U.S. Department of Commerce
National Oceanic and Atmospheric Administration
(NOAA)
Marine Fisheries Advisory Committee

The Marine Fisheries Advisory Committee met in the Royal Sonesta Dupont Circle, 2121 P Street, Northwest, Washington, D.C., at 8:30 a.m., Megan Davis, Chair, presiding.

Members Present:

Megan Davis, Ph.D., Chair; Research Professor, Aquaculture, Florida Atlantic University, Harbor Branch Oceanographic Institute
Janet Coit, Assistant Administrator, National Marine Fisheries Service (ex officio member)
Bob Beal, Executive Director, Atlantic States Marine Fisheries Commission (ex officio member)
Hugh Cowperthwaite, Senior Program Director, Fisheries and Aquaculture at Coastal Enterprises Inc.
David Donaldson, Executive Director, Gulf States Marine Fisheries Commission (ex officio member)
Thomas "Tom" Fote, Retired, Recreational Fisherman*
Jennifer Hagen, Marine Policy Advisor Quileute Tribe/Marine Biologist*
Sara Mcdonald, Ph.D., Director of Conservation, South Carolina Aquarium
Meredith Moore, Director, Fish Conservation Program, Ocean Conservancy
Stefanie Moreland, Director of Government Relations and Seafood Sustainability, Trident Seafoods
Ryan Prewitt, Chef/Owner, Peche Restaurant
Linda Odierno, Fish and Seafood Development Specialist
Kellie Ralston, Vice President for Conservation and Public Policy, Bonefish & Tarpon Trust
Jocelyn Runnebaum, Ph.D., Marine Scientist, The Nature Conservancy
Ervin "Joe" Schumacker, Marine Scientist, Quinault Department of Fisheries, Quinault Indian Nation
Sarah Schumann, Fisherman; Owner/Principal Consultant, Shining Seas Fisheries Consulting, LLC
Patrick "Pat" Sullivan, Ph.D., Professor

Emeritus, Department of Natural Resources, Cornell University
Clayward "Clay" Tam, Cooperative Fisheries Research Coordinator, Pacific Islands Fisheries Group
Barry Thom, Executive Director, Pacific States Marine Fisheries Commission (ex officio member)
Matthew Upton, General Counsel and Director of Catcher Vessel Operations, United States Seafood*
Brett Veerhusen, Principal, Ocean Strategies
Richard Yamada, Owner, Shelter Lodge

NOAA/NMFS Staff Participants Present:

Russ Dunn, National Policy Advisor for Recreational Fisheries, NOAA Fisheries
Evan Howell, Director, Office of Science and Technology, NOAA Fisheries
Heidi Lovett, Acting Designated Federal Officer, NOAA Fisheries
Emily Menashes, Deputy Assistant Administrator of Operations, NOAA Fisheries
Sam Rauch, Deputy Assistant Administrator of Regulatory Programs, NOAA Fisheries
Jenni Wallace, Director, Office of Policy, NOAA Fisheries
Cisco Werner, Ph.D., Director, Scientific Programs and Chief Science Advisor, NOAA Fisheries
Katie Denman Zanowicz, Policy Analyst, Office of Policy, NOAA Fisheries

Also Present (NOAA/NMFS Staff and Visitors):

Max Appelman, Fishery Management Specialist, NOAA Fisheries*
Stephanie Bailenson, The Nature Conservancy*
Carden Barkley, Advisor to the NMFS Deputy Assistant Administrator for Operations (Acting)

Kaitlyn Boyle, Suffolk County, New York*
Rachael Confair, Branch Chief, Trade and Commerce Division, Office of International Affairs, Trade, and Commerce, NOAA Fisheries*
Morgan Corey, Fishery Management Specialist, NOAA Fisheries
Kelly Denit, Director, Office of Sustainable Fisheries*
Laura Diederick, External Affairs Lead, Office of Communications, NOAA Fisheries
Paul Doremus, Chief Operating Officer, Trident Seafoods
Karen Greene, Fishery Management Specialist, NOAA Fisheries*
Rebecca Ferro, Deputy Director, Office of Communications, NOAA Fisheries*
Christine Ford, Fisheries Management Specialist, NOAA Fisheries*
Roger Griffis, Climate Change Coordinator, NOAA Fisheries*
Lindsey Kraatz, Senior Science Advisor, NOAA Fisheries
Jason Link, Senior Scientist for Ecosystem-based Management, NOAA Fisheries*
Johnny Marquez, Mississippi Wildlife Federation*
Sally Martinelli, Senior Management Consultant, M2 Strategy*
Alex McOwen, Policy Analyst, NOAA Fisheries*
Kate Naughten, Director, Office of Communications, NOAA Fisheries
Stephanie Oakes, Fishery Biologist, NOAA Fisheries*
Brian Pawlak, Director, Office of Management and Budget, NOAA Fisheries*
Louden Porter, South Carolina Aquarium*
Tauna Rankin, Coral Program Analyst and Marine Habitat Resource Specialist, NOAA Fisheries*
Michael Rubino, Senior Advisor for Seafood Strategy, NOAA Fisheries
Kristen Rickett, Meeting Manager, HB &

Company, Inc.*
Grace Roskar, NOAA Fisheries*
Mike Ruccio, Division Chief, Domestic Fisheries, Office of Sustainable Fisheries, NOAA Fisheries*
Tim Sartwell, External Affairs, Office Communications, NOAA Fisheries*
Ali Schwaab, Fisheries and Aquatic Resources Policy Program Manager, Association of Fish and Wildlife Agencies*
Brianna Shaughnessy, Aquaculture Literacy Coordinator, NOAA Fisheries*
Sarah Shoffler, National Seafood Strategy Coordinator, NOAA Fisheries
Spencer Showalter, Advisor to the NMFS Assistant Administrator (Acting)
Libby Smack, Senior Management Consultant, M2 Strategy*

*participating via webinar

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Proceedings

(8:38 a.m.)

Welcome, Roll Call, Agenda Review

Chair Davis: Okay. Good morning and welcome to our MAFAC meeting. I'm Megan Davis, and I'm the chair. And I just want to give a warm welcome to all the members and our leadership and guests that are here. And Heidi is going to read the privacy statement, and then we'll go around the room and do our introductions, and I'll talk a little bit about the plan for the next few days. Okay, Heidi.

Ms. Lovett: Excuse me. Pursuant to the Privacy Act of 1974, agencies are required to tell people what our authority is for collecting personal identifiable information or PII from them. And the purpose of the collection, how we are using and sharing the PII, whether or not the person can refuse to provide the PII, and what, if any, is the consequences of refusing to provide PII.

In order to collect PII at all in our system of records, even if accompanied by a Privacy Act statement, we also have to notify the public generally of this collection, which is what we're doing with this statement right now.

There is also a statement posted on the MAFAC meeting site. We are sharing this because we want you, as participants in this meeting and public commenters, particularly people on the screen, to not provide PII or business identifiable information, or controlled unclassified information, during recorded virtual conferences.

Speakers, sessions, presentations, and any public comments during a federal advisory committee meeting, are made publicly available, and today, this is through this webinar. We're not recording the webinar, but the audio is being recorded by the telecommunications company for the purposes of creating a transcript.

The purpose of noting all of this is that an individual's permission is required for the use of photographs, videos, and audio in any format, used for communications, outreach, interviews, and dissemination of mission products intended to promote an awareness and appreciation of the environment and NOAA science services stewardship roles.

NOAA's website and -- websites and social media outlets must not collect any personal information from children under the age of 13, unless parental permission is provided in writing. Please make sure there are no young children in the background at all while you're onscreen. And if there is, if that is a possibility, we suggest you blur your background or use a different background. So that's for the members onscreen.

