for work that's clearly aligned with, and this is part of the accountability and transparency thing, clearly aligned with our

mission functions and ones that we can execute as directed by Congress once there is the final appropriation.

So that's the detail sort of catching you up since we last did so in May on the initial reading of our FY '22 budget where the receptivity at least on the part of the House was and the kind of timeline that we have going out through December to get to an enacted budget for FY '22.

Lots of, meanwhile, lots of pressure on the organization to continue responding as best as we can with our existing resources to a lot of those priorities noted on the priority slide. Not the least of which is our effort to provide the types of complicated services that are required in the offshore wind category as well as in other areas noted to be able to maintain responsiveness to the administration's priorities as our appropriations resources get worked out on the Hill.

I did want to note apropos of large scale budget topics that we recently received, and have made available to you, a report that was commissioned in the FY '20 appropriations process that was subsequently directed to the National Academy of Public Administration to conduct an independent review of our budget operations with a particular focus on allocation and survey related questions in particular. That was one of the things that motivated this is understanding and better communicating in particular funding choices around some of our core priority areas like surveys.

And this was a major study that (NAPA) conducted interviewed over 90 people. Lots of folks within the agency, external stakeholders, congressional staff, commercial recreational fishers, also our stakeholders, members of the Fisheries Council, staff from other science, federal science agencies. So a very broad sweep in terms of their effort to understand how we function, how those functions are viewed by various of our stakeholder communities, how they're understood or not, and how they compare with other federal scientific agencies.

Interesting to note here that we do benefit enormously from these types of comparisons with other federal science agencies. But often it's very interesting that the distinctive

nature of our regulatory function makes our whole organization stand out as quite different. And with attendant, you know, different types of stakeholder considerations in particular around interactions with Congress due to the combination of our size and our regulatory functions, not just in one way or the other.

So the number of recommendations here in six broad areas, three largely in the planning domain and three in the budget domain that make that - I'm sorry that (NAPA) came forward with and they were interested in making sure that MASAC is aware of. And we will be coming back, with this having just landed a matter of weeks ago, we will be coming back with our implementation response to all of this.

There are things that we can do things that are far more difficult and think that we might want to take a slightly modified approach to so we're working through all of that now. But generally speaking an enormously beneficial review and something that's going to be really helpful in us continuing to progress and deepen our ability to strategically drive our budgets, align our funding with mission priorities, make adjustments over time and make sure that we're doing all of this with very effective communication and engagement with our stakeholders and with Congress. Bottom line that's what the (NAPA) is asking to do and we think that this is spot on what we need to do and a very welcomed set of findings.

On the strategic planning front there, you know, there I think like all good public administration people you want to see a tight connection between our articulated strategy and the budget process. The complexity of the budget process and the length of time between strategy, articulation and budget decision is to be considered and acknowledged by (NAPA) to be very complex.

And there's lots of decision making points outside of the agency's direct control. I think you all know that budget pathways many steps within the administration before it goes to Congress but we can certainly in particular do better in engaging external stakeholders in our strategy document and that's one of the things that we will certainly be moving forward with.

And, you know, deeper into the organization recommendations on program management and what they call functional planning. And getting at tighter analytical backing for our proposals and our understanding of different operational choices in front of us both in our major programs and our oversight of our field execution from headquarters as well as in our mission support functions in the areas of functional planning around in particular information technology, resources, facilities and things of that nature.

The third, the second set of three budget related recommendations center on developing a line for our facilities portfolio. This is something that we've been discussing advocating for some time. Our facility strategy is executed in the context of NOAA's facility strategy which is executed in the context of departmental and administration guidance.

We have substantial facility needs both in terms of recapitalization as well as modernization and improvement of our maintenance functions across our very extensive facilities portfolio to particularly on the science side of the house. And this is one of their recommendations to draw better focus on the long term dimensions of these needs.

And similarly, on the budget front, can't as always pointed out, you can't under emphasize the value of communications. They have a number of recommendations on how we can improve congressional engagement as well as external and internal communication flows around the budget particularly in light of the many decision points in light of the complexity of our budget functions.

And last they do propose interestingly a recommendation for modifying our budget structure. We have been through this. Our budget, as some of you may recall, was restructured to reduce the number of separate budget categories. These categories are called PPAs. And they advocate for Congress allowing us to move a little bit further in that direction which would give us greater flexibility and discretion to respond strategically to different demands over time.

So very interesting set of recommendations ones that we take very seriously what we think will be quite beneficial to us. And you'll hear more from us as we more fully articulate our response plan and set some expectations for what things we anticipate

changing in the next, certainly within the next year but some of this will take a bit longer to evolve.

So that's a small pause here. That's our budget overview. And I thought I would just provide quickly some observations on our operational front before opening it up to questions. We have here a transition to a discussion about our long path with COVID and the pandemic and thought it appropriate to start with a visual here of our people.

It happens to be a crew from the Northeast Fisheries Science Center 2021 Spring Bottom Trawl Survey. And, you know, it's interesting from the vantage point of the creatures being displayed here and the masking and everything else. But the story behind this really to me points to the thing that is first and foremost in my mind always and in the entire leadership team and certainly in the context of the pandemic and that is the health welfare of our people and our ability to work together to maintain mission continuity despite these challenges.

So this team went out because of COVID protocols. As you well know we put in place very thorough protocols in the name of employee safety and to minimize, absolutely minimize any type of COVID transmission risk. We did put in place protocols to allow us to get back into the field.

Things were pretty thoroughly shut down post-pandemic in FY '20. In '21 we were able to get back out there such as in the survey. They had a short team. They had to make last minute adjustments to the night watch, the chief scientist is getting out there on watch.

I mean people to a person went above and beyond to accommodate the restrictions imposed on our operations by the pandemic but more than anything else to get out there and to continue the work. And this is emblematic of the type of mission that we have in this organization.

And I want to come back to that because our ability to maintain mission continuity has absolutely been driven by that commitment. And one of the big concerns I have going forward is our ability to maintain a manageable approach to work in the context of

continued stresses and strains driven by the pandemic and by the future operations that we are in the process of creating to live within these types of pandemic restrictions that we anticipate during the course of this year.

So just a quick note, not only with this next slide, not only did we maintain mission continuity across our core functions but we did take on very substantial requests, execution requests. And did that through very well-developed and absolutely critical partnerships that we rely on extensively with our three interstate fisheries commissions. We'll hear from them next.

And a big, big step up to the plate by many folks in our sustainable fisheries world, among our economists, in our grant community and with our incredible colleagues and partners in the interstate fisheries, the Marine Fisheries Commission. With the initial tranche of \$300 million of CARES Act funds, you know, there - we put out six grants but this involved 82 spend plans getting approved working with 30 states and tribal, 52 tribal authorities, states and territories extensive a very fast and very heavily reviewed process.

And just as a nice note to compliment all those involved in executing this we were told upfront by the Office of the Inspector General that they were going to do a close review which is appropriate particularly with very rapidly executed large new programs, new grant programs. And they conducted that review and they had no findings which is pretty rare in this world. So enormous testament to everybody involved in that.

Round two came through the Consolidated Appropriations Act in 2021. Same general approach but differentiated \$255 million following the pattern of the initial \$330 million dedicated to tribal fisheries which we're executed the Bureau of Indian Affairs and \$15 million directed to the Great Lakes.

And that's again we've got on the order of 35 spend plans. We're, you know, that was a later add. We're still working through that whole process but a substantial augmentation all in the interest of responding to congressional demand to provide some very sorely needed direct relief to those most affected in the private sector from the pandemic. And let me tell you, and we can talk later, those effects are by no means over.

We also, looking ahead, are going to continue to maintain the approach that we have been using all the way along not just in fisheries but in NOAA as a whole. Continuing our smart, steady, flexible theme.

And at the center of it is local CDC data that's giving us all the essential data that we, like other federal agencies, need to understand COVID transmission rates, hospitalization rates and a variety of other indicators of, in a sense, the level of pandemic risk in specific locations. And using that to determine how to manage the operating status of our organization.

So in the late spring and early summer we were expecting a gradual progression from Phase Zero mandatory telework through Phase 1 which is getting from mission critical to mission essential functions using our facilities approximately 25% to 50% occupancy and Phase 3, you know, I wouldn't say back to normal per se but able to use our facilities 100%. And things obviously reversed and we ended up after having a number of our facilities move into phase one some starting to be eligible for Phase 2.

We ended up driven by the data back to an almost 100% Phase Zero and are now seeing that change again. So by just as of this week we're just turning the corner to Phase 1 in about a dozen of the 43 sites that we track where we have ten or more employees in our field locations.

And we, of course, have the major campuses that NOAA manages the phasing of for Silver Spring, for Seattle and for the NOAA Regional Center in Hawaii in particular.

So we're still just around a quarter in Phase 1 and 3/4 in Phase Zero. But we're cautiously optimistic as vaccines continue to generate the benefits that they generate and as the federal government responds in particular to the new requirement that the administration laid in just a matter of weeks ago for all federal employees to be vaccinated where we are working through that, NOAA is a whole and that'll strengthen our ability to maintain progress towards this return to our facilities.

We again have throughout this period maintained mission continuity. We have gotten into the field and into our labs for mission critical functions. And we are absolutely looking forward to a lessening of the restrictions that we have been forced to deal with over the course of this whole period. So getting back on track from my view looking ahead is maintaining that smart, steady, flexible, real premium here as we look forward to what we hope is the positive progression through phasing.

We have the opportunity to really build into our future operating modes in effect the best of both worlds. We learned a lot of things that we never would have expected to learn through this pandemic period about ways to effectively execute our operations with distributed staff.

There are benefits. It's not a great situation and no one wants to, you know, there's certainly a lot of loss from the full mandatory telework mode that we've been in. But there are benefits from providing that kind of flexibility to staff and to be able to engage people and work teams regardless of geographic boundaries.

Something that we were working to but really sort of punched up to a completely different level operationally over the course of the last year and half. And we'll be building out, like every organization is trying to do, a hybrid work model.

This is really going to be centered on, as we've talked about at great length in our organization, with our leadership council, with our is going to be heavily driven by team dynamics, by specific functions and how we can best execute our functions in different parts of the country given the circumstances that we're in.

So it's a new mode of getting out there. And we do think, like most other organizations, that our ability to do this well is going to drive two things.

One is our response to the comment that I made looking at folks from Northeast Science Center on that vessel is we've got an incredibly high level of mission commitment. We need to maintain that and not overtax our people. So that's kind of issue number one from my vantage point.

And issue number two is recognizing that we - the workforce has changed. The realities of work have changed. We talked a little bit about that relative to the seafood industry but the pandemic has had an enormous impact on the workforce. And our ability to develop these hybrid modes of working and to continue to kind of step up our productivity is going to be a key part about in our ability to compete for talent in the future.

And folks have - are moving have moved. And our ability to maintain that type of mission commitment and build out from it will depend in part on how successful we are in really modernizing our workplace practices and taking advantage of the opportunity that's in front of us.

So, Erika, I'll turn it back to you and available for questions but I really appreciate the opportunity to provide both the budget overview and a little bit of sense operationally where we are at the outset of FY '22. Thank you.

Erika Feller: Thanks Paul. Does anybody have any questions? Roger?

Roger Berkowitz: A quick question Paul then a comment, a comment first. You know, on the picture displayed by the crew in and photo was really disappointing to see the size of the species out there. And I don't know if that's, you know, it probably is indicative of climate change and what's happening out there.

And then a quick question, I see where the governor has mandated vaccines. Do you see any negative consequences to the workforce at NOAA with the advent of this mandate?

Paul Doremus: These are really challenging issues, and thank you Roger, we are working very closely with NOAA. This is an overall question for the executive branch, really. And NOAA the department are working closely with the administration as all federal agencies are to implement this in a way that allows for clear and appropriate exemptions where warranted for religious or health reasons. So all that's playing out.

We have implemented through NOAA. It's a voluntary attestation that our staff can make of their vaccine status. And we've had a very high response rate. And our data indicate that we have a very highly, a very high percentage of our staff already who are vaccinated.

So the delta is relatively small. And I think with continued progress in our implementation and the sensitivities to all the types of considerations that come forward while maintaining focus on the president's direction to federal employees have to be vaccinated.

And we'll accommodate changes where or exemptions where required and at the direction of the agency. And that step will ultimately be the answer to your question, Roger. So I think it will be difficult for some folks but I think it'll be a fairly small number within our organization as a whole.

Roger Berkowitz: Thank you.

Erika Feller: (Joe)?