Thank you. That's the privacy statement.

Chair Davis: Thank you, Heidi for that. Okay, well, let's go around the table and what I'd like you to do of course is your name, your affiliation, and also where you come from. So once again, my name is Megan Davis. I am with Florida Atlantic University. I'm a research professor there. And so I'm from Florida. And I'll turn it over to Janet.

Ms. Coit: Good morning, everyone. Great to see you. My name is Janet Coit. I'm the head of National Marine Fishery Service, and I hearken from the great state of Rhode Island.

Mr. Rauch: All right. I'm Sam Rauch. I am Janet's deputy. One of the three deputies. I'm in charge of the regulatory programs.

Dr. Werner: And where are you from?

Mr. Rauch: I'm from Georgia, originally. Silver Spring, Maryland right now.

Dr. Werner: Cisco Werner, chief science advisor fisheries, and I'm based here in Silver Spring.

Chair Davis: From? Grew up in?

Dr. Werner: Grew up in Maracaibo, Venezuela. All right.

Dr. Howell: Hi. I'm Evan Howell. I'm the director of the office of science and technology, stationed here in Silver Spring. I grew up in Philadelphia and spent most of my life out in Hawaii.

Mr. Thom: And I've been given a hand microphone. Barry Thom, executive director of Pacific States Marine Fisheries Commission, and I am in Portland, Oregon.

Mr. Donaldson: So tonight, now we have our karaoke, and I'll do your -- I'll do my best rendition of Have it My Way. I'm Dave Donaldson. I'm the Gulf States -- from the Gulf States Marine Fisheries Commission, executive director. And I'm from Ocean Springs, Mississippi.

Mr. Cowperthwaite: Good morning, everyone. I'm Hugh Cowperthwaite. I'm from Portland, Maine. And new to this committee, so thank you for having me. And I work for Coastal Enterprises in Maine.

Ms. Odierno: I'm Linda Odierno. I'm a fisheries consultant and I'm from New York. And I've been in this industry for a million years, so I know lots of information historically.

Mr. Veerhusen: Brett Veerhusen. I'm the principal for Ocean Strategies. I'm also a lifelong Alaskan commercial fisherman. I'm from Homer, Alaska and live in Seattle.

Mr. Prewitt: I'm Ryan Prewitt from Peche Restaurant in New Orleans, Louisiana.

Mr. Schumacker: Good morning, you all. I'm Joe Schumacker. I'm with the Quinault Indian Nation out on the coast of Washington State, and I live in Ocean City, Washington, which you won't find on a map.

Ms. Moore: Hello. I'm Meredith Moore. I'm the

director of the Fish Conservation Program at Ocean Conservancy. I live here in Washington D.C., which is no excuse for why I was late. But I did make it just under the wire, thank you, Janet, for giving me some cover and unmuting five minutes. I'm originally from Huntsville, Alabama.

Ms. Zanowicz: I'm Katie Zanowicz, NOAA Fisheries in Silver Spring.

Mr. Tam: Hello, everyone. Clay Tam here from Hawaii. Director of research from Pacific Island Fisheries Group, also chair for the advisory panel on the council in Hawaii.

Mr. Yamada: Hi. Richard Yamada. I'm a lodge owner in Southeast Alaska, Juneau, but originally from Hawaii, and Clay and I know Janet from some time ago. But I'm also International Pacific Halibut Commissioner.

Dr. McDonald: Good morning, everyone. I'm Sara McDonald. I'm the director of conservation at the South Carolina Aquarium. I live in Charleston, but I grew up in New Jersey.

Dr. Sullivan: Hi, everyone. I'm Pat Sullivan. I'm a Professor Emeritus, which means I'm supposed to be retired, at Cornell University. And I'm in California.

Vice Chair Ralston: Yes. I'm Kellie Ralston. I'm with Bonefish and Tarpon Trust. We are based in Miami but I am born and raised, and currently live in Tallahassee. I'm also vice chair of MAFAC and serve on the American Fisheries Advisory Committee.

MS. RUNNEBAUM: Good morning. Jocelyn Runnebaum. I'm a marine scientist for the Nature Conservancy in Maine. I live in Bath, Maine, and I grew up in Fort Worth, Texas.

Ms. Schumann: Sarah Schumann. I fish commercially in Alaska and Rhode Island. And I'm the director of the Fishery Friendly Climate Action Campaign. I came here from Warren, Rhode Island, which is my home

base, but I grew up three stops up the Red Line from here.

Ms. Moreland: Stefanie Moreland with Trident Seafoods. Long career in Alaska fisheries and oddly, I'm from Wisconsin.

Ms. Wallace: Good morning. I'm Jenni Wallace. I'm the director of the Office of Policy in NOAA Fisheries. I'm from Washington, D.C., but I'm originally a New Yorker.

Ms. Menashes: Hi. I'm Emily Menashes. I am another one of Janet's deputies. I'm the -- cover the operations portfolio that Paul Doremus previously had. I live in Silver Spring, Maryland and originally from Pennsylvania.

Ms. Lovett: Hi. I'm Heidi Lovett. I'm the acting designated federal officer, or DFO for MAFAC. I'm with the Office of Policy. I live in Silver Spring now and I'm from Boston originally.

Chair Davis: Okay. Well, I didn't get to say where I'm from. I'm actually from Australia, originally. So it's great to hear from you all. We're also going to introduce our guests, and also we have Tom and Jennifer, so if they could introduce themselves.

Mr. Fote: My name is Tom Fote. I represent Jersey Coast Anglers Association. I hope you hear me better. I have to wear headphones. I'm sorry I can't be there. I had an operation two weeks ago, and that's why tomorrow I'll have to miss most of the meeting because I've got to go back to the surgeon on Wednesday.

But I'm glad to be here virtually, even though I can't be there in person.

Chair Davis: Thank you, Tom. Jennifer?

MS. HAGEN: Good morning. There's a lot of familiar faces, although it's a little hard to see you. It looks like a really long room from where I'm sitting.

Anyway, Jennifer Hagen. I work for the Quileute Tribe, which is located on the coast of Washington, just north of where Joe works.

And I am calling you from Vermont. This is where I grew up, and I am going to be in and out for this meeting because my 90-year-old mother is going through some heart issues and is going into surgery tomorrow. So I needed to be here to support her. But I live north of Forks, Washington. Thank you.

Chair Davis: Welcome, Jennifer.

MS. NAUGHTEN: Thank you. Good morning, everybody. I'm Kate Naughten. I'm the communications director for NOAA Fisheries. Happy to be here today and see new faces and familiar faces. I am from Lake Sara, just up the redline here. I grew up in Montgomery County, Maryland, and I now live in Annapolis. Nice to see you all.

MS. SHOFFLER: Morning. I'm Sarah Shoffler, national seafood strategy coordinator for NOAA Fisheries. I'm based in San Diego, but I was born in the Philly area.

MS. SHOWALTER: Do you want to come over here because we're hiding? HI. I'm Spencer Showalter. I'm acting as Janet's advisor and am usually the advisor to her Chief of Staff, and I'm from the West Coast writ large, depending on when you choose to ask me.

MS. TRNKA: Hello. Maureen Trnka. I am the senior advisor for the regulatory programs of NOAA Fisheries, which means I work with Sam Rauch. Oh, I forgot to say where I'm from. I live in D.C., but I am from Chicago. That was important to say.

MS. KRAATZ: Good morning, everybody. My name is Lindsey Kraatz. I'm the senior advisor for fishery science, which means that I am Cisco's advisor. I'm a military brat, so I never know how to answer the question of where I'm from. Though I did graduate high school in Huntsville, and I currently live in Dallas. So close to Fort Worth.

MS. DIEDERICK: Hi, everyone. Whoa. Hi, everyone. Laura Diederick, NOAA Fisheries lead for external affairs and stakeholder engagement. I live here in D.C. and was born in the Cleveland area.

Mr. Beal: How much time do I have? Good morning. I'm Bob Beal. Sorry I'm a few minutes late. I'm the executive director of the Atlantic States Marine Fisheries Commission. And I'm not sure what else I'm supposed to be saying. I'm from -- grew up in Maryland, live in Virginia now.

Ms. Coit: What's your favorite fish?

Mr. Beal: Not red snapper. It's truly not striped bass. I know. It's a long list of not favorites.

Chair Davis: Okay. Thank you for all those introductions. Welcome to our new members. Welcome to our existing members and guest leadership. We have a full agenda over the next couple of days. And you either have maybe printed out a copy or you have it on the -- you can get it on the website, the MAFAC website.

And also, there is links to all the, if there are slides and things like that, and information. So we will definitely start off with Assistant Administrator update from Janet Coit. So we're looking forward to that. And then that will be followed by Cisco Warner with a science update.

And then we'll also have some updates on the IRA by Sam. Our subcommittees have been very busy over -- between our last meeting and this meeting, so they'll have quite a lot of updates. Meredith and Jocelyn will be updating us on the climate ecosystem subcommittee's work on Climate-Ready Fisheries policy.

And then there'll be some working time after that for the subcommittee. Let's see, it looks like both Sam and Katie will give us an update on the, the EEJ strategy. And then we'll have some recreational fisheries update from Russ and Evan. And let's see,

and that will sort of wind up today's session.

And then tomorrow, we'll continue with updates from the state directors, from Bob, and David, and Barry. And then Emily and Brian will walk us through the budget and the budget outlook.

And then Stephanie will lead a discussion on the strategic planning and budget subcommittee work that they've been doing. They also have a draft letter to the Secretary of Commerce that we'll be reviewing.

And let's see, we have an overview from the Office of International Affairs and Trade and Commerce, which is great. I think that has to do with the work that Linda is leading. So looking forward to that.

And then we're right in the middle of a celebration of ESA, 50 years, so we'll also have Dori Dick providing us a update on that. So it'll be virtual. And then we'll -- that will end Thursday.

Wednesday, actually, I think I'm getting a little confused here. Yes. We have some working committee time. And then Thursday will be about a half a day session. We'll have some subcommittee work in the morning and then Chuck Weirich will give us an update on -- from National Sea Grant, seafood industry workshop.

We'll also have some tribal engagement updates. And then we have two actions that we'll be looking at Thursday. One will be the proposed Climate-Ready Fisheries policy, and one will be the letter to the Secretary of Commerce. So we'll have those action items at the end.

And then there's some options for field trips on Thursday afternoon that Heidi sent out by email yesterday that you can make a decision on.

Before we get started with our meeting, I know that we have a few new members, and also we'll be having even more new members. There's a call out

right now for nominations for seven new positions. So there are seven of us that will -- this will be our last meeting. And so we'll be starting to transition.

And I thought that this might be a good time to just go over some of the meeting norms that we do, to introduce the new members to that. And then we're actually going to have a session, a short session tomorrow on maybe working together on team commitment and how we function as a group.

And I think that's going to be great input with the team, the MAFAC team that we have here now, but also to prepare for the future as we have new MAFAC members coming in. It's something that MAFAC doesn't have really written in place, so we'll talk about that.

So as we have lots of discussions, I'll be helping to facilitate those discussions along with Heidi. And I want to give a special shout out, thanks to Heidi and Katie for all the organization that they've done to help us prepare to be here today and for helping keep us on track.

So as you have a question, you have your name, we usually put up our, we call it our tent. It would be great if you have a couple of questions that you only ask one question, then you can go around on the second round if we have time.

And so just to be able to respect everybody's time and give everybody a chance to be able to have input. We will keep the meeting on time to make sure that you all have the breaks that you need and time to also talk with each other.

And I would just recommend that you made an effort to come to the meeting, which is really wonderful, and I know that it's a volunteer service that you all are doing, and that you have very busy lives of other things that you're doing. But if you can try your best to stay present at the meeting and stay off your phones and your computer, and things like that, as much as you can.

We want to make sure that we respect our teammates and that we don't interrupt, and that we're here to listen to everybody's viewpoints and input. And as you all know, we're advisory members for NOAA here, and our role here is to provide advisory work.

And we may speak from our other roles in our lives, but we're really here to come with our expertise, which is really always so amazing to me to see the expertise that comes from all throughout the industry. But to also remember that when you're giving your inputs and advice, to certainly use your expertise but not to make it so that it's about where you're coming from. I hope I'm clear about that.

And that it really is our role here to be as open and to participate in a way that we can provide great advisory input for NOAA Fisheries. And so those are just a few things that we can talk about some more in terms of when we start to build our team commitments and things like that.

So I just wanted to kick off the meeting that way. And I just want to open the floor, let's see, we have another few minutes. Okay. Here we go. We have another few minutes and I think Heidi has a few announcements, but I also because we have a few minutes, I'd like to just open the floor up if there's any comments or any clarifications that we need to put forward.

Okay. Thank you, all. Thank you. So Heidi, over here, there you go.

Ms. Lovett: Hi. So first of all, I think rather than having to move the base, I think you can tilt this and that should work fine for everybody, just as a first note.

Second, for those when you need a restroom, they're out this door and to the left, and down the hall. You'll go by another meeting that's going on and the bathrooms are on the right.

I wanted to note, I have a few things here, that sadly a few of the other members couldn't participate in person, but they do hope to be joining us when they can. So we hopefully will, besides Tom and Jennifer, we'll also see Donna Kalez, Natasha Hayden, Matt Upton and Donny McMahon at various times. As I said, they couldn't be here for a variety of different reasons.

And I don't think I have any other announcements right now. Oh, and lastly, the food because of health issues, they can't leave it out all morning. So if you want to -- they may not even -- hopefully it will still be here at 9:45 but if you want to get up and get something, please do it now and enjoy the food.

Thank you, sure. I can do that. So yes. As Megan noted, there's two things happening Thursday afternoon. One is that there's -- our agency has been helping organize a symposium on Rice's whale at the Smithsonian. And their symposium is going on all day, so the afternoon sessions, once we're done here or whenever we're done here, you have the opportunity to join that if you wish. It's open to the public.

There's -- in the email I sent out and I'm happy to share it again, there are some recommendations of lunch sites nearby or close to the Smithsonian to make that -- to accommodate getting lunch before you join the symposium.

And the other thing is, is that we have a number of staff that are co-located at the Smithsonian in the systematics lab, and they are offering to do a tour for any of us that might like to go and see the work that we do in collaboration with the Smithsonian.

And particularly, fish, systematics, and I think invertebrate collection, the fish collection, and they can talk about, you know, the relevance of the work they're doing there to climate and other topics of importance to the subgroup.

So the one thing is that they do -- they will need to

provide a badge to everybody, that you're a special guest and can go behind the scenes, so that's why I sent out a request that if you do wish to join that, if you can let me know by lunch today, I can then pass your names and the other information they requested onto the staff at the Smithsonian and they'll be ready to greet us.

Any questions about that? Okay.

Report of the Assistant Administrator

Chair Davis: Thank you, Heidi, for those announcements. So I'd like to officially welcome Janet Coit, the Assistant Administrator for Fisheries. And she will provide us a report this morning.