(Joe): Thanks Madam chair. And thanks Paul, you know, great update. I just first of all kudos to NOAA Fisheries for working through this crisis with all of the other added burdens, if you will, that were put on here including CARES and the distribution of consolidated appropriations.

The work of the commissions as well to all of you for getting that done through a whole bunch of issues and problems during that time. And then, of course, dealing with these setbacks that has occurred recently with Delta. It's just remarkable.

Yes, I just wanted to step back to the budget for a second here. You mentioned good old offshore wind again. It's high on my radar out here. You mentioned 20.4 mil approximately for that. And I know that'll go towards improving NOAA Fisheries ability to participate in assessments of the site assessments and impacts on fisheries and fishery

stocks and fisheries themselves. Is your other activities that you envision within that, that would be an expansion of NOAA's role in offshore wind?

Paul Doremus: (Joe), right now in FY '21 this is in effect a bit of a catch up here. The bulk of the resources that we've requested, I'm sorry for FY '22, will be directed to the Northeast where we've had the greatest pressure for supporting permits in the pipeline there as well as understanding the science around these issues and managing both understanding and eventually managing the impact and mitigation strategies for our surveys and our ability to continue the level of scientific support that we've provided for decades to the industry.

So most of the resources in FY '22 are, in effect, catching us up. And we will need to continue to look at our investment and our ability to support on both the science and management side of the picture the continued progression of wind permitting proposals in different parts of the country.

Discussions with Gulf of Mexico. Already some things going on in the mid-Atlantic, South Atlantic and in California. So this is going to continue to progress. And the administration has set a very significant target of 30 gigawatts by 2030.

And that level of investment that we're requesting in FY '22 is only looking at the frontend of this in that immediate time period that we need. So it's a, while it's large, it's a focused ask. And it really centers on those two main functions of providing the consultation and review mechanisms on the management side and really evaluating the science requirements, responding to the science requirements and developing the mitigation strategies.

(Joe): Yes, thanks, thanks. So you're anticipating asking more in the future if we - if we're heading towards the 30 gigawatts for real, correct?

Paul Doremus: Yes, we're going to need to work with the administration and with the realities of this permitting pathway as it evolves and adjust. But right now we're catching up to current reality. And if that reality continues to evolve there will be resource implications.

Erika Feller: I've got (Kelly) and then Sebastian.

(Kelly): Thanks Erika. Paul, always appreciate these budget updates. They're really, really helpful kind of put things in perspective. I was wondering if you could talk a little bit about, you mentioned trying to catch up from some having some shortfalls in the past. I'm particularly interested in the slide that talks about fishery science and management component.

It looks like there's probably about a \$50 million to \$60 million increase there. How much of that is targeted towards stock assessments, you know, and council activities kind of at the, that granular level because that's really, you know, kind of where the rubber hits the road as far as fisheries management goes? And maybe it's a better question for (Cisco) I'm not sure but just wanted to see what your thoughts were.

Paul Doremus: Well we've got on the climate research front and the key thing I draw your reference to in addition to all the detail that's in the blue book is the slide on slide 8 where it lays out some of the components under climate research of what we would be investing in which includes \$10 million requested in the president's budget, slightly less allocated by the House mark for our core fisheries survey capacity.

And that's the piece I think you're talking about the most. And there are some survey implications and science implications in particular in the Northeast of our offshore wind proposal as well. So those are where I would direct you for the greater detail around that core mission function. So thank you (Kelly).

(Kelly): Thank you.

Erika Feller: Sebastian?

Sebastian Belle: Yes, thanks Madam Chair. And Paul thank you for your summary, always helpful to to hear the budget numbers and also cognizant of the fact that you're the messenger. So not interested in shooting messenger but I have to ask the question, which I'm sure you know

I'm going to ask, which is given all the priorities in the budget aquaculture is notably absent.

And given the fact that we have at least the beginnings of a project to start a National Aquaculture Economic Development Plan how does that work and where is the budget on that? And is that being reprioritized or how does this fit into the overall budget?

Paul Doremus: So there, you're right. As I mentioned at the outset of our discussion about the kind of alignment of budgets with the administration getting into place and quite literally with people, and positions and agencies. There's been a bit of an effort there.

And before virtually anybody was in place there was a very strong direction that is the centerpiece of, I think, at least for the scientific and technical agencies the centerpiece of the administration's direction was all around climate. So I think we've got some catching up to do in some respects for discussing the broader array of investment opportunities.

We are continuing to do the work that we've outlined with existing resources which is very substantial efforts to continue to advance opportunities for growth in aquaculture. We're continuing to work ahead as resources allow with agricultural opportunity areas in a number of other things that I think represent the promise that we've articulated for this sector.

We hope to have a broader attention to this over time particularly as folks come to see what the opportunities are with some of these investment trajectories. And also as we get - I think our approach together under the department, as the secretary has asked us to really pursue a seafood, national seafood strategy, a great deal of enthusiasm for this and I think you'll be hearing more from us about it.

But we've gotten very, very strong indications from the secretary that, you know, she comes from the ocean state, understands the vulnerability that the commercial sector, commercial fishery sector is facing, understands the challenges and the opportunities for aquaculture and wants to see us do everything we can to provide greater opportunity for

growth and essentially for repositioning as we talked about earlier the opportunities for the sector to the greatest extent that we can.

So a lot of enthusiasm there Sebastian and look forward to continuing to engage with MAFAC and with others focus on aquaculture as we kind of open up a greater opportunity in the coming years.

Sebastian Belle: So just to be clear, Paul, that - what you're saying is that the work on the National Aquaculture Economic Development Plan will not be stalled and will continue to move forward?

Paul Doremus: Yes.

Sebastian Belle: Thank you.

Erika Feller: Harlan?

Harlan Pearce: (Unintelligible) madam chair. Madam chair?

Erika Feller: Yes.

Harlan Pearce: Yes now you can hear me? Paul thanks for the presentation, as usual. I think you touched on some of the things I'm about to talk to you and ask you about. But one of the bodies of work that MAFAC has done since I've been on this group that I'm particularly proud of is the National Seafood Council.

I know that Linda Cornish is working very, very hard on DNA task force to get to get that done. And it's particularly of interest to me because a lot of times groups like this and which is a shame that we work very hard on doing - and gives great work done and it goes nowhere.

And I know how you feel about this particular council idea. Is there anything in the budget, any money that you can talk about can help move this forward and for us just

trying to put it together, trying to get it started? What can we look for for some kind of funding in the future for that group, if you can, if there is any?

Paul Doremus: Yes all I could offer right now, it's a little early to say, to be honest with you Harlan. And I do appreciate the enormous energy that you and others on MAFAC have put into this, and it's not a recommendation that's sitting on the shelf by any stretch.

I think as many of you know, I serve as vice chair on the board Seafood Nutrition Partnership which has seen a - the - and I think started down the path of articulating how a national seafood council could come to fruition. They have motivated an enormous amount of support in the private sector and built through their ET - through the America campaign, an extraordinary coalition of private nonprofits and other interests around the seafood sector for a positive consumer facing message to eat seafood.

I think that the time is right. I think that the timing of MAFAC recommendations was quite fortuitous. And I think it's going to be a while. It's a big request, and I think it's going to be a while for people to understand how best to execute that.

But there's been an enormous galvanizing energy around the core concept. And I do think as has been pointed out by the committee's report, as well as by folks like the Seafood Nutrition Partnership that particularly in the early phases, partnership based strategies are the only way to go and it can evolve over time.

But we're seeing, I think, very positive signs Harlan in the private sector coming together in a way that hasn't before and then a broad array of interests in the ocean and seafood communities around seeing something like this happen. But I can't point to anything in the budget and not certainly not in FY' 22 at this point in time. And we're hoping that there's more and more attention to the opportunity here for both the administration and for Congress to discuss.

Harlan Pearce: I was just hoping that's all.

Paul Doremus: Yes.

Harlan Pearce: I (unintelligible) put you on the spot and find some cash here. That's all right...

Paul Doremus: No, no.

Harlan Pearce: Appreciate everything and I'm just really glad to see the (unintelligible) . I think everyone on this council, this committee was really excited about it. I think as we can see the industry's excited about it. And it's good to see it moving. All right thanks for all your work Paul.

Paul Doremus: Absolutely. Thank you Harlan.

Erika Feller: All right thanks Harlan. Thank you Paul. That's all the questions I have. So thanks for that presentation, and maybe we'll move on to the report from the state director's meeting and from the Fisheries Commission. And I see (David) and I see (Bob). I do not see (Randy), so...

(Randy): I'm...

((Crosstalk))

Erika Feller: (unintelligible) this.

(Randy): I'm here.

Erika Feller: (Randy) you're here.

(Randy): Well I'm here.

((Crosstalk))

(Randy): Yes, but I'm in my pajamas.

Erika Feller: I think we all want to see that on screen.

(Randy): No not everybody.

((Crosstalk))

Erika Feller: (Unintelligible) stay off camera. So who wants to go first? I don't care.

((Crosstalk))

(Randy): I can.

Erika Feller: Okay, why don't we start with the West Coast?

((Crosstalk))

(Randy): Okay. Yes, a couple of things, I was going to quickly run over what happens at our annual meeting and then go through where we are in disaster so just been a big issue.

So at our annual meeting the issues that came up which we discussed were whale entanglements. And then West Coast states are all getting together and trying to figure out a plan on how we proceed forward with this, because as you know what it does, it effects our crab fishery here, which is the biggest fishery we have on the West Coast. So we're moving forward on that one.

Another one was wind energy, big issue. BOEM said they want us to provide some information on where people fish. And we said, "Fine, it's going to cost you some money." The check supposedly is in the mail, so that's kind of where we are on that issue. But it's a big concern on the West Coast. We won't provide any very detailed information on them, but we think it is probably worthwhile for everybody to understand where people really are fishing.

Marine mammals that was an issue out of Alaska. They now are concerned about the amount of seals that are taking salmon in Alaska. They have some suggestions for amending the Marine Mammal Act, which none of us believe will happen in my lifetime probably again. So we will be trying to figure out whether there are ways of approaching what their concerns are.

And last was birds. We're getting a lot of bird predation on specifically in the Columbia River. And this is an issue, of course, with Fish & Wildlife Service more than NMFS. The solutions are not clear, but we will be talking to Fish & Wildlife Service to see if there's any options at all, the concerns of cormorants.

So CARES, the first CARES Act round of funding we have distributed as of today, \$86,510,000. Hawaii is complete. They got 4.3 million. California is complete. They got 18 million. Oregon is complete, they got 15.8 million. Washington is complete. They got 38.8 million. Guam received 175,000. They're done basically, American Samoa, we still haven't gotten W-9s from them, so we can't pay them yet.

So the tribes themselves Washington and Oregon tribes got almost \$3 million distributed. So the CARES round two which we are now involved with spend plans have been approved for Hawaii and California. The rest were all under review by NOAA Fisheries, And that includes California, Oregon, Washington, Alaska, Guam, American Samoa.

And we also are dealing with other disasters. We're paying out now in California sardines, California red sea urchins, Alaska Pacific cod and Chignik sockeye. So that's what's happening on the West Coast.

Erika Feller: Great. I think let's hear all the reports and then we can open it up for questions. Okay, so who wants to volunteer to go next?

Man 1: I'll go next, Madam Chair.

Erika Feller: (Unintelligible).

Man 1: So Gulf of Mexico as (Randy) mentioned we - and Paul mentioned, we're - we - we're involved in the CARES Act as well. We - fortunately we - we're only dealing with four states -- Texas, Louisiana, Mississippi and Alabama, Louisiana, Mississippi and Alabama. Louisiana, Mississippi and Alabama, we've distributed all of their funds. It was a total - for all four states this is about - total about 28 million.

Texas is distributed most of it. We're still working on. There's one more slug a flow of money to go out to Texas for the first round and hopefully that'll be distributed here in the near future.

The second round, all the spend plans have been approved. Alabama, we're waiting on approval for Alabama's list of eligible applicants and hope to be paying them soon. Mississippi is in the process of opening their - the application process, opening their application process.

Louisiana is currently working on a list of eligible applicants. And Texas has paid all their qualified applicants, and they have a fairly significant amount of money left over. And we're working with NOAA fisheries to determine how to how to best utilize that. We're looking at doing some marketing to expand and elevate the consumption the Texas Gulf seafood.

As you know, the commission is highly involved in data collection. That's one of our main focuses. We've been working with the Gulf States and NOAA fisheries with SERO which is an e-log book for federal permitted charter boats in the Gulf of Mexico. They - there's a variety of different applicants - or applications out there for captains to sign up for, and they're in the process of doing that.