Ms. Coit: Good morning. It is so nice to see everyone. So thank you all for traveling here, and Tom, we wish you well, Jennifer, we wish your mother well. And as Megan said in this hybrid meeting, some of the others -- or Heidi said some of the other members will do their best to join virtually. But thank you all.

I'm also -- I agree with all your rules and love the way you stated them. And you have the whole leadership of NOAA Fisheries here now, but no matter how much we try, we all have other obligations and commitments.

Dr. Spinrad's Science Advisory Board is meeting at the same time. Last year, we were in the same hotel, if you might recall. And we were able to sort of race from meeting to meeting, but Cisco and Evan will be joining that meeting.

As you said, there's this wonderful event at the Smithsonian that may call me away at times, and all of us are going to have to step out and in, but we'll do our absolute best to be present, and I so look forward to continuing conversations with all of you and getting to know the new members of MAFAC.

So again, start out with a big welcome, and also want to reiterate the thank you to the policy team, and

again, in particular, Heidi and Katie. Thank you so much for all you do and are doing to make this meeting successful.

MAFAC is a dynamic entity. I think of it as a river that keeps flowing, and different fish are coming in and out of the stream. And so I just, well, again, want to welcome the new members. As you can see, we need more representation from the Gulf, so thank you very much, Ryan. And Hugh, great to see you, and Jennifer, thanks for joining us.

But I will say from personal experience, it takes quite a while to get to know NOAA Fisheries, and so be patient with yourself and we'll all do our best to support and bring you along as we all continue on this endeavor to both understand better the mission that is so consequential and important, I think even increasingly important to the public to understand how our natural systems are what provide the sustenance and resilience for our planet and how difficult this time is, besides global events that are oppressing, and depressing, and violent.

We've got climate change and so many challenges, so it really feels like a privilege to come together, and to have you on this advisory committee, and get a chance to hear fresh perspectives that are given with the best of intentions and help us succeed and connect to the public.

I wanted to start with some updates that you kind of got a teaser on already, which is Emily Menashes, since we last met, has become the head of our -- the Deputy AA for operations. And as she mentioned, it's a role that was filled by Paul Doremus who just walked in the room.

So we might have an extra-long break if I wrap this up quickly, and I know Paul wants a chance to -- welcome Paul, to greet people and to get a chance to connect.

But Emily, you're so fortunate to have Emily. She worked for many, many years for Sam Rauch in

sustainable fisheries, and she was the Chief of Staff to the National Ocean Service, and we lured her over from NOAA Research, another line office where she was similarly the deputy for operations.

She did a good stint at the Council on Environmental Quality, and she just brings this breadth of experience to us. It's a really critical role. So you'll be hearing from Emily later, but we're thrilled that she's in the position.

You also met, as we went around the table, Jenni Wallace, and Jenni is filling the position that Jennifer Lukens filled, and Jen was really a point person that many of you got to know best in MAFAC.

Jenni also brings a wide range of skills. She also worked for Sam Rauch in sustainable fisheries. And she is real excited about leading the policy group and thinking about ways that it might tackle some of the issues that we've discussed quite a bit, like equity and environmental justice, improving our relationships with tribes.

Already, we've built up an offshore wind node within policy. So welcome, Jenni. The other new person that's joined since we last met in San Diego is the head of our science center in the Pacific Islands. His name is Charles Littnan, and he took the role that Mike Seki held for many, many years.

And Charles had come up through the science center and is an expert in protected resources and took the helm quite a few months ago. I think the last time we met, Jennifer Quan had already taken her role as the regional head of the West Coast regions. So those are our two newest leaders on the regional level.

So quickly, I just, you know, I'm trying so hard to both fulfill my role here and see the country, and meet people, and try to experience more what people are confronting with their dealing with fisheries and climate change.

So I just wanted to run through some of what I've

done and MAFAC members seem to show up most everywhere I go. So just -- right after our last meeting, Donna Kalez led us, a group, where we went out to see some cooperative research with the recreational fishing community. And it was fantastic.

You know, a great -- an example of our science center and regional office working with industry to better collect information and data about vermillion rockfish, and -- so that we could do a better job of management. And it was just super inspiring, and a wonderful trip.

The -- I spent a week in the Klamath watershed going from the mouth of the river up into the headwaters, meeting with tribes, and meeting with ranchers, and meeting with farmers. And that was a really valuable trip.

The Klamath host the biggest dam removal project in the U.S. So four dams are coming down, and it used to be the third most productive salmon river in the U.S. And we have great hopes, it doesn't happen immediately, but of reconnecting that river and its habitat is a really exciting project.

In September, I was able to go back to Alaska and spent some really valuable time with our own staff, but also met with Stefanie and processors in Anchorage, and participated in Belugas Count!, which is a celebration of the work done, really a celebration of the 50th anniversary of the Endangered Species Act.

But the excitement around recovery of beluga whales in Cook Inlet, where they're very visible to the public. So it was -- people have viewing stations all around Anchorage and gather together to celebrate the whales.

And similar to what we plan to do at the Smithsonian around Rice's whales, which have received a lot of notoriety recently in Washington, D.C., even though there's only around 50 of them, they're causing quite a stir. I'll talk more about that later.

Later in September, I met the fishing industry in New Hampshire, and just had a roundtable with them. Subsequently, I went to the American Clean Power conference and spoke with the head of the Bureau of Ocean Energy Management in Boston.

Offshore wind was on the minds of New Hampshire fisherman, and then there was a conference with thousands of people about how do we do a better job of supporting the growth of the offshore wind industry off the coast of the U.S.

And then last, just last week, and I saw Matt Upton who's expecting a baby soon, which is why he didn't travel here. I saw Stefanie at the Trident headquarters. I saw Brett, I saw Sara manning a booth. So I was in the Seattle area meeting with industry and participating at the Pacific Expo.

I even met Brett's father.

Mr. Veerhusen: Sorry.

(Laughter.)

Ms. Coit: And then before that, spent several very profound and sobering days with four tribes in the Pacific Northwest, including a full day with the Lummi tribe talking about salmon recovery, hatcheries, habitat restoration, history, how we work together going forward.

And then closer to home, we've all been going up to The Hill for meetings, and I've testified several times since we last met, including a hearing last month before the Senate Energy and Natural Resources Committee that was largely focused on -- was focused on offshore energy development and the intersection between whales and wind, and oil and gas.

So happy to talk more about that later. But anyway, needless to say, all of us are doing this, trying to both cover the territory and make sure that we're not, you know, in a Washington bureaucratic bubble, while

also carrying a load here.

So it's, to me, the favorite -- my favorite part of the job is getting out and meeting people, and seeing them where they live, and hearing about the challenges. And we have a lot.

So I'm going to shift to just talking a bit about MAFAC, because I mentioned when I first -- my first MAFAC meeting was virtual, which is much different. And I wasn't as aware of how important this group is when I had that first meeting, because I was so brand new.

But since then, and I say this to all of you, particularly the new members, you know, I just realized that this -- I believe it's our nation's first advisory committee of this sort, and it's so important to all of us to get the perspectives that we -- in such an informal and constructive way, that we don't always get when we are sitting in our offices.

So I just want to emphasize how much we appreciate people that are serving in MAFAC, and I also want to reiterate the message that Megan gave you, which is we now -- we have a wonderful cohort that's moving on fairly soon, who we're going to miss very much.

And the opportunity to bring in, you know, a bunch of new voices and perspectives. And so those of you who know what MAFAC is, please help us recruit and encourage people to put their names forward, so we continue to make sure that we're hearing directly from folks with a variety of perspectives and expertise from around the country.

The purpose of MAFAC is to, you know, advise on all of the issues before us, and we're going to hit the -- the agenda's terrific, we're going to hit on the breadth of what we do here at NOAA Fisheries, and I know from the work that we've done recently in the Columbia River, that MAFAC led endeavors, can have legs years and years after the people who have been working on them have moved on.

So the work that you're doing influences us, not just at the time, but can set the stage for conversations and conservation for years to come. That's really important to us.

And I know today, or this week, there's two action items that are of great importance, and one is around Climate-Ready Fisheries, and the panels and the discussion in San Diego on that were top notch. They were really influential, and we loved them.

And it's really formed our work going forward. And then the work that you've been doing around our budget, and that's something we're focused a lot on every day. I like to say show me your budget, and I'll tell you your priorities.

So we have a big leadership council meeting coming up that Jenni and team are also organizing to examine our budget carefully, having every single leader present. And we've had this great opportunity of having Inflation Reduction Act and fusion of funds around certain priority areas.

But we know that are budgets aren't likely to grow, and as the world changes, we have to think very carefully about what are those priorities we're investing in, year in and year out. And your help and interest in making sure that we're funded to do the work of NOAA Fisheries is very much appreciated.

I'm very interested in where that leads. And speaking of IRA funding, just it truly is a historic opportunity. We were -- NOAA itself was allocated I think it's $2.7 billion for NOAA work, and NOAA Fisheries was allocated hundreds of millions of dollars under both the Bipartisan Infrastructure Law, and then more recently IRA.

So those of you who are watching our press releases know we've done sort of a rolling announcement of the funding. Worked hard to figure out the priority areas to invest that funding. Cisco will talk more about investments in science. It's giving us an opportunity to expand development of technologies

that we need going forward that will help us expand our observations in this dynamic environment.

One of the exciting aspects for me, and I saw a restoration project that the Tulalip were leading north of Seattle last week, is the money that we've been able to put into conservation through the Bipartisan Infrastructure Law, boosted by the Inflation Reduction Act.

So our first round, we funded $480 million of over 100 projects across the country, and they're on the ground, you know, restoration projects. We're moving dams, expanding culverts, revegetating, reconnecting, they're in -- I'm not going to go over the different pots of money, but for the first time, we have one that's devoted to underserved communities in this last round, to a specific set aside for tribes, not just for fish passage, but also for capacity building.

And we're hoping that these funds -- we're seeing them make a difference. We have staff all across the country working directly with communities and their -- because of the amounts of the grants and the amounts of the funding, people are able to do projects that they've contemplated for decades and never had the resources to do.

One of the things I've heard as I've visited these projects is the fact we debated mightily whether we should have a match requirement. And I heard that from all the tribes we met with last week and others that by not having a match, it provided an opportunity for many projects to go forward that wouldn't have otherwise.

So I want to repoint that back to the secretary because they, you know, she always wants leverage, leverage, leverage with every dollar, and I think we were able to get leverage, but also allow folks to do projects that they wouldn't have otherwise been able to do.

The IRA money, a very large amount, historic

amount, never before, is going to hatcheries. Never before in the history of the U.S. Government. And you know, sadly, it's a mixed message. It's going to support hatcheries and production of salmon and steelhead because we need to do that in these areas where we don't have the native fish runs, and we're trying to hold the line and allow fishing and allow time for recovery.

So we're working on that, both through the Mitchell Act, which many of you are familiar with, that was part of mitigation for the Columbia River dam. But also, for the first time for non-Mitchell Act projects, for the first time in a large way, $240 million is going to hatchery infrastructure.

And all the tribes we've been meeting with are very, very interested. They have outmoded, outdated hatcheries that they're depending on. I saw some of them last week. So Jen Quan from our California -- excuse me, from our West Coast region, she's operating out of California, is leading that and we'll have more announcements on that coming up.

And just quickly, we announced recently $20 million in grants going to the councils to help them with their Climate-Ready Fisheries work, and we're waiting for proposals from them. $20 million was announced for red snapper specifically.

And Dave Donaldson has been very integral to helping us work with the states in our Southeast. Evan Howell's led a lot of that to try to improve research and data collection for red snapper in a way that will benefit other species in other areas as well, if we do it well.

And then our Climate Ecosystem and Fisheries Initiative, something that we work on with the Ocean Service and with NOAA Research. For the first time, got an infusion of funds. And we feel a lot of pressure. We want to demonstrate that we can improve and use science to inform management through this CEFI work in a way that will -- demonstrates usefulness, so that we can continue to get it funded.

And I won't go into it. I think and hope Cisco is going to talk more about it, but I know you're very interested and it's something again that we talked about in San Diego.

The -- I'm going to just hit quickly on it. There's so much in this role and in our worlds that we're working on all at once, and through the agenda, we have an opportunity to get more deeply into subjects.

One of the things I talked a lot about in Seattle was our national seafood strategy, and that is an area Alexa Cole is coming in to talk more about trade and commerce. Linda has led a lot of the conversations in MAFAC with input from, valuable input from many folks.

That's an area where we have thoughts that perhaps MAFAC will be able to get us more deeply into some of the issues around traceability and IUU fishing that we feel like we have an opportunity to do a better job with.

So I'll let Alexa talk more about that, but it's one pillar of our seafood strategy that we rolled out since the last time that we met.

And we're super excited about the seafood strategy allowing us to talk to people about the importance of fisheries for food, for sustenance, for commerce, for jobs, that might resonate more with them then some of the focus on ecosystem based management or the things that we get excited about that are core to supporting our nation's seafood sector, but don't necessarily always grab the public in the same way.

So we're going to talk about the national seafood strategy. The equity and environmental justice strategy is going to be a constant learning effort. We're working on implementation plans. But always with a lot of humility.

There are many ways that we are trying to implement that strategy by increasing representation on the councils. I mentioned the significant funding going to

underserved communities. You know, they're underserved by all the U.S. Government, but they're places that we haven't traditionally invested as much funds in for a variety of reasons.

But one of them is why we're also funding capacity building grants, just to give folks an opportunity to hire people and do science and get involved in a way that allows them to be competitive in these big grants.

A lot of you have talked about our IFQ programs and access to fisheries, and that's something Sam and his team are also looking at closely in regard to some of the equity in environmental justice work that we're doing.

I believe Russel's going to talk later about our recreational fishing policy. That's something we also completed with a lot of input. I would say one of the biggest areas for that, that we've been working and talking about, is just how climate change impacts recreational fishing and how our management of recreational fishing, a sector that sometimes in some councils isn't as vocal.

But in the Gulf and in the Southeast, you know, it's both the economic driver and the -- puts a lot of pressure on the fisheries, you know, how we do a better job in some ways, and what we're doing with the red snapper money, I hope kind of lowering the temperature in getting everybody at recreational fishing community, our conservationists, they want to see a future for their children and grandchildren to enjoy and benefit from recreational fishing.

And see if we can do a better job of talking about science based management in light of changing ecosystems. So that's another area that you have been very involved, that we're going to talk more about.

And then lastly, I just wanted to highlight that we have this exciting event at the Smithsonian going on. When I've testified a couple times on ESA issues, and

I can't help but think every time the Endangered Species Act passed the Senate unanimously 50 years ago, and overwhelmingly in the House.

It was bipartisan. America was excited about conservation. Excited about protecting species from, you know, bald eagles to grey whales, to wolves. And I think people still are.

So you know, you get in this echo-chamber in D.C. and everything is so fraught. But we've been trying all year to celebrate the Endangered Species Act, celebrate conservation successes, and talk about the importance of saving all the pieces.

And I think that America is very excited about it. Nobody wants to see species go extinct. So we have this celebration where we're looking at some of the recent science where we identified Rice's whale, a species that had thought to be part of a Bryde's whale species, and then we were able to, through terrific science work, identify that it was a separate species.