We're working on the validation portion of the - of that project and hopefully later this month or beginning of next month we'll begin doing some validation surveys in the Gulf.

And then we're - we've been working - and we have been working and continue to work with NOAA fisheries in the state to resolve the differences between the (ambirad) and the in the state surveys from red snapper.

We're trying to have a common currency. We've got meetings planned for November and then a larger meeting in - or in January of next year to hopefully resolve this and get moving forward with it. It's a difficult issue. There's a lot of consternation between the two surveys and trying to try to resolve it has been problematic.

A newer project that we just recently got involved in with the NOAA Restoration Center is implementing a barotrauma project. it's call - you may have heard of it. It's the Return 'Em Right Program. Florida Sea Grant and the Gulf Council are involved in the outreach and actually distributing the devices that to - we're targeting for hire vessels initially and then and then open it up to private anglers.

The commission's going to - is responsible for the research and monitoring portions. We've entered into several agreements for some research on barotrauma survival and release of the - release mortality of red snapper that's going to be - it's being conducted off coastal Alabama, tagging some fish and whatnot. And then we're also looking at descended device predation and drop - as we drop fish are they - as they're released are they being eaten by dolphins and sharks and things like that?

So and then we're doing a Gulf-wide survey on attitudes and opinions on descending devices. We're working on the monitoring component and hopefully we'll begin doing some at sea sampling in early next year or early to mid-next year.

So the last item I want to talk about is our October meeting. Unfortunately, it's going to be virtual. And the reason I mentioned that is we've been since the pandemic hit, we've been trying to have a general session to talk about wind.

The wind energy, offshore wind. We're kind of behind on that whole issue compared to the East Coast and West Coast. And we want to kind of get ahead of the curve and utilize some of the lessons learned and on the other two coasts and try and prevent some of the issues that that we're seeing there in the Gulf. So we have BOEM and NOAA fisheries and a variety of other folks.

But unfortunately, because it's virtual, we're not going to be able to have that meeting. But hopefully in March of next year we will. And wind is an important issue, obviously a priority for the Biden administration. And we want to make sure that it's implemented effectively and with minimal impacts to our fisheries. With that, I'll hand it over to (Bob).

Erika Feller: Over to you (Bob)

(Bob): All right great, thanks. Can you hear me okay?

Erika Feller: Mm-hm.

(Bob): All right, great. I'll give you kind of the lightning round from the Atlantic Coast perspective and try to zoom through things. I like giving (Dave) and (Randy) a hard time because they've got four or five days to work with. That sounds pretty attractive during the CARES Act negotiations. I can tell you that.

For Quick CARES Act update, for CARES Act round one ASMSC received or was allocated 119 million. We spent all but seven of that so far. Of the seven, we have remaining 7 million we have remaining from round one. About half of that is from Pennsylvania. Actually Pennsylvania determined they didn't have any eligible applicants so they're - they will not be distributing their money. And NOAA's going to let us know what should happen with that those remaining funds.

And then the remaining money is just a little bit from a few states. Some states got some return checks because of the made more than whole provision and some other things. So we're working through that with them.

Round two for CARES Act of the 14 states since Pennsylvania's out of it, we four states have started distributing their funds. Six states have spending plans that had been approved and are working through the application process. Two states have pending approval for their spend plans and grants online. And then two remaining states have not submitted their spending plans yet. So we're starting to get some of the CARES 2.0

checks out. But we're, you know, working our way through the process with the multiple states.

Hitting some of the other highlights that are going on here on the East Coast, sort of the overarching thing wind and other things are obviously a big deal here. But one of the things that we're really wrestling with on the East Coast is climate change.

I think some of the most acute impacts of climate change are being felt here on the East Coast and in the fisheries that we manage at state and federal level. And it's everything, you know, species distribution. It's stock productivity. It's predator prey overlap. It's all, you know, all the impacts that the folks on the call know.

But one of the unique things about the East Coast for better or for worse is the governance structure here on the East Coast is kind of as complicated as it gets. You've got the 15 East Coast states. You've got South Atlantic, Mid Atlantic, sorry, South Atlantic, mid-Atlantic and New England councils. You've got this thing called ASMSC which has unique management authority kind of in the middle somewhere.

And so you've got, you know, a rapidly changing climate and a very complex governance system. And frankly, the system is struggling to keep up with how quick things are changing out the ocean.

So all the management entities, including NOAA fisheries have gotten together and we've started all calling a scenario planning initiative on fisheries governance here on the East Coast.

So what it is, it's a sort of holistic look at the complex management system that I mentioned, plus the rapidly changing environment and figuring out collectively what we can do about it, how can we better manage the stocks that we're all have the responsibility to manage when there's a number of geopolitical boundaries that the fish have absolutely no interest in listening to and they're crossing boundaries and doing different things and things that species that are managed by one council and the majority of the stock may actually be in another council's jurisdiction now, and states are move - or species are

moving in and out of state waters, out of ASMSCs jurisdiction and the federal waters and vice versa? And then how can we how can we better tackle that?

So that's going to be an ongoing initiative over the next 12 to 18 months. We've had some kickoff workshops that, you know, to get things going, but it's going to be - we're hoping that we can get back together and do some face to face workshops and come up with some good ideas on how to tackle this issue along the East Coast because it's changing fast and we're suffering the consequences pretty bad. So we'll keep you keep you informed on the scenario planning process here on the East Coast.

A couple other big issues at the commission, just as (Randy) mentioned, you know, whales are a big issue. The Atlantic Gray Whale population on the East Coast is in sort of severely endangered status. There's only about 380 of those animals left unfortunately. And that fishery happened or the whale population happens to overlap with the lobster, Jonah crab fisheries and gill net fisheries here on the East Coast.

NOAA Fisheries has recently released a rule to react to the interaction between whales and fishing gear on the East Coast. And that - those the first rule that was issued is focusing on lobster gear and crab gear, in particular Jonah crab. And it requires gear modification, gear marking another - a number of changes on how that fisheries prosecuted as well as some time area closures.

So the industry is reacting to that and starting to modify gear and move gear but will be moving gear as seasonal courses require. As, you know, this is a - it's almost an impossible situation. You've got this this severely depleted stock of whales and you've got it overlapping almost completely with the most valuable fishery on the whole East Coast which is the lobster fishery.

So how do you how do you balance those two competing, really valuable competing needs out? And it's a it's a tough thing that's going on. So no surprise to anyone here either is there's plenty of lawsuits flying around. Some are saying NOAA fisheries did not do enough when they're implementing the Marine Mammal Protection Act, Endangered

Species Act. And others are saying they went way too far and they're going to negatively impact the fishery unnecessarily.

So, you know, those lawsuits will have to play out in court. And ASMOC will just track those and see how it goes.

The sticking with lobsters for a little bit, Tom Fote mentioned earlier in the call about southern New England lobsters are in rough shape. And that's a climate issue. And you know, if ASMOC zeroed out the harvest of those lobsters, it probably would not bring back that stock.

So the concern now is, you know, what if the Gulf of Maine continues to warm north of Cape Cod and the lobster population up there starts reacting in a similar way unfortunately to the warmer water as it has south of Cape Cod?

And ASMOC and our states are working through what we're calling a resiliency plan that will set up a series of triggers. And if the stock does start declining in the Gulf of Maine and then a series of automatic management measures will be implemented to deal with that and hopefully help that stock with resiliency. But it's going to be tough if it's a climate change issue. So we'll, you know, stay tuned on that. The states are working through that.

A couple other species highlights, one is striped bass which is one of the flagship species that ASMOC manages, one of Tom Fote's favorites. And we got a stock assessment a couple of years ago that indicated the stock was over fished and over fishing was occurring.

The state implemented regulations in 2020 to end over fishing. We needed to achieve an 18% reduction. Fortunately, the measures the states put in place actually achieved a 28% reduction. So on paper anyway, we've ended over fishing, and now we need to focus on rebuilding the stock.

We're working through a management change right now which will be called Amendment 7 that will focus on rebuilding in a number of other features in that fishery and hopefully bring that - the striped bass population back to where it needs to be.

And the final species that I want to mention really quickly is Atlantic menhaden. Atlantic menhaden's obviously a big issue for ASMOC in the predator prey relationships and the forage base that menhaden provides on the East Coast.

The fishery's changing here. Obviously, there's a big reduction fishery in Virginia that uses menhaden that they harvest for, you know, animal feed and turns them into omega three pills and a whole host of other things that are done with the harvested fish in Virginia.

But the bait demand along the East Coast is skyrocketing for lobster fishing and others because of a few other, the Atlantic Sea herring fishery and others that the populations are in rough shape. So the demand for menhaden is bait - is going up. So the commission and ASMOC is moving through the process of potentially reallocating the state by state shares that we have in the menhaden fishery. And we're going to work through that process for the next, I don't know, the year, hopefully not that long, the next six months, eight months -- something like that.

So, you know, those are those are a number of quick highlights here on the East Coast. Erika happy to answer any questions if you have any. So thank you.

Man: Erika you're on mute.

Erika Feller: Damn it, and it was so good, I was so together on what I was saying, I mean I'm really sorry for you all. What I was saying is that we're overdue for a break, but I want to give - I'm sure you guys have questions that you want to ask these guys.

So my proposal is that we give ourselves about five minutes for questions. We can take a quick bio break and then come back and hear (Cisco)'s update. and then we've got

another update, like a five minute break after (Cisco)'s thing. I would propose we just forgo that and power through the rest of the afternoon.

So if that works for you guys on the floor is open for questions. What do you got? First version was so much better, sorry. Nobody has any just because he wants the break?

Oh, my God, there was like wind, there was White Whales. There were striped bass. There was - that was a target rich environment for questions. But clearly, you guys, the briefing was so thorough and perfect that you conveyed all of the necessary information and MAFAC members are fully briefed and very grateful for you guys coming here providing this update so thank you.

Oh wait, I spoke too soon. Robert has a question then Tom does.

Robert Jones: Well I'll just a comment and quick comment that, (Bob) thank you. Well, thank you everybody for the presentation, but the challenges that you just outlined (Bob) speed into the comment I made earlier.

In addition to us figuring out how we deal with the effects of climate change, especially on the East Coast, and make sure that the regulatory structure keeps pace with this changing climate, this is on point for the comment I made earlier about making sure that on workforce development and workforce transition, that we're considering how this is affecting fishing communities and preparing those fishing communities through very changing dynamics, including the fact that their livelihoods may have to change.

Erika Feller: Tom?

Tom Fote: Well I just wanted to thank (Bob) for his report and also they pay attention that we start 11:30 here and finish at 5:00. So for the four days next week maybe you change your schedule to start at 11:30 and finish at 5:00.

And it's also because of our annual meeting again next week.

And the second year in a row, we had to cancel it in New Jersey, New Jersey feels like

we to host it, never been hosting. And so we don't know if it's going to be here. That's the third year in a row. We're still working through that, but we will be in a virtual meeting next week (unintelligible).

Erika Feller: And Roger?

Roger Berkowitz: (Bob) thanks for your uplifting report. Was there any - is there any good news?

(Bob): Yes, it's hard to come by these days. I don't know. There are a number of fisheries that are coming around. The Tautog fisheries the smaller fishery on the East Coast here. It's - I think we've ended over fishing and over fished on all those stocks which is good news.

Yes the Gulf of Maine lobster fishery's doing great. We're preparing for the eventuality if it doesn't do great. So, you know, they're pretty - they're at record prices this year, I believe, and still pretty close to, you know, a record high landing. So there's good news out there. And you know, the fisheries are doing pretty well, but we're trying.

The climate change is turning everything on its head and reallocation is hard. If you move fish from state A to state B, state A, you know, gets less. And the infrastructure in state A is impacted negatively. And so, you know, it's tough. But state B they would see that as good news because they would get more fish.

So it's like going on the East Coast and climate change and wind power and everything else is complicating it.

Roger Berkowitz: Yes. So lobster prices are sky high. Are fewer boats out there fishing for them or that's supply being, they're controlling the supply a little bit?

(Bob): It's more of a demand thing from my understanding. You know...

Roger: (Unintelligible).

((Crosstalk))

(Bob): supply's still pretty high.

Roger: Okay.

(Bob): Things are going pretty well. It's just everybody is, yes, I think it's people are going back to restaurants and things, obviously, as you all know. So, you know, the lobster's not something that many people necessarily cook at home, but when they go to restaurants, it - that helps with demand.

Roger: (Unintelligible). Thank you.

Erika Feller: That's all we've got. So thank you, guys so much for the updates. Let's take about a five minute break. We'll return at 3:25 and turn it over to (Cisco). Work for everybody?

(Randy): Hey Erika? (Randy)?

Erika Feller: Yes?

(Randy): One quick thing, this will be my last MAFAC meeting, I'm retiring March 1, so I don't think there'll be another meeting before that. So I just wanted to let you know that that was happening.

(Liz): (Unintelligible) updates. Oh, you have to get on screen, (Randy).

(Randy): Yes, I know. (Liz), thanks. It's been a good ride.

(Liz): Wow congratulations, that's huge.

(Randy): Thank you.

Man: MAFAC will never be the same without you (Randy).

Woman: That's true.

Woman: Oh God.

(Randy): Well I really miss the in-person stuff. This is sucks basically compared to, you know, what goes on after the meeting. There's a lot more done there than many places.

Erika Feller: Well, I hope you're going to stick around this afternoon. I think there's a lot of people that would like to express their thanks and congratulations to you.

(Randy): All right. Thank you. Sure.

Man: Yes. Roger (unintelligible).

Erika Feller: Welcome back from that very, very, very short break. Next up, we have (Cisco Werner) with our science update. (Cisco) over to you.

(Cisco Werner): Great. Thanks very much and it's good to be back talking with everybody here on MAFAC. I'll give you a really brief science update and it's really going to be focused on data collection and there'll be three parts to it.

One is just a cool finding on - that we did while we were collecting data. Then I'll go and talk about where we are in terms of our ability to get back out on the water very quickly, you know, post-pandemic.

And the third topic is where we're going to go in the future. And that third topic I alluded to a little bit yesterday is where I think it's important to get your input. And we will be going out more publicly with solicitation on input on data collection that I'll describe in that third part of the talk. So if I can have the next slide, please.

I chose this description here of the finding of Puerto Rico and in honor of (Right) because we were going to meet in Puerto Rico. I thought hey, why not talk about something that was really special?

A finding that actually took place in 2016 off northwest, north northwest Puerto Rico. And it took a while to actually sort it out. It took a - and I'll tell you in a second why this was.

And this was a survey where we had (coastal) fisheries together with OER, which is the Ocean of Exploration, Ocean Exploration Research out of the OAR, Oceanic and Atmospheric Research Line Office where they sent down this (ROB) that you see there. You see the picture of the person and the size of the thing being pushed out on the water, you know, on the track there.

And then I went out to almost 4000 meters deep and found these little comb jellies that you see there on the right, these things, these comb jellies that are, I guess, they're called ctenophores. And they're about 8 centimeters long so what is it about maybe 3 inches or something like that?

But the cool thing about this and the really fascinating aspect of this is the next slide which is that this discovery - and you can hit the video there so you can see it moving. There's no audio. There's a link down it below for the full link is it as the as the slide says, you know, this is the first time that we used high definition video to describe and annotate a new species of comb jellies.

I mean, this is normally if you discover a new species, it's something that you, you know, you have to collect physically, you have to analyze. You have to bring it to the laboratory and it takes a while.

So this time, 4000 meters deep and extremely fragile, you know, comb jelly or any jelly really is extremely fragile. But 4000 meters deep and so smaller. It's really not really possible to bring something like this up.

And so the reason it perhaps took so long was because, you know, it's actually confirmed that this was a new species, et cetera. It took a while because all we had was video to do it.

And I just wanted to show it in terms of the capabilities that are out there in terms of, you know, how the high quality of video that we could do, the sampling that we can do, the care that we can take in doing this. And again, there was no physical samples. We still don't have one, have never brought one back up to the surface to analyze but we were successful in doing that.

And so again, it's just a way to kick off this conversation and also to link it back to the Puerto Rico which is where we would have been. Or maybe it looks like that's where Heidi is sitting right now given her (unintelligible).

But anyway, that's to start it off. The next part I just wanted to touch base, the next slide, please is to give you an update on where we are in the, in our getting back on the water with our surveys.

That busy map on the right is just, you know, I just put a composite together of all the different places that we that we survey and just some cruise tracks not to necessarily come from this year, but just to give a sense as we're back on the water all the way, you know, East Coast, Gulf, Mexico, West Coast, Alaska, Pacific Islands, all the way up to Guam we've been able to get back after basically not being able to go out and go underwater in FY '20.

We - so far the status that you see here is the end of September so what, two weeks ago we had about 48 surveys completed. Some are multiple legs. So, you know, it's a combination again of white ship OMEG vessels as well as chartered vessels. And we completed about 1700 days, maybe just over 1700 days.

And we still have some six surveys out there which might add another 500 days or so. And this is a huge step forward back on the water. And, you know, we're not where we would like to be, but we had a lot of challenges in terms of sheltering in place, testing, quarantining, et cetera. That obviously reduced the number of days that we could go out.

And we were able to, as I said be somewhat successful, a lot of compromises. But due to the dedication and effort of everybody, we're able to get back out of the water again.

The next slide is just a summary of, you know, of the various efforts by the various centers, you know, Alaska Northeast Northwest on the Pacific Islands. Again, it's just a numerical summary, if you will of being back on the water.

In addition to, you know, how we're - we were back on the water, these only reflect white ships and our charter vessels. But there's additional days that were completed using uncrewed systems like sail drones that we've talked about before and other kinds of gliders that we've talked about before. But that's just to give you again an update that we're back in the business of data collection.

So just kind of tell you where we are now. Now I think is perhaps the core of what I was hoping to talk to you about, and this is the third part of the talk and the next slide begins to refer to that. And this is what we refer to as the next generation data acquisition plan or the NGDAP, the DAP short.

And, you know, if you if you if you go back and say, well, when's the last time we had a DAP data acquisition plan? It was really in about 1998 so just over 20 years ago. And back in 1998, you can imagine what the questions were, you know, trying to deal with over fishing, overfished, trying to figure out how it is that we actually had estimates of populations.

And really that led quite successfully to the to the establishment of the white ships that I talked about earlier, that we used to do surveys and, you know, have resulted in our nation, the United States, you know, being perhaps the leading nation in terms of managing fisheries that a lot of other countries look up to and look to see how we how is it that we were so successful.

And so that data acquisition plan of 1998 answered, you know, was perhaps triggered by those questions of how do we manage population was arguably quite successful. And so

one would say, "Well, if it's successful why change?" And I think that we all know there's at least three reasons, if not more, why we need to rethink what kind of data we need.

One the oceans are different from what they were 20 years ago, certainly different from what they were 40 years ago. The physics and the bio-geochemistry are different. The ecosystem and food Web connections are different. We need to differently.

I know that you've been talking about, you know, the fact that the ocean use sector is also different whether it's aquaculture or whether it's wind farms. There's things out there that we, you know, that are occupying the space that we used to sample and now we're going to have to sample differently. So that breaks up time series.

And lastly, I just wanted to put a note echoing something that Dr. Spinrad, you know, as to how we define a new blue economy, and that's that it's a knowledge based economy looking to the sea, not just for extraction, but also for data information that addresses societal needs and inspires solutions.

So how we use the data and the questions that we're asking are different today than they were 20 years ago, 30 years ago. And so that's the need for - that's the argument for the need for a new data acquisition plan.

So if I could have the next slide, the - let's see, waiting for that next slide. There we go. The top right is just a cover of the 1998 (paid) acquisition plan, and you can see it it's a ship. I mean, that's really what it was focused on.

We have since 2015, and we've updated and provided updated updates to you on how we have defined or generated stock assessment improvement plans, climate and science strategies, EBFM, Ecosystem Based Fishery Management, the Climate and Fisheries Initiative and so on. All of these plans, if you will all of these documents identify data gaps.

And so we know that in order to improve in each one of these areas, there's new and different needs for data. Interestingly, though while we have done all of these plans, what

we haven't done is actually done the data acquisition plan. And so that's again, you know, we have a background, we have a process through which we've gone to say, "what is it that we need? What are the questions that we need to answer?"

And now the question is not just having a ship, but as you can see that that picture that you've probably seen before of a whole host of capabilities and data collection approaches that we can take whether it ships, whether it's, you know, the cooperative research whether it's gliders, whether it's, you know, the molecular approaches to environmental DNA, et cetera, that will help us come up with this new NGDAP, the Next Generation Data Acquisition Plan.

And so the way that we're approaching this is that we are working with a - an outside firm that we're contracted with. So the next slide, please is IBSS is the name of the company and this is a process. It was a, you know, it was a solicitation that was put out and it was competed for. And in terms of our saying, we would like to, you know, establish this this contract, if you will, with the company what will help us craft this Generation Data Acquisition Plan.

And these are the folks who - whom we're working with. This contract was awarded probably less than a month ago. And so we're just in the early stages of how are we going to go forward with IBSS, with Laurie Allen, Marie Colton and others who you might know. Both of them were with NOAA long time and understand NOAA as well as the, you know, the needs that are there. And so we're going to work with them to, you know, to generate this data acquisition plan.

So the data acquisition plan is - if I could have the next slide, please. Well they're all number one. I guess they should - there should be a one two, three, four, five but anyway, they appeared all as number one. It's going to be a - and I'm going to talk - and I get in a second to the timeline. And this is, you know, going to end with a timeline because that's where the connection with MAFAC and other partners is going to be important.

It'll be a discussion of the data collection and usage within fisheries, you know, discussion of, as I said, the goals and gaps, some of which have been identified by

previous programs such as the Stock Assessment Improvement Plan or the Climate and Fisheries Initiatives, et cetera, a description of how it is that we collected this approach or collected the data, that - the information, I should say, the information to generate to DAP, a summary of recommendations and finally, you know, how we will implement these recommendations.

And last, this next slide, this slide, this last slide is the most important in terms of how I - we will be requesting your advice and more folks advice in terms of generating this gap.

So typical (Gan) chart of, you know, there's obviously program management throughout the throughout the effort, which is viewed to be 12 to 18 months. We're looking to finish this data acquisition plan in 12 to 18 months.

The first task that we're looking at -- and that's a part in the oval there -- is a - it's going to result in the Request for Information, an RFI. And this RFI is going to be public. The survey, the survey questions, if you will, the questionnaires are being drafted now or being crafted now.

This is going to go up broadly as well as externally as well as internally in terms of, you know, you will see questions or the questions that will be in there will talk about the different data needs, fishery dependence, fishery independent, recreational, commercial, et cetera. And we're working on that, on the questionnaire right now.

What we get back - and again, we're going to be looking to distribute this broadly. What we get back is going to then help train what will be a series of public workshops. And again, I emphasize the word public here.

We envision at least three. There be perhaps a national workshop that, you know, brings the collective ideas or brings, you know, the general ideas together. And perhaps not draft, but then we have in mind a one for the Atlantic or East Coast, and then we have a West Coast and Pacific Islands and Alaska. So they and that could be two, and you know, it could three, maybe four workshops where based on this request for information, we

will begin to collect and define what this next generation data acquisition plan should look like.

If everything goes right and we all know that the challenges occur, you know, roughly in a year or so by the end, just about now next year, you know, we would we would be having a, either the final draft (unintelligible) give us your final draft of the next generation data acquisition plan for us to consider. If need be, it could probably be extended for another six months, maybe another 18 months. Again, assuming the contingencies can happen.

And this is something that we're looking forward to for all the reasons that I said. We need it. I mean we know that the questions we're asking are not the same questions that we asked 20, 30 years ago.

The kind of data that comes in will answer, you know, we're not going to take a step back. We know that the world is much more interconnected. And so the - how to connect the data that we have with other data that's coming in and taking advantage not just of the fact that we can collect more data, but that we can analyze the data with methods that we didn't have before, whether it's artificial intelligence, machine learning, you know, big data efforts, obviously the high performance computing and so on, there's - it's not just a matter of more data, but the ability of doing more with that data.

So this is a balance between collecting data but also processing it and turning it into information that we can use. I've said before that, you know, the amount of data that we have and the ability again, to analyze this data, is providing an "and", not an "or", but "and" and, to scientific-driven questions and data-driven questions and (unintelligible) driven processes and data-driven processes.

And so it's part of a new way of thinking, a new way of going forward in terms of how we think about the information that we need to continue to do the work that we need to do. So I'll stop there. If - you can see it's something we're all excited about; it's something that we will need everyone's help - stakeholders, partners, etc. We're not flying solo on

this one. And I'll just stop there and just leave it open for any kind of questions or comments that you might have. Thank you so much. Thanks, Erika. Back to you.

Erika Feller: Thank you, (Cisco). I know there will be plenty of questions. I've got Tom and then (Pat).

Tom Fote: Thanks for the presentation, (Cisco). It makes me excited. I mean I'm looking at the species that we've always been surveying and realizing that, you know, the (COA) survey was not the best way of surveying that particular species, so we had (unintelligible) with data (poor). Are you looking at better methods like bluefish and other species in that same category that we can't survey with the (unintelligible) survey or, you know, the (fall) survey as well, and looking at other ways of doing it? Is that part of this exercise?