And now it's one of the most endangered whale species in the world. So we're working on critical habitat designation, a recovery plan, mitigation measures, and celebrating that as a nation, we've, under that law, demonstrated that we value protecting biodiversity.

And that's what the Smithsonian event is about, understanding better the science and celebrating our commitment to conservation and why that's important.

But at the same time, we no longer have unanimous support for the Endangered Species Act, and our work to both communicate why it's important, but also our successes along the decades of working with industry and working with stakeholders to develop mitigation measures, are things that we also want to talk about because we've had a lot of successes, and we've worked very closely with the fishing industry and other sectors to develop mitigation measures so that we can both carry out development activities and

work to conserve threatened and endangered species.

And certainly, I spend a lot of time on North Atlantic right whales. That's something we're also investing a lot of IRA money in, and that's an area we're just about to announce to the National Fish and Wildlife Foundation. So exciting grants around developing ropeless fishing gear for trap pot fisheries.

You know, that's an area where climate change and the changing distribution of prey is creating more conflicts. So our endangered species work is only getting more difficult, but I'm an optimist. I really think that America wants to be a nation that we are conserving these glorious whales and small species and thinking about the entire ecosystem in a way that we're responsible for.

So I think it's one of the very consequential duties of NOAA Fisheries and an area that we seek and appreciate your advice. So I hope people will be able to participate in the reception, which is Wednesday night.

And I'll be in and out of that as I participate in the Smithsonian events. And I think I'll wrap that up. I am excited about the agenda and what we're talking about over the next three days. And I really look forward to these meetings. So again, I want to say how great it is to look around and see all your faces, and to remember that two years ago or so, most of you were strangers to me.

So MAFAC becomes quite a -- feels a bit like family. Feels a bit like returning. With all our disagreements and we welcome the opportunity to air them, and again, really value all the different perspectives around the room.

And I want to appreciate the way Megan always runs these meetings too, because she allows everyone to be heard in a respectful way. And there aren't that many environments where that happens like this. So very appreciative of that, and very appreciative of

Megan as our chair. So thank you, Megan.

Happy to have questions or discussion.

Chair Davis: Thank you so much, Janet. That was a wonderful way to have an update and also to kick off our discussions. So thank you for that thorough update.

We do have 15 minutes that we can -- okay. I see Meredith's up first, and then Joe.

Ms. Moore: Hello. I just thought I'd get us started off right. Thank you so much for your comments. I just wanted to highlight a couple of things. And I promise I only have one question, Megan, which is I just wanted to say I really appreciate the approach that the agency is taking with leveraging the IRA funds to advance Climate-Ready Fisheries.

CEFI is very exciting, but I also just want to underscore, I've seen like a real strength for the money that you're heading over to the councils to ensure that it's not just backfilling, like we know the councils always have other needs, but I really appreciate the work that's being done to ensure that it is going to advance Climate-Ready Fisheries and do those sorts of projects and really like accelerate that work.

Because there's a, I think, a real risk of that when money shows up, it flows to the easiest thing, and we need to do hard things with that money. So I just want to really appreciate that that's happening.

And I also wanted to suggest that as you are -- I know you are all still working to get the money out the door, but you know the money goes -- like I'm stressed about the cliff that's coming when the IRA funds go away, as you are using it to establish some of these really good programs.

And a lot of your climate work is coming out of the IRA, and so I would just suggest, as you are thinking about the next phase of this, how like to help us, help

MAFAC help you to communicate what the benefits were of doing the work that you did, and sort of what -- how to maintain it and so that it doesn't just vanish in 2026, when the funds go away.

So I just want to highlight that's a real concern for me, and I hope that MAFAC can help communicate the benefits of this -- of the funds and we look forward to working with you on that.

Ms. Coit: Thank you, Meredith. Well said. And I think communicating around IRA is something that we would welcome help and amplification on, and I totally agree. On some of this, you know, I don't know if I'm too optimistic, but we think if we, you know, invest in technologies to detect and avoid whales in vessel strikes.

If we invest in ropeless fishing gear, if we invest in better monitoring, like we're going to get ourselves with this funding into a better place where we can demonstrate the success of those investments.

I was on the phone with a congressman from South Atlantic who was saying why aren't you putting more of that $20 million of red snapper funding into the Atlantic Coast. And I'm saying we better demonstrate this, you know, that what we're doing in the Gulf is going to provide a basis for work that can happen in other areas.

But it may require new funding. That's why we're like so under the gun to demonstrate that this is successful and get this funding widely out the door.

Thank you on the councils. We've decided to give a certain set, a smaller amount to each council, but then are asking for specific plans around particular fisheries and climate-ready projects.

And I think that I just agree with all your points. Thank you.

Chair Davis: Thank you, Meredith, and Janet, and Joe.

Mr. Schumacker: Thank you, Madam Chair, and thank you, Janet. Really informative and boy, you hit all the good notes this morning. We love the fact, you know, this money, these moneys are out there.

Speaking from the tribal perspective, especially in that regard. The amount of funds that are coming through right now are really astounding, and as we've noted, they can do some great things. And we're concerned about the cliff as well afterwards.

But one of the big things from the tribal aspect, and you hit on it earlier, was capacity. And I really, I just want to reemphasize that and thank you again for noting that within these grants and the proposals.

It's a little cart before the horse with some of us, though. The grants are there, the capacity is not, and we're trying to get that in place. So I just want to key that in for those underserved communities that really need that ability, to try to consider that in the timelines for these proposals and moneys.

Our tribes are governments. We have all the, all of the responsibilities of any government out there, and really, really have trouble trying to approach these large restoration projects in particular that we need to do.

We often say in Washington State, at least that you know, the salmon wouldn't even be there right now if it wasn't for the tribes. That in fact the lands were decimated, and it's been the tribal actions over the years to reasserting their treaty rights, and the restoration projects that they brought in behind those treaty rights.

U.S. v. Washington, the Boldt Decision, et cetera, that really got things going. So we appreciate the -- especially your, your ability to come up and visit us and see what we do up there, and I just want to thank you again.

I also want to welcome Jenni. Thank you, Jenni, for joining us on board here. It sounds like you're going

to be working with tribes and offshore winds, so I'm sure we'll have a little bit to talk about here in the future.

And that's it, I just want to thank you and keep those considerations in mind for travel capacity, in particular. Thank you kindly.

Ms. Coit: Thanks, Joe. We can send around one of the -- so we're into the second round of three rounds of grants of these large grants for both capacity and habitat restoration. And the one that has the $20 million set aside for tribes, I believe is open through mid-December. So I want to make sure you all have that information.

I think I worry about the cliff there too, because those grants are up to $1 million over three years, so 3 million total. But I know when I worked a nonprofit that when you get funding for staff and capacity, and then it disappears, you're bereft and you can't -- so I think those are really important issues.

And looking at -- I'd like to spend more time understanding better how we work to do that in a sustainable way. It's very much on our minds.

Chair Davis: Thank you, Joe and Janet for that discussion. Brett?

Mr. Veerhusen: Yes, thank you. Thank you, Janet. Good to see you at Expo. Must be racking up the miles. Appreciate it. Just on the third round, because I'm not overly familiar with the criteria, I think especially in Alaska and I've seen kind of nationwide that for a lot of reasons, an event prices and dockside prices are low.

If you have, if not more, I think, you know, Bristol Bay salmon this year went, even though that's a state water fishery, or managed by the state, went from $1.30 to 50 cents. So the capacity for commercial fishing organizations is very constrained, and the resources to fund staff are very limited.