(Cisco Werner): Yes. Yes. If I understood the question, yes. I mean we're looking at different ways of surveying and not just, you know, the whole concept of different ways of surveying, not just for single species but multi-species and the different capabilities that we have. You know, clearly this is going to be tricky because the calibration aspects of things is going to come into play as we evolve from one set of measurements to maybe not a different one, but at least a complementary set of measurements initially.

So short answer to your question, Tom is yes, we're definitely looking at expanding in that direction. Yes.

Tom Fote: And a short follow up - are you working with the states and also including the surveys they do in basically expanding?

(Cisco Werner): Yes. And thanks for bringing that up. That's key. I mean the key to this thing is as I kind of said earlier, that we can't fly solo on this. We need to work with the states, we need to work with industry. And we need to work more broadly honestly with, you know, globally in terms of what other partners are doing elsewhere.

There is just a wealth of data that's coming in that we can't ignore. And the kinds of question that we're asking we also can't answer just by doing it ourselves. So absolutely

the states and other partners, are key in this in our approach of how we collect data in the future. Yes.

Erika Feller: (Pat) and then (Joe)?

(Pat): Thanks, Erika. Thanks, (Cisco). This is absolutely terrific hearing what you're talking about here. And I'm just recalling what (Ren Meyers) said maybe a decade and a half ago or more, about we should never change surveys or gear or anything, just to keep everything consistent. Of course he was Mr. Meta-Analysis, looking at things across the globe.

But I recognize, you know, fish are moving; they're going deeper; they're going north; and we have all of this other brand new stuff - AI, big data analysis and we're getting - I noticed I'm seeing pushback now. You know, we can't change anything because we need to keep our data streams consistent.

So I'd like to hear, you know, I would imagine that we would probably need training (unintelligible) old scientists that are out there, with regard to how we might, you know, change our perspective on things.

But also I recognize the capacity for an institution like federal government to change, is difficult. And, you know, the next thing we're going to be talking about is collecting recreational fisheries' data using cell phones and whatnot. And even there I've gotten some pushback on well, we can't, you know, there's no way we can possibly store the images of all these fish that we want to take, or even the locations and all of this kind of stuff.

So I really applaud where you're going with all of this. I hope some resources are being put into training to get us and I'm including myself as well as our - my National Fisheries Service colleagues, in terms of getting onboard with this and, you know, trying to change the infrastructure, the tech infrastructure, to stay ahead of this as things are changing. I'd like to hear more about this at some point. Maybe if you don't have time now but, you know, at some point if we can talk, that would be really terrific.

(Cisco Werner): Yes, no, thanks, (Pat). Thanks so much. And you've hit a number of points that do keep us awake at night in terms of how do we move forward with this, right, particularly in the end of, you know, if one metric is at the end, being able to say something about the status of populations and such. You know, I think one of the things that we need to do is go slow obviously.

You know, we could run the risk of doing two things - one, the ocean is changing and then the way that we measure the ocean is changing. And then we're changing two variables at once which we never want to do, right? So we want to make sure that something remains constant and that we do things in parallel for a while, until we know that it's time to shift, or as I said, or to keep the complementary, the approaches.

In terms of your point about training, it's essential. I mean, you know, we've thought about a number of things particularly in areas of like new technologies, new ways of analysis is to have internships so sending our folks to I don't know, make something up, to Google or something like that. You know, to learn how AI works. Or vice versa. Bring somebody from one of these companies into our centers, to learn, etc. I think that's going to be essential.

The other thing in terms of how do we translate this information into advice, I think initially, you know, we've toyed with the idea of what I've referred to as a shadow assessment. And that we would take some of this new data, new information and say well, if we had included this, this is what would have been. But we still need to stick with what we understand for a while and begin to compare, contrast, and hopefully quantitatively determine what are the two methods telling us and is there a time to shift or consolidate or something?

A lot of questions there, (Pat), and I think this is something that we need to look into, you know, slowly and carefully. It's not going to be a quantum jump. We're going to have to get there. But it's an important step that we need to take. Thanks. Thanks again, (Pat).

(Pat): I appreciate that. (Cisco), thanks for the work on this.

(Cisco Werner): Yes. (Joe)?

(Joe): Thanks, Madam Chair, thanks (Cisco). Yes. I want to go to Google to have a chance to. You know, (unintelligible) where we have our, you know, for our big commercial import stocks throughout the fisheries (unintelligible) world. And there's a (unintelligible) stocks I heard I think (Harland) yesterday mention a little bit about that. And how that data, you know, is coming in fits and spurts over time.

And my question to you is I'm sure that'll be a part of the data acquisition plan, the next gen plan, working with those stocks and the data that come from them. But the archive data for a lot of those data (poor) stocks that exist in many of the old NOAA silos if you will, and that might be out there, is there a plan to bring that into this (DAP) as well?

(Cisco Werner): Yes. The - thanks (Joe), thanks for the question. The ability to bring the data to serve it under that, you know, that spare content, right, you know, that, you know, that you can find it, that you can - that's interoperable that you can distribute it, is key to this. Because as I said, you know, we can't collect all the data that we need, you know, by ourselves and neither can other folks.

So I think it is going to take, you know, the ability to ensure that the data is out there, findable, attributable, etc. I forget exactly what the FAIR stands for. But anything from the data (poor) stocks that you mentioned to others, the collection of information and the ability to ingest all of this information into the new approaches for analysis and such, is going to be key.

So if we don't include that, I mean let me say it differently. Including the availability to distribute - and the distribution of the data broadly, is one of the key components of the data acquisition plan. Because like I say, it's not just us, it's not just our data. But it's a broader consideration of the data sources, data availability out there, you know, from other places, as well as our contribution to that broader global data use.

So long answer to your question. The simple answer is yes, the whole aspect of data availability and distribution for all, whether it's the data limit is otherwise, is part of our

thinking. And these are the kinds of things that I think, you know, through these public, you know, requests for information, requests for input and the workshops, is something that can be emphasized and make sure that it happens through this public conversation that we always have.

Erika Feller: Are there other questions? Wow. (Cisco), you put us like way ahead of schedule.

(Cisco Werner): Well I wish I had the survey to send you guys then you could start working on it. But no, thanks. It - I wanted to make it short and sweet because I really wanted the message to be one where, you know, one first of all this is exciting and that's what's the aspect of us going forward. But also as you saw, you know, basically from beginning to end, this is a process that is - that will rely on the conversation, a public conversation about what we need.

And so in the coming months or maybe even months or weeks - weeks, months, and in the coming year, this interaction with (MAPAC) and the input from you, is going to be very important. And getting the word out that we really would like to get, you know, we need the broad input from all of our partners and stakeholders under (unintelligible). So that'll be great. If I could impose on you, that would be wonderful.

(Eric): I'm sure (MAPAC) is delighted to be imposed on. Actually, I got a couple more hands up. And I have a bit of a question. It may not be a very good one, so just throwing it out there. I guess I'm kind of wondering to what extent you guys are thinking about how this next acquisition data plan, how will this change management? Like what are we going to be able to do later that we can't do now?

(Cisco Werner): Well, I mean it's - one of the things that we've talked about - and for me in conversations with the impact of climate and changing environment, as we think forward in management, you know, beginning to shift our thinking from being deterministic about us being able to provide an answer to saying what the possibility of outcomes might be.

And I think that it's important to be able to quantify that range of possibilities so that we don't say gee, I don't know. It's changing out there. I can tell you. Right? I mean I think

that what we need to do is say this is likely to happen or more likely, or less likely to happen. Along the lines of what say, some of the climate projections are saying. What's likely going to happen and what's less likely going to happen; allow the decision makers to make the decision.

And so I think that one of the things that we need to do with the data acquisition plan, is anticipate that there's going to be more variability; anticipate for uncertainty and be able to collect the data that will quantify that uncertainty in a way that is useful, not just say we don't know what's happening, but actually say this is what is likely to happen or not, and thereby allow for the managers to make those decisions and rather different. And as I said, you know, perhaps a little bit more uncertain situations than what we're used to. That's one of what we hope we can do.

Erika Feller: I think that would be amazing. But, you know, kind of to (Pat)'s point, it sort of strikes me that this is going to let managers ask and answer different questions than they've been able to answer before. And, you know, thinking maybe about training or outreach to Fishery Management Council members and how these things are going to start to change the way they do their jobs.

(Cisco Werner): Indeed.

Erika Feller: With full advantage of it. I've got (Kelly) and then Tom's hand's raised.

(Kelly): Thanks, Erika. This kind of ties into your question and some of the earlier questions. But I guess, you know, one of the challenges that we see with data collection the way it is now, is that there's such a disconnect between the time the data is collected and then the time (unintelligible) being made. And so we're typically always behind the 8-ball.

Is there, you know, more of a predictive approach that you're looking for here, you know, markers that you can look for? And I think you kind of answered this earlier, but, you know, that we could be more on the front end and say, you know, hey, we're doing something right now and so we can make a management decision based on that

information right now. So it's not necessarily real time but at least as close to real time as we can get.

(Cisco Werner): All right. I think it's a good (unintelligible). I think that's a great observation and one that is - if we're not making - in the report I'm going to take this, you know, back to the group. You're absolutely right. There's just too much latency if you will. It takes too long for some of the data to be translated into management use. So I think that the next generation data acquisition should be very attentive to that, I mean particularly if we are admitting that there is uncertainty, we only know that over time some of these uncertainties might get even, you know, exacerbated if you will.

So it's important - shortening the turnaround time to providing advice, would be one of the driving aspects of this next generation data acquisition. So I agree. I think this is something that should be one of the drivers in terms of how we think what would be - how we design whether we need to collect so I'm echoing you. I think that's a great observation, (Kelly).

(Kelly): Thank you for that. And by the way, it's great to see you, even if it's virtually. It's been too long.

(Cisco Werner): Indeed it has. Good to see you.

Erika Feller: I've got Tom.

Tom Fote: Yes. Just thinking of when we basically tried to tackle (MDA) and basically put that through and (John Borman) went and testified before Congress and he said if you wanted to have a good system this is what I need, \$50 million. Of course we never got that appropriated, so we wound up still with a system that nobody - a lot of people don't have confidence in, especially what happened when the new numbers came out, and we wound up overfishing (poor) stock that we weren't (unintelligible) numbers came out.

I think it's important that we get the - when you gather at public hearings, tell them what the cost is. So we can be allies in making sure that this is funded. Because it's not - if we get all of this information and how we can do this without getting the funding promptly to

do it, then we're behind the 8-ball. I mean I'm looking at long term down the road and of course at my age I probably might not achieve this by the time it really gets fully implemented.

But I'm hoping in the next ten or 15 years that this does. And we'll get the money necessary to get the (unintelligible) information.

(Cisco Werner): Yes. Indeed. That's - thanks Tom, it's a great point. And it's that last aspect of the data acquisition plan is (unintelligible) how do we implement it? And we didn't want to think about the cost at this point but, you know, the implementation certainly has that implied and in the discussion of what's it going to take to get there?

So indeed. It's something that we will have to - at some point have to get there because somebody - it's a natural question to ask. Okay, so what's it going to take to implement this? Agreed, Tom.

Erika Feller: So that's all we've got. So I think we might be able to say our thanks to (Cisco) and let him go. I'm assuming (Russ) isn't here and he's not - well he - oh wait, hey look, there he is down in the corner. So if you guys are okay, maybe we can just roll onto our recreational fisheries update and maybe we'll get done early. Wouldn't that be great?

(Russ): Erika, I just want you to know that really hurt. That you didn't think I would be here, right here, you got me.

Erika Feller: (Russ), I know what a busy man you are and you have many demands on your time. And I don't necessarily - sitting there waiting for us.

(Russ): With bated breath.

Erika Feller: So excited.

Heidi Lovett: Erika? Hi, Erika. This is Heidi. I'm going to be showing slides for both (Pat) and (Kelly) and then for (Russ). So (Pat) and (Kelly) I think are ready to go first. But I just need a

minute to - presenter. I've got it. Okay. Hold on just a moment. Can you all see the slides?

Man: Yes.

Heidi Lovett: Great. We didn't talk about who was going to go first, so...

(Kelly): No, we didn't.

Heidi Lovett: I thought you might...

(Russ): Heidi, the only thing is from what I'm seeing, (Cisco) still has a gray box up with his name in it instead of just the presentation. So I don't know if other people are seeing that. It would be bigger - oh, there you go. You fixed it.

(Kelly): Oh. It was looking fine on my screen for some reason. (Unintelligible).

(Pat): So I might as well jump in and (Kelly) you can just stop me anywhere along the way if we - if you have input on this. So I think, you know, what I'm what I'm giving I guess, is a little bit of an overview of what the subcommittee associated with our committee, is working - we've been doing a lot of work. And it's really a terrific group that we have. And a lot of folks are working pretty heavily on this.

And I think last time we talked I went through the names of all of the folks that are there, but in addition to (Kelly) and my myself, (Sean Simmons) of the Anglers Atlas, and (Amy Dukes) of South Carolina, is Department of Fisheries, have really been contributing a lot. And of course, there's a lot of expertise on the panel and they're all weighing in as this thing develops.

So broadly speaking, in the summer we broke into three groups to look at common standards and integrating data from multiple sources - data validation and new directions of data collection and recruitment and retention of anglers, barriers, and motivation. And so these three groups have kind of been working together and compiling the document

itself. And we've had a number of presentations in terms of reviewing earlier data gap work and focusing on what are realistic and achievable goals for the prior recreational anglers using electronic reporting.

And of course, there's a lot of potential here because, you know, as (Cisco) was just pointing out with AI and big data and all sorts of things and cell phone technology, there's all sorts of things that we can do these days that are likely to improve what information we get from recreational fishermen, if we can get them involved with this too. So if we go to the next slide.

So where are we at? We're looking at current processes and common standards. And (Russ) and (Gordon Colvin) and (Richard Cody) have been just really terrific in helping us see what's possible there. We've had some presentations from NOAA data staff and it's just terrific. But it's a challenging thing. Of course, I've been involved a lot in terms of reviews of National Fisheries Service Science and Data over the years. And one of the things that's challenging is to get people to agree on what should be common statutes.

So we've wound through some of that as well. And I've talked with folks at the National Information Exchange model and so forth, about how to think about this. Also, in terms of data integration, because we have lots of different programs with different needs and resources trying to consider what the minimum data requirements are, and broadly speaking this to me, is challenging to even talk about, sample size considerations in terms of what it is that needs to be taken into account.

Some of the barriers are technological as we were talking a moment ago in my questions to (Cisco), I really appreciated his talk, with some of the barriers that are social basically getting people onboard with regard to providing data. Currently, I'm working with folks, the Department of Environmental Conservation in New York State, with regard to things like, you know, VTR data for commercial fisheries, right?

And right now in the state, that's all being, you know, submitted by the fishermen on paper. Right? And so how do we get to electronic? And of course, in doing so, I think this is worthy to mention, things that are kind of tedious to include on a paper form like where

you live and what your telephone number are, and things like that, could be greatly streamlined if we had an electronic version people could tap into with - on their cell phones for example, and submitting just, you know what fish they caught as opposed to all of this other information which would be there, you know, automatically.

So recognizing that, you know, kind of points to what the advantages may be to the fishermen too, in terms of including this kind of information. Next slide, please. So what is the report going to look like? Well, we're going to have data validation, new directions, but we're talking about how to develop data fields and associated metrics to technology-driven data collection and verification, comparison-driven data collection and probability versus nonprobability-based sampling.

So what the heck is all of this? Well, (Sean Simmons) for example, the guy we have from Anglers Atlas, is a Canadian working in lakes in Canada. And man, you should see what this company is doing in terms of data collection and so forth. So things that we think are - what I might have thought was impossible, he's providing solutions for.

And so it's really interesting to kind of see where we can take the technology part. Of course, we've had a lot of discussion about how to get the fishermen involved with this too. And of course, providing incentives and so forth, are critical to this. I might mention probability versus nonprobability sampling, just because I know you're just anxious to hear about that.

But the reason this comes up is in the surveys that National Fisheries Service conducts, that follows a design such that the data represent a sort of random sample, which allows equal probability of everything in the ocean to be represented. And so this is our kind of ideal for gathering information. One of the things that comes up when we were talking about recreational fishing data, is fishermen don't fish randomly. Well some do. I do when I'm out on the water. But most people have a pattern, right, they're actually going to where the fish are.

And so as a fishery survey person myself, one of the things that you need to see is not only where the fish are, but where they are not. And the random sampling often gives us

this. So we needed to talk a little bit about nonprobability sampling. That is things that aren't equal, like equally likely representative of all - everything in the universe, to situations where fishermen may be focusing on particular locales.

There's also the work going on these days using a model called (Vast) and so forth, to try to integrate and make - account for whatever bias may occur. But one of the things that we recognized in our discussions, is that recreational fishermen can provide a lot of information that we cannot get through our normal National Fisheries Service survey mechanisms.

For example, My Catch or survivorship of the fish that are returned to the water, or targeting. And so all of these things kind of open - if you recognize that it opens the door to recognizing all of the value that is potentially there in terms of recreational landings. One of the things that we haven't talked about yet is solvability and ability to scale.

And what I'm reminded of here is (unintelligible), you know, transitioning into (MREF) and the Marine Recreational Fisheries Data Collection Systems were originally designed basically to provide how much landings that were of the different species to assist scientists at the end of the year. Now, however, where we're using it almost on a monthly or even weekly basis to see where the fisheries are and how to respond to that.

So the scale of how we're using this data is important. And of course, this is something (Cisco) kind of was alluding to earlier, too. With all of the advances in technology we're going to be getting a lot more data on a lot more things. How can we make use of that in our fisheries management systems? Next slide.

(Kelly): Hey, (Pat), I'm happy to do this last one since I've been...

(Pat): Great. Okay. Thank you, (Kelly). I appreciate that.

(Kelly): Yes. Totally. Yes. So all the data in the world isn't really helpful if you can't get people to provide it for you. So this other section of the report really is kind of focused on what I would call kind of the human condition and how can we engage anglers, and what types

of data are they willing and able to provide? And so it's really kind of an interesting overview of the human condition.

I think talking about, you know, what are those barriers to participation when you're talking about who's asking for the information; how are they asking for the information; what types of feedback and incentives are appropriate and helpful for anglers to be able to participate in these types of programs?

So, you know, some of that has to do with ease of use of the actual, you know, application itself. But some of it has to do, you know, kind of how the data is going to be used and what it's going to be used for. And so all of that's really kind of rolled up into having angler participation such that the data is meaningful and can be useful for management decisions.

So I think we've had some really good conversations. We have - actually have a really good start on the report and especially this section that I've been engaged in. So I think it's - we're close to having something for (MAPAC) to review as a draft. Unfortunately, I don't think the timeline quite lined up with our meeting this go around, but we are hoping for something soon.

And then kind of to segue and remind us where this all started from, you know, this was - this actual task force was a direct result of the last recreational summit that NOAA Fisheries put together was it three years ago, (Russ)? I think that's right. Four years ago? Okay. So I just want to thank (Russ) and (Cisco) in particular, for helping kind of spearhead this effort.

I really do think this report's going to put - or this task force is going to have some great meaningful recommendations for the agency and how they can move forward with electronic reporting and incorporate it in a meaningful way. And so I just really appreciate that we have a really great and enthusiastic group in this task force. In fact, sometimes we have to like talk them back down off the ledge. You know, we don't need all of the detail. If you can give us some broad recommendations that's really what we're looking for.

But it's great to see kind of the - and engagement from this group. So thanks, (Pat) - the human component is a little simpler. The statistics and stuff are really complicated. But I really appreciate your expertise there as well. So with that, I don't know if anybody has any questions, but that's where we are.

(Pat): Yes. I, of course, think the human component is more complicated than the statistics. But there you go.

(Kelly): Well, then we're doing the right parts, right?

Erika Feller: Who has questions?

(Pat): I don't see any questions. But back to you, Erika.

Erika Feller: Let's give people a second to wrap their minds around all of this. (Sarah) has a question.

(Sarah): I'm going to ask Erika a question.

Erika Feller: Oh.

(Sarah): What's your timeline? I know you - yes, I think you said it, but I missed it. So just the timeline on putting this forward and then possible implementation.

(Pat): So who was that to? That was to Erika? I probably shouldn't answer that, right? So...

Erika Feller: Yes.

(Pat): Our intent was to have it for this meeting but obviously, you know, we were working through the summer and of course these are the recreational fisheries folks, right? And so summer is a busy time for them. But we've made a lot of progress. And I think at this point, a lot of the responsibility might fall on me in terms of sitting down and trying to wrap up what's there.

I don't know that we, except for the scalability part, I don't know that we have too much more that we need to do in terms of assembling the information. It's mainly getting it into a form that's readable. So that's where I'm at at the moment. Although Heidi might want to comment further.

Heidi Lovett: Yes. So the goal was to have a rough draft, not a final copy, that's for sure. Just so you all know. But so draft is a little too rough to share at this time. So I think by the end of this year, there'll be a rough draft, hopefully, to share. And overall, the goal is to - is aiming to have something complete to be shared, I think in time for the summit, which (Russ) will be talking about. I mean, that's the target.

The original scope of work for us for about two years, and that brings us to the early spring of next year.

Erika Feller: Richard?

Richard Yamada: Yes. I had a question. You've kind of outlined the science and statistical side. A lot of questions have to be answered. In your report, is it going to - does it follow - besides reading the questions, are there answers? Like, you know, how would the data be - how would be the biases be reduced? Or are you just raising the question that we - there is a bias? Or are you going to be answering how the approach to bias reduction on the data and the usefulness of the data?

(Pat): Well that's a great question, Richard. I think to the extent that we feel we can, we are pointing in the direction of how to deal with that. So one of them is what I just mentioned, is usually when - in the stock assessment world, when - and the survey world, when somebody mentions data coming from the recreational fishery or from fishermen at all, there's the question of whether it's representative of reality.

And so one of the shifts in perspective that we're putting forward, is a recognition that while it might not be ideal for conducting let's say, a catch per unit effort, as one would see in a design survey from National Fisheries Service, we're actually suggesting a focus

towards what is not being collected by National Fishery Service, and is readily available from recreational fishermen as to, you know, let's say My Catch.

My Catch is a classic example of this. We don't know typically, for many species what is being caught in - while being - having directed Fisheries towards something. And that can be a major source of mortality. And we're not getting information at all on that. So part of it is like you avoid the bias by, you know, focusing on something different, right?

That being said, you know, there's a lot of work going on in these models these days. And the models are being used to kind of integrate things like we're collecting through design-based methods, such as National Fishery Services surveys with stakeholder-based data being collected. I don't think we've gotten all the wrinkles out of that yet. But the report points towards that as encouraging development in that area, but keeping our eyes wide open as we step through that, to see that this integration is appropriate.

One of my roles is to basically call people out on this in terms of like if they're promising too much, in terms of what the models can do. And so, you know, so I think there will be some of that in there. But to be honest, there's a lot of issues with regard to bias that, you know, we don't have the technical ability to really go into too deeply in a report like this, except point the direction as to how to think about this, perhaps. So hopefully, that answered your question.

Richard Yamada: I have a little bit of a follow up. Here in Alaska we have the International Pacific Halibut Commission and we have an extensive satellite survey that's scientifically based, which, you know, all the allocations are based upon. And they also have a commercial fishery which they collect commercial fishery data. But there's a huge, as you said, bias in that commercial fishermen are fishing where the fish are at. And there's been movement towards algorithms that will integrate commercial fisheries, (CPOE) and the (Sat Line) survey (CPOE)s.

So have you reached out to see what that kind of progress in melding those kinds of fisheries data - it's pretty similar. I mean you've got, you know, I guess, you know, like

(unintelligible) information you get recreational data. And there's a big bias, but there is data. And there must be some algorithm that can reduce that bias.

(Pat): Yes. Yes. No, Richard, you probably don't realize there is a ringer in the (MAPAC) here on this, right? I actually worked for the International Pacific Halibut Commission for ten years before going to Cornell. And one of the things that happened when I took over from (Rick Soriso) there, was he had stopped the survey because we were getting the same information from the records, from the commercial fleet.

And so for years, we were actually just using the commercial landings in effect. This is a little bit easier to do with hook and line data than it is for (trawl) data. But what I - what we found later, was that the commercial fleet was not capturing the fish below the size limit. And so we were actually missing out on how the fish were getting smaller over time.

So in point of fact, we started the survey up again and actually combined the two pieces of information. The Halibut Commission is one of the few places that does this, and National Fishery Service has different approaches for doing this, depending on the regions that one's looking at. So the answer to your question is yes, there are some ways to integrate these two pieces of information. And given my experience of the Halibut Commission, I always thought that including the stakeholder information was critical.

But not everyone - not all fishery scientists agree with me on that. So it's something to work towards, but it's a really good question you're asking.