So you know, a member, if you think, you know, as we kind of think about them, a member of an organization is kind of like a customer and they have a set amount that they pay to be represented professionally. And that amount may or may not stay stagnant while their revenue has decreased dramatically, given a lot of events.

And so I'm wondering even short term with the cliff funding, would maybe help get fishermen over the hump if markets improve, especially as markets are also impacted by climate.

So is there any way to provide capacity in some manner to not only commercial organizations but any other kind of organization that depends on the markets and resources available?

Ms. Coit: Thanks. Thank you, Brett. We heard that a lot. So like you just covered a lot of ground. You know, because there's both -- we met, and as you recall, in San Diego, those of you who were there, we heard from Jamie Goen with the Alaska Bering Sea Crabbers Association.

So we met with Jamie, for instance, who asked that exact same question, what about nonprofit associations that are supporting the commercial sector, particularly in areas where the bottom has dropped out.

But then when we met with Stefanie and others, you know, and talked about just the spread between what the fishermen are earning and, you know, what things are selling for, and all of the dynamics on the economic ecosystem, you know, we talked about whether we have loan programs or things that we can expand or use differently to help in a time that is very, very difficult.

And I think one of the things that we're struggling with, and we talked a lot about in Seattle, is how our -- we focused on managing the resource well, and we do that better than anyplace else in the world, I would wager, but some of these other

macroeconomics and dynamics are meaning that the actual people who need to fish and sustain a family, aren't actually able to succeed.

And how do we, one of the levers we have across the U.S. Government, how do we deal with that. I can't say at the moment that we have a program that's going to do what you just talked about, but it's something we came away from Seattle thinking hard about, how we can do that better.

And things have changed so dramatically in the last few years that it's really pressuring everyone in a way that makes us know that if we don't act more urgently or more expeditiously, there can be a lot of businesses that don't survive or consolidation despite the fact that people don't even want to consolidate, but they just can't make it.

And we heard that from processors, we heard that from the crabbers, and others. So I think that's a lot for us to wrestle with, and some of it may require new authorities, some of it may require innovation around the authorities we already have.

Some of it may require us being a more forceful voice working across the U.S. Government. But no easy -- no solution. I wish I had a specific answer back. Thank you for raising that.

Sam also passed me a note, Joe, that said December 18th is -- oh that -- oh, your handwriting. December 19th is, is the date that that capacity building grant closes.

Chair Davis: Thank you, Brett and Janet. Okay. We -- are there any more discussions or questions that you'd like to make? We have about another five minutes. Okay. What's that? Tom or Jennifer?

Okay. So we will break five minutes early, but that means we'll come back five minutes early from break so that we can start with Cisco. So five to ten, we'll be back from break. Thank you. Thank you so much, Janet.

Ms. Coit: Thank you.

(Whereupon, the above-entitled matter went off the record at 9:41 a.m. and resumed at 9:59 a.m.)

Science Update

Chair Davis: Welcome back from your break. And thank you for the AV specialist for calling everyone back. That's like a little bonus we're getting here.

So we've set aside an hour and a half for our science update, which is great, because I know that there's always lots of great discussion and we're very much looking forward to your update, Cisco. So without further ado.

Dr. Werner: Thank you, Megan, and good morning everybody. It's great to be here. Janet alluded to a river, you know, flowing through things and I, you know, in my head this is sort of a pastoral scene and something like that.

And I'm about to tell you something that's more like rapids, you know, in terms of, you know, the kind of things that are happening, and you know, white knuckle through the whole thing.

But I -- you know, thanks for the opportunity to be able to speak to you about this. It'll be, you know, I'll start it off, you know, Evan Howell here sitting next to me will also offer some thoughts, and then you know, with Sam, we'll kind of go everything, you know from science to then science and management.

And hopefully, you know, the presentation will make sense to you in terms of how we're building up to where we're going. I think this is my -- yes, okay.

So I figured I'd start with an outline because there's quite a bit of things that we wanted to tell you. So I'll walk you through what we're going to tell you first.

So I did want to give you an update on survey and fleet issues, of which there are quite a number of them, and also next steps in terms of how we have

to anticipate what we're going to be doing over the next five to ten years. I mean, this is a forward looking discussion as well as a status report, if you will.

We'll talk about the Climate-Ready Fisheries and IRA opportunities, particularly in relation to, you know, how the data collection and the data acquisition component of our enterprise.

We'll talk a little bit about the advance tech and how we combine that with the surveys. You know, we'll talk about the Climate Ecosystems and Fisheries Initiative. Also the national survey program, which results as all of these things, you know, kind of add up and we need to rethink how we think about our survey, our data acquisition program.

That will kind of lead into, you know, the climate and fisheries discussion. I know that there's some, you know, folks who are new here and so I figured we'd do a little bit of a recap of what happened in San Diego. It was referenced before. It was a very good meeting when we talked climate and fisheries.

And there was some, you know, really excellent discussions that happened there, and I can't not -- I can't help but not bring up, you know, the Alaska snow crab issue that, you know, of course, you know, it hit the news.

I mean we've known about it for a bit, you know, but it hit the news a couple of weeks ago. And also that combined with what we talked about in San Diego leads to really, you know, that important component of how we link science to management. How do we change, you know, how we think about how we provide advice to management in a way that allows, you know, management to incorporate a lot of these new ideas and needs that we need to convey, you know, as decisions are made and such.

And so and then Sam will be leading that part of the conversation, including, you know, the tools, EBFM, governance, and so on. And then we'll offer, you

know, a few concluding remarks.

So it'll be quite a bit, but there is a thread to this thing, hopefully, that makes sense. So real quick on the survey updates, and this is just almost like what did we do last year and where we're going to be this year.

You know, last year, we completed about -- and I'm only speaking now to our surveys on the -- on our fishery survey vessels, on the NOAA ships. We completed about 74 percent, or 75 percent or so of our days at sea, if you want to use that as a metric.

And you know, we ran into -- there's challenges that were -- that ran across not necessarily in fisheries, but NOAA wide, having to do with work force. It's just a real challenge, you know, for OMAO, and they're doing a lot to try to make sure that they have the wage mariners and others.

But this seems to be a national challenge. It's also happening at the UNOLS fleet, the academic fleet. Talked to folks even up in Canada and this is something that is just an issue right now going on with the wage mariners and insuring that they're there.

And there's also some issues that came up with repairs and maintenance that resulted in this, you know, roughly 75 percent completion rate.

In '24, we're in a bit of a flux right now, you know, if you look at the President's budget, there was a request of -- and we're just over 1,200 days at sea, but you know, we're now looking at what might happen, whether it's a CR or the different marks, Senator House marks are there.

And you know, that, you know, the 1,200 or so days at sea that are in the President's budget, you know, by the time you look at what might actually translate into it, it's closer to 800 days at sea.

And so that is a reduction of over 400 days at sea

relative to that mark, you know, to the President's budget, if you will.

It's going to be challenging, you know, in the next three quarters, quarter two, three, and four, meaning from January through September, depending on where the budget ends up.

And so again, this is still in flux, so we're, you know, in some ways you should -- you know, one way to think about it is that we're trying to bookend, you know, what could be possible with one level of budgeting, and what could be possible with a lower level of budgeting.

And so you know, we're in the process now of revisiting this, what we call the fleet allocation plan, to try to see how you know, we prioritize the surveys, we do have a prioritization and a list of prioritized surveys that we work on.

That we're going to try to see how do we get through FY '24, in addition to, you know, being able to perhaps use some of the IRA funding to mitigate some of these impacts that might happen, to ensure that our core surveys happen.

So it's a state of flux right now in terms of understanding and bracketing what's possible and understanding what we need to do to go forward.