Erika Feller: Tom?

Tom Fote: Yes. (Pat), maybe you can answer, and (Rich). How much money is spent on the survey by Alaska, to basically do this? Because when we were talking about (MRES) or even (MRF)s before that, it was never designed to really estimate the catch, it was to estimate trends that were going on in the fisheries.

And, you know, and that's historically - and as a matter fact we fought with (unintelligible) would argue that we shouldn't be used for management until about five years ago, they kept on bringing it up because the danger is not - it shows trends and not exactly what's catching. So I'm interested in what you're spending in Alaska to do that on the halibut because I want to see what it would cost to do in our own fisheries, when we look at the East Coast.

(Pat): I think the recreational was really to get the landings and not the trends. Because trends from (MRES) would be really difficult, whereas we've got multiple surveys to do the trends. So it was - but it's critical to have the landings because we have to assess mortality. In terms of cost, obviously the surveys are pretty costly and doing them right can be challenging. But we can't just turn the surveys off and just use recreational/commercial data for landings, because it's not giving us the full picture.

So it's a challenge, right? You look at Alaska versus, you know, Alaska has a survey - one survey is two years on some things and New England has three surveys a year. So we're doing different things in different areas depending on the nature of the data there and the fisheries. So I think we're going but maybe I'm wrong, it's thinking about, you know, what the cost is of doing this relative to collecting data in some other way.

And certainly, we're thinking about this. And as you looked at all of the different survey methods that (Cisco) was talking about, you know, these like wind-driven surfboards, right, that can do acoustics while they're just sailing on their own across the Gulf of Alaska. You know, there are all sorts of new things happening these days that will allow us to get data in a more systematic fashion. So I'm looking forward to that.

Tom Fote: No, (Pat), the question I was asking is how much does it cost to do the rec survey; how much does Alaska spend to collect that information? Not a Fisheries survey, but the rec data survey.

(Pat): I mean if you're talking about halibut, I mean the rec fish is hardly there at all. What we were talking about is the commercial hook and line fishery long lines, right? And, which is exactly how we were doing the surveys as well. We're saying it's different than a (trawl)

survey such that National Fishery Service is typically doing for groundfish and whatnot, other pelagic species.

(Russ): Yes. Tom, the rec data in Alaska is collected by the state. And then they are good enough to share it with us. We provide funds to them as best we can, but it's really at the state level who collects that, primarily through the for hire fleet through a logbook. And it's electronic now with the exception I believe, of one last area of the state is still transitioning over. I don't know offhand, how much the state spends on that, but we could look into it and find out for you.

(Kelly): Yes. Tom, to give you an idea, so Florida has their state reef fish survey, which is kind of a more targeted version of (MRES). And they spend \$3 million statewide for that. So that's both the Gulf and Atlantic Coast to - and I'm sure some of that is supplemented by (MRES) money as well, just because there's some overlap of the dockside intercepts. But that's the ballpark of what Florida spends.

I know at least some of the other Gulf States for their independent reef fish type surveys or data collection that they're doing for recreational, are less than that. So Florida's a big state with a lot of coast, but just to give you a ballpark.

Heidi Lovett: So we can roll it over to the second part of our recreational fisheries agendas, (Russ)'s update on the 2022 Recreational Fisheries Summit and other activities.

(Russ): Okay. Yes. It is more exciting than just the summit. So since I'm the last of the day, I know you're anxious to hear in detail, what we've been up to lately, so here we go. First, actually I just want to say thank you for having me come. So Heidi yes, thank you, you are on the right slide there. The first project I want to touch on is one where we are just one of a number of partners, and that is the Return Them Right Program.

And this is a collaboration with - in the Gulf of Mexico, with Florida Sea Grant and the Gulf States Commission, among others, which it formally launched on September 14th. And imagine this project, it is - because it is a large one. It's about \$30 million funded through the Deepwater Horizon Open Ocean Trustees Implementation Group. And it is -

so in other words, this is part of the Deepwater Horizon restoration dollars and work in response to that tragedy.

So it's focused really, on providing anglers with the knowledge, as well as the tools, to increase survival of released fish and - as well as the overall health of our reef fish fisheries area in the Gulf. And it really focuses primarily on the issue of air trauma. And so to accomplish those goals that you see up there on screen, improving survival of the fish and fishery broadly, and anglers' experience with the gear, the program focuses on promoting best release practices with an emphasis on the proper use of (descending) devices.

And we, you know, we know that there is a conservation benefit there. And it varies by fishery, by depth, by species, and whatnot. So we need to get a better understanding of exactly what the benefit is out there, once (descending) devices are in widespread use. So where are we in this program as it just launched, as I said, about a month ago?

Well, right now, federally permitted (head) boats and charter boat captains, and their crews, are eligible to go online, take the instructional course, and then that vessel will receive free release gear. And what that is comprised of is essentially a release device, which I believe they settled on the (equalizer), which is the - it's a barometric triggered - a pressure triggered device where when it gets to a certain depth, it pops open. I think everyone has probably seen it. And that is rigged to a two pound weight.

So that's being distributed to the for hire sector after they take a training course. Those - that tool - the release device and the weight will be available to state guides as well as the private sector, starting in the spring of 2022. And they can pre-register now. Once the project is underway, there'll be sort of additional phases. The first is to really measure changes in use of release gear by the fishing public in the for hire sector and then to investigate what impact that use may be having out there.

So just one clarification - the timing of this is really coincidental to the (Descend) Act. As you may or may not know, the (Descend) Act is an act that was passed by Congress and requires the use of - the possession of the (descending) device that is rigged and ready to

go in the Gulf of Mexico. That comes into effect in January of 2023. This project is separate from that. It's coincidental. It's supportive of, you know, it supports de facto, the goals of the (Descend) Act, but it is really separate.

And I don't want to put him on the spot, but I see one of our partners on my screen, (Dave Donaldson), is here. (Dave), I don't know if I missed anything there; if you want to touch on or elaborate? It's fine if you don't.

(Dave Donaldson): Well I mentioned a little bit on my report and I think you've added to it, so I don't have anything to add. Good job.

(Russ): Great. Okay. Thanks. Okay. Next. All right. Next is - what I want to touch on, is something that (Pat) touched on, a few other people have, I believe, which is the National Academies of Sciences, Engineering and Medicine. Their review of data and management strategies for recreational fisheries with the annual catch limits. So this was a report that was required under the Modernizing Recreational Fisheries Act.

It was getting started just as COVID really struck. And a draft report was delivered to the agency in July. Essentially, the academy formed a very impressive panel of experts from around the country and across different fields of expertise, to look at the recreational fisheries data collection in those fisheries within the catch limit, and see how well (MRES) meets the needs of in-season management.

And we've heard a lot of discussion about timing issues, just in the last few minutes. And they also looked at what changes to data collection and management, could be made to better meet the needs of in-season management. So as you can see on slide, on the slide there, there were 15 formal conclusions and recommendations and I am not in any way, going to go through them all.

So I just wanted to just highlight a couple. Among the other finds you can see that the (MRES) data are crucial to fisheries management and important improvements have been made over time, you know, particularly with regard to timeliness and precision as the program has moved forward. That - it's made a very clear statement that (MRES) was not

designed for in-season management and we really just had a brief discussion about that a minute ago, talking about how it really was designed for sort of annual region-wide estimates.

And as you try to narrow in and become more granular, there are increasing levels of the opposite of confidence, of uncertainty. There we go. The report concluded that supplemental data could be used in combination with (MRES) estimates, to improve in-season management. Things like state surveys, tournament data, species-specific surveys, etc.

And that there is a real need to integrate and calibrate these multiple data sets. And to ensure that there's a solid public understanding of what's - of the need for that integration and calibration. As you may recall, one of the big issues in the Gulf right now, and for the last year or so, a little more, is the calibration between the state data sets and (MRES) with regard to red snapper.

In terms of recommendations, I sort of artificially broke them into two and I think there was - they broke it into three. But there was the data and survey optimization, and management strategy recommendations. The management recommendations include taking steps to improve precision and timeliness and availability of the (MRES) data.

Availability of the (MRES) data means things like allowing states access to the raw data, because it may allow them to identify landings trends earlier in the season than if they wait and get the process data. It recommends identification and use of ancillary data sources as well as exploring the use of additional statistical methods and parameters and approaches.

And I'm not going to touch on those because I don't understand those, so that wouldn't help. Management - that should not be - that header should not say alternative management strategies. That was one recommendation is to review this. It should just say management strategies. That said, the very first bullet does touch on alternative management strategies, so I apologize for that.

It recommends pilot testing things like harvest tags in species with low ACL, things like snowy grouper that has a really tiny annual catch limit. And also, it recommended piloting a recreational sort of permit program to help facilitate developing other recreational surveys. Now if that sounds somewhat familiar, it should because that was one of the - similar to a recommendation that the (MAPAC) rec subcommittee provided in its report to you all about I don't know, ten months ago or so, at the beginning of the year, which was to investigate essentially, an offshore federal permit as a way to better identify the universe of offshore anglers.

So there you have a little bit of coincide between the National Academies report and the (MAPAC) subcommittee report. The National Academies also recommended that when (MRES) supplemental surveys are developed and implemented, that it's done so in coordination with regional entities. And it interestingly, recommended a review of the national standard one guidelines, to ensure that accountability measures guidance aligned with basically the capabilities of the data. And that was the point again, that was just mentioned a few minutes ago that used the data within their capabilities.

So obviously I have not delved in depth into this report, it is around 165 or 175 pages, for a few reasons. One of which is that on November 8th the National Academy is slated to give you all, (MAPAC), a presentation at 2:00 pm. I assume that is still set but last I checked that was. You may be interested to know, we have not received the final report yet.

We are still working off the draft report. We do believe that it's expected to close in November. And once we receive that we then have six months to develop a response to that plan and submit that to Congress. And I'm not sure if (Pat) is still on, because I can only see two people. But (Pat) was a reviewer and I just want to ask if there were any key points that he think I missed, and again I apologize for not warning you and throwing you under the bus.

(Pat): No. That's good, (Russ). I think I'm not supposed to talk about this.

(Russ): Okay.

(Pat): According to (Josh).

(Russ): In that case, I didn't ask the question. There we go.

(Pat): But I did review it. And of course, I chaired several of the other reviews prior to this. So I think it's a good report. And I think you did a good job of presenting what's in it. So thanks for that.

(Russ): Okay. Sorry about that ambush. Yes. Right. So next, I think, so now on a lighter note, just some of the more - so engagement-type activities we've been working on. You may recall that last year, in 2020, we partnered with (Bonnier) Corporation to host a national saltwater recreational fishing photo contest. We have done the same this year. It launched in July.

You may recall that (Bonnier) owned some of the larger glossy sport fishing magazines that you may see in the airport, like Saltwater Sportsman, Marlin Magazine, things like that. So we have extended this partnership. We relaunched it. Last year we had about 1.1 million impressions during the contest. And we're hoping to exceed that total this year. I unfortunately, don't have an update as to where we stand on that.

But essentially, what we're hoping is that by a little bit of a redesign, we've made it sort of a March Madness bracket-style competition when we get towards the end. We'll have 64 finalists and then we'll have those go head to head. Our hope is to sort of drive additional traffic to the Web site through that interactive component of the contest.

And, you know, I think the benefit here is that it allows NOAA Fisheries to - and has - remain visible to the fishing public during the pandemic. It's provided a positive focus for anglers and frankly, it helps us burnish our credentials a little bit by being associated with a trusted external partner. Next. Thanks. Okay. Just a couple of quick hits - you may recall that in May we had just launched our first recreational fisheries video.

We now have five out and we're going to take a breather until next spring. We've done them on Atlantic HMS, cod and haddock fishing up in New England; fishing safely

around marine mammals in Alaska; highlighting fishing opportunities down in the Southeast; and then sort of a more HQ generic overview of recreational fisheries' work here.

Each are around 2, 2-1/2 minutes long. You should be able to click on the link in that presentation and get to all five of them. We had a very successful National Fishing and Boating Week in June, which was just after we last met.

We partnered up with four private sector entities - National Marine Manufacturers, American Sport Fishing Association, Recreational Boating and Fishing Foundation, and AFWA, the Association of Fish and Wildlife Agencies, as well as five federal agencies - Fish and Wildlife Service, Forest Service, BLM, Bureau of Reclamation, and National Park Service, as well as the sanctuaries, to cross-promote and post content celebrating National Fishing and Boating Week.

And as a whole, the positive result was sort of a record increase in traffic out there during that week. So that was a positive. We had just recently on September 24th, a quick celebration of National Fishing and Hunting Day. And the President signed a proclamation celebrating that day. And finally, in terms of leadership engagement, (Janet) has jumped right in with both feet.

She's been, in her short tenure here, she managed to get down to a (ICAS) before the Delta variant sort of restricted travel again just as it was starting to open up. She participated in the Theodore Roosevelt Conservation Partnership Saltwater Media Summit about America the Beautiful, better known as 30 by 30. And just about two weeks ago, she was the guest speaker at a White House Outdoor Recreation Roundtable event, which had outdoor interests from around the country involved.

So she's been very active and engaged on the rec front. Last slide. So I wanted to put this up so you could see with regard to the summit, this is a very unscientific word cloud of the inputs that were received as we went around the country to talk to fishermen about what they believe should be discussed at the summit and/or were priority issues they'd like to see addressed.

And it - actually, as I looked at this, it was pretty similar frankly, to a word cloud that you all had up yesterday, I think, during the America the Beautiful discussion, which I thought was interesting. There's a lot of different ways to slice the inputs. For example, where you see data in the center, just to the right of it, you can also see data collection in electronic reporting.

Well depending on how you slice it, you could all roll those all into data or not. But then you lose some of the nuance. So you can see though, that data and management, climate, wind power, ocean uses, which obviously wind power is one component of that, as is aquaculture, which is just above ocean usage, effort out there. There's - I have in the last - recently there's been a lot of chatter about effort and how through the management system, do we balance or address the question of effort relative to a sort of satisfying recreational fishing season.

And given the effort in increasing fishery, how do we do that? With more effort; with more efficiency comes if you have a finite resource, comes a shorter opportunity to fish on that resource. So what - what is the approach? How does the management system address this sort of conundrum of increasing interest, increasing effort, increasing efficiency, and yet - and in some cases, expanding resource, but then at some point, ultimately a finite one.

So I just wanted you to see that, that (MAPAC) had provided inputs that are incorporated into this, as well as the subcommittee. And we had our very first steering committee meeting today. It went quite well. We had 14 folks on the steering committee. And as you can imagine, it takes a little bit to gel, but what we really began to do was weed through basically about a dozen topics, to try and narrow down and identify what exactly the summit discussion topics will be.

So we're right at the very beginning of the process with the steering committee. So I will stop there and open it up for any questions.

Heidi Lovett: (unintelligible).

(Russ): Okay.

Jennifer Lukens: Actually I don't - I've been trying to take it down for the last 20 minutes and it keeps going back up by itself. So I think - I have a slightly (unintelligible). Sorry.

Erika Feller: That's what happens (unintelligible) keyboard. Does anybody else have questions?

(Russ): Jennifer, I thought you were going to ask (Russ), how can you be such a nice guy? But I guess that's not what you were going to say.

Jennifer Lukens: I - well I should have said (Russ), thank you for the great presentation and all of the great work that you are doing and sharing that with the rest of (MAPAC).

(Russ): Yes. Thank you. Okay. All right. Well, if there are no questions, feel free to email or call or touch base with me. Or if you don't have my info, Heidi's info, Heidi can always relay a question to me...

Erika Feller: (Russ)?

(Russ): If you think of something afterwards. Yes? Tom?

Erika Feller: Tom, do you have a question or is your hand just magically up?

Tom Fote: Yes, you - (Russ), remind me of the date again, when the summit or do you have a date yet?

(Russ): Yes. We do. March 29 and 30. Now some may ask, what are you going to do about COVID? And we say, what COVID? No, we - that was one of the first questions we grappled with today. We basically set a self-imposed deadline in late December, to make a decision of are we going to go; are we going to go virtual; or are we going to postpone? And so that'll be an ongoing conversation with the steering committee, and obviously watching what happens with COVID.

Erika Feller: Any other questions? All good? Thanks, (Russ).

(Russ): All right. Thanks. And congratulations on your final meeting, Erika.

Erika Feller: Thanks. I think - okay, so that wraps up our recreational fisheries activities agenda item.

Before we adjourn though - for their announcements (unintelligible) take this opportunity or did you respond (unintelligible)?

Jennifer Lukens: No. I'm happy to take this opportunity. Just two quick announcements - one, I'm disappointed to learn that Dr. (Singer) will not be able to join us now tomorrow. So we do have 15 minutes back on our agenda. His schedule changed and he's unable to make it tomorrow. So apologies for that. I got you all excited. He was coming and then I probably shouldn't have told you and just had him show up and surprise you. But he does have quite a hectic schedule. So I'm sorry about that.

And then let's see, nominations - I sent out a note. As (Russ) just noted, this is Erika's last meeting. And we'll have some goodbye remarks to the folks who are departing us, tomorrow. But I did send you a note last week about nominating yourself or nominating someone else, for the Chair and Vice-Chair slots, for leadership of the committee. I asked for those to get back I think, by Friday, the 15th, to me and/or Heidi.

So please think about that. In addition to the other opportunities for leadership on the tasks that we're going to be talking about tomorrow. So I just wanted to throw that out there. I think that's all I have in terms of announcements. I don't know, Heidi, if you have anything, reminders for tomorrow.

Heidi Lovett: I didn't have anything...

((Crosstalk))

Heidi Lovett: I was just saying I didn't have anything specifically, except that the first session is another subcommittee meeting that's going to be led by (Sarah). It's the Protected Resources Subcommittee. And I think the agenda that I sent out by email today, already had a slight

adjustment due to learning that Dr. (Singer) is not going to be with us. So just time just slightly shifted at the end.

Erika Feller: Okay. So we should be able to...

Man: So - so can I - can I ask - I'm sorry, Erika. I was curious. It's been nice having the presentations available. I don't know to what extent they are, for tomorrow. But, you know, today's too. And so I've been using the WebEx link, right, to access those and it's been really handy. So I don't know if we can upload any of those to that...

Erika Feller: You mean the Web site, the meeting Web page?

Man: Yes. The agenda, the online agenda.

Erika Feller: Yes. Yes. So the presentations that I was able to get in advance of the meeting are all loaded.

Man: Got it. Okay. Okay.

Erika Feller: And a few came in just recently. But we hope to load them up this evening or tomorrow morning. Yes. They will get loaded soon.

Man: Yes. Thank you. Thank you. I appreciate it. They're really handy. So thank you.

Woman: Yes. Just I want to add there, we do get presentations very late, from presenters sometimes. And for those of you who don't work in the bureaucracy, we have to go through a process of processing them to make them 508 compliant, before we are permitted to post them on the Web. So - and getting ready last minute and making a document 508 compliant does not work well. So apologies for that, but we are trying to find a better way to get it out there beforehand.

Woman: Yes. And I can certainly send today's presentations out to everybody through email. I can do that. And 508 for those that aren't familiar, 508 compliance means that it's accessible to people that might have various limitations, like use screen readers or things like that.

Erika Feller: So like Heidi mentioned, our first topic tomorrow will have the Protected Resources Subcommittee and then we'll have a break and then we'll come back and talk about resilient fisheries. (Sarah), not to put you on the spot, is there anything you want to say to get people ready for that Protected Resources discussion tomorrow afternoon, morning, whatever?

(Sarah): Morning for me, afternoon for you. Thanks, Erika. So I think for folks who are on the subcommittee, if you haven't had a chance and maybe what I'll do is resend the email, we have a document with some draft survey questions and some - we got some really great feedback from (Kristy Long) and the (unintelligible) staff, Protected Resources staff, on rewording some of those questions.

But really, I think that's probably where we're going to be starting, is kind of going through these questions, going through maybe - and the next steps of how we want to start implementing the survey. But maybe I'll start off with a review of like hey, we're doing a survey and here's why we're doing a survey and here's what we want to get out of it - our goals and then go through some of the details of the questions.

And because I have a feeling a lot of people haven't had a chance to look at that. So I figured we could take that opportunity to go through that.

Erika Feller: Great. And anybody is welcome to join us. Preferably do the readings that (Sarah) will send around. I don't think there's anything else we need to get done today before we adjourn. All good? Jennifer? Heidi?

Heidi Lovett: So Erika, I just - after we adjourn, I have a quick question for you.

Erika Feller: Okay. Okay. So we're done. We will adjourn for the day. I'll look forward to seeing you guys tomorrow, if not, during Protected Resources then at 1:00. Thank you all. Good to see you.

Woman: Thank you. Operator, this concludes our meeting for today.

Man: Thanks all.

Coordinator: Thank you for participating. You may disconnect at this time.

Erika Feller: Heidi, do you just want to send me a quick email when you're ready to chat?

END

Members Present:	NOAA/NMFS Staff Present:	Also Present:
Bob Beal , Executive Director, Mid-Atlantic States Marine Fisheries Commission (<i>ex officio</i> member of MAFAC)	Paul Doremus , PhD, Deputy Assistant Administrator for Operations	Stephanie Bailenson , The Nature Conservancy
Sebastian Belle , Executive Director, Maine Aquaculture Association	Russ Dunn , National Policy Advisor on Recreational Fisheries	Kristine Cherry , Branch Chief, Regulatory and Policy Branch, Office of Aquaculture
Roger Berkowitz , President, Massachusetts Seafood Collaborative and President and CEO, Legal Sea Foods Marketplace	Heidi Lovett , MAFAC Assistant Designated Federal Officer	Laura Diederick , Lead, External Affairs, Partnerships, and Events, Office of Communications
Janet Coit , Assistant Administrator, National Marine Fisheries Service (<i>ex officio</i> member of MAFAC)	Jennifer Lukens , MAFAC Designated Federal Officer; Director, Office of Policy	Mike Hopkins , NOAA Fisheries
Megan Davis, Ph.D. , Chair; Research Professor, Aquaculture, Florida Atlantic University, Harbor Branch Oceanographic Institute	Gabriela McMurtry , Fishery Policy Analyst	Bob Gill , Gulf of Mexico Fishery Management Council
David Donaldson , Executive Director, Gulf States Marine Fisheries Commission (<i>ex officio</i> member of MAFAC)	Darius Thibodeaux , IT Specialist	Lindsey Kraatz , Senior Science Advisor, NOAA Fisheries
Erika Feller , MAFAC Chair; Director, Marine and Coastal Conservation, National Fish and Wildlife Foundation	Cisco Werner , Ph.D., Director, Scientific Programs and Chief Science Advisor	Catherine Krikstan , ECS
Randy Fisher , Executive Director, Pacific States Marine Fisheries Commission		Sean Lawler , Environmental Policy Analyst, NOAA Fisheries
Thomas Fote , Retired, Recreational Fisherman		Patrick Lynch , Chief, Office of Science and Technology, NOAA Fisheries
Robert Jones , Gulf of Mexico Regional Director, Environmental Defense Fund		Sean McNally , Senior Advisor to the Assistant Administrator for Fisheries

Donna Kalez , Owner and Manager, Dana Wharf Sportfishing and Whale Watching		Karl Moline , Chief of the Operation, Management, and Information Division
Sara McDonald , Ph.D., Director of Conservation, South Carolina Aquarium		Kate Naughten , Director, Office of Communications
Donald McMahon , III, President, Pensacola Bay Oyster Co., LLC, Pensacola Bay Oyster Hatchery, LLC, and TORCH		Wendy Piniak , Office of Protected Resources
Peter Moore , Stakeholder Liaison, Mid-Atlantic Regional Association Coastal Ocean Observing System		Patricia Pinto Da Silva , Social Policy, Northeast Fisheries Science Center, NOAA
Stefanie Moreland , Director of Government Relations and Seafood Sustainability, Trident Seafoods		Cristi Reid , NEPA Coordinator, NOAA Fisheries
Jim Parsons , General Manager, Cooke Aquaculture Pacific		Michael Rubino , Senior Advisor for Seafood Strategy
Harlon Pearce , Owner/Operator, Harlon's LA, Fish LLC		Sarah Schumann , Fisherman; Owner/Principal Consultant, Shining Seas Fisheries Consulting, LLC.
Kellie Ralston , Vice Chair; Vice President, Conservation and Public Policy, Bonefish and Tarpon Trust		Sarah Shoffler , National Seafood Strategy Coordinator, Southwest Fisheries Science Center, NOAA
Ervin "Joe" Schumacker , Marine Scientist, Quinault Department of Fisheries, Quinault Indian Nation		Seth Sykora-Bodie , Advisor to the Deputy Assistant of Operations
Patrick Sullivan, Ph.D. , Professor Emeritus, Department of Natural Resources, Cornell University		Anna Scrimenti , American Society for Microbiology
Richard Yamada , Owner, Shelter Lodge		Brett Veerhusen , Principal, Ocean Strategies