The next slide is a little bit on the fleet survey. You know, the fleet updates, you know, and I just wanted -- this is more on the ships themselves. You know, you may have heard that the -- and so we have about 15 or 16 what we call white ships.

Unfortunately, the Rainier, which is a ship that's out on the Pacific, had an incident, and had a fire on 5 September and it was not a trivial one. Everyone is safe, everyone, you know, there was no injuries, no nothing.

But the ship is certainly out of commission for this year, FY '24. And there is assessments now to try to

see, you know, what the long term fate of the ship might be. It's a ship that I believe is about 50 years old, and so the question is whether to, you know, what is the relative benefit of actually being able to completely, you know, bring it back or is that ship going to be decommissioned. It's something that's being looked at.

It's a ship that, you know, it is used on the Western Pacific mainly. There's, you know, things that have to do with coral reef surveys, as well as reef fisheries and such. So it's an important ship for us out of the Western Pacific in collaboration with our other line offices, like the National Ocean Service.

We have on the, you know, we have - we, NOAA, have contacts out for two class B vessels, which are mainly charting vessels. These are not ones that we would use in fisheries a whole lot. There's a possibility of piggybacking, if you will, some effort, some fisheries' effort on these class B, but they're mainly, as I said, for charting.

We're in the middle of what's called an AOA, an Analysis of Alternatives for what's called class C vessels. These class C vessels are fisheries and coastal science, so they're relatively -- they're smaller than our current say Dyson class vessels, but they're ones that we would be able to use perhaps more nimbly.

You know, we would be able to do things that, you know, I don't think we would lose, you know, any capability by going to the class C's, and given the kind of measurements that we want to take, you know, these class C's are things that -- are vessels that we would embrace in terms of going forward in our fisheries surveys.

Particularly starting if at all, after 2030. So if there's going to be funding for the class C's, it would be after 2030. An analysis of alternatives does not mean entering in a design or anything like that. It's just seeing what would be possible under different design scenarios.

But it's not something that is going forward yet, but the planning is actively in place.

And the last thing I wanted to talk about on the vessels, and this is something that really will impact a lot of what we do in fisheries, it's what referred to as a midlife repair period. And I'll spend a little bit of time on the midlife repair period, because it is going to affect what we do probably for the next ten years.

And I'll explain a little bit on what these are. So the FSV's, the white ships, so the five ships, you know, the Dyson, the Bigelow, Pisces, Lasker, and Shimada, were designed for, you know, a 20 year period of service life.

And so they're slowly getting to their midlife right now. And so a midlife repair, what it would do, what it is, is a, as it says up there, it's a bow to stern evaluation of the condition of each vessel. You know, it's looking at any particular thing that might be damaged or deteriorated.

It also offers the opportunity to upgrade, you know, to standardize the fleet in terms of whether you talk about, you know, reduced carbon emission or to increase the capability of some of the new technologies that we might want to bring on board to make sure that we can do that.

So it allows a number of things in addition to looking at the state of the vessel itself.

But these are costly both in terms of dollars and in time. I mean, these are serious issues in terms of how we look at them. Approximately each midlife repair is about 85 million per vessel. Sorry, did I do that? How did it go forward? Sorry. I meant to -- how do I go back one? I didn't touch it. Is there a chance somebody can go back on it? I don't know what happened. Go back one. Yes, thanks.

And they can take anywhere from 12 to 16, 18 months to complete, depending on what they find when they look at it. Right now, you know, there's

only one of our vessels that has the funding identified. That's the Dyson. You know, all the other ones are one that we would need to think about, whether they are going to be funded and what happens if they're not funded.

If they're not funded, then they would just go through their normal repair period without this in-depth midlife repair associated with it. So the impact, and I'm just going to just, you know, I guess this is roughly the schedule.

So you know, in April of '26, the Dyson goes in for its midlife repair, and the last one is you know, this is expected to go through, you know, 2033. So it's, you know, we need to start thinking now about you know, what's going to happen, you know, over the next ten years in terms of how we have the various ships ready.

We have on there is also, you know, the calendar in terms of when the ships are going to go in and the expected cadence, if you will, of the repairs. It's you know, it's a major, major undertaking in terms of what we have to do.

Now only in terms of, you know, the funding and all of that, but in terms of how we actually then rotate and address the various aspects of the impacts on the surveys that we do, and make sure that, you know, that we don't miss a beat.

I mean, so there's quite a bit of discussion and planning that needs to happen over -- that we're starting right now in terms of what the midlife repair impacts are.

And I'm just going to show a simple example, you know, for the West Coast. This seems not to be working. Could I be out of battery maybe on this one? Sorry. There we go.

You know, a simple example here because it brackets the whole period and in some ways, you know, it brackets the period in that it starts with the Dyson on

the left, and it ends with the Lasker on the right. And it covers this ten year period, roughly, or this better part of a decade that we're talking about.

And so we currently have, you know, how we do surveys on the West Coast and Alaska. We have the Dyson up in Alaska. We have the Shimada and the Lasker on the West Coast.

In '26, you know, the Dyson will go into midlife repair, then we have to figure out how we take up, you know, the needed surveys with just two ships, you know, the Shimada and the Lasker. We're working on that right now to make sure that we integrate some of the surveys so that we can, for example, do joint surveys on the Lasker and the Shimada for the hake and the coastal pelagics while the Dyson is on repair.

And again, you know, the Shimada would go north and do the Alaska work. Then when the Dyson comes back and we have three ships and we can do things, you know, that allow us to expand say our ecosystem surveys and such, in ways that we hadn't done before.

Then it happens again. The Shimada will go into midlife repair, then we have again, two ships to deal with things. Then later on, the Lasker will go into repair, and again we have two ships to deal with.

So there's a lot of moving parts here that I've simplified, but it's just, you know, even the calendar of things and anticipating what we need to do is not trivial. I mean, things just have to work, I'm not going to say out of the gate, but pretty close out of the gate in terms of how we rethink our surveys, and how we think our sampling schemes and schedules, and everything associated with it.

So we're in the -- we had a midlife repair summit earlier this summer, and you know, that summit included a number of things in terms of what all has to be considered about this. It's ships, how to ensure that the surveys continue, you know, how do we work

with charters, how do we work with industry, how do we work with UNOLS, the academic fleet.

I just talked about the Rainier going down. There's three other ships that are also 50 plus years old. You know, the Sette, the Oregon-II, and the Gunter that we use, and so what happens if something happens to them. So we have to factor that in there was well.

If their end of service life occurs, as well as any other possible delays, as well as, you know, taking these surveys and make sure that we have the capability to develop the technologies that we need on these surveys -- or on these vessels.

The cost and budget, I already talked about how much just the midlife repair costs. As I said, about $80 million. But then there's the other associated costs with how do we back up everything that we need to do. You know, again, the personnel is something that, you know, how do we juggle people between these various locations and such as one ship goes down and comes up.

Implementation of new technologies. I mean, to implement new technologies, we need these ships, you know, to test them and to deploy them and things. And so again, you know, how does that come in. And obvious the cost in terms of, you know, how do we make sure that, you know, what we're doing and such is clearly communicated early, and also, you know, what the impacts are and how to mitigate these impacts.

So that's roughly what I wanted to say about midlife repairs. It is one of the things that keeps me awake at night quite a bit because of the importance and the severity of this.

But I'm now going to talk about, you know, something positive and leading into, you know, we have these fleet challenges, but now I'm going to jump into the IRA because this can help us, you know, in terms of how we address these challenges in the short term, and also in the long term.

So you know, I think, you know, in terms of a summary of the IRA, this is, I think you've seen this before and certainly you've heard about it. You know, the climate-ready fishery is, you know, roughly about $350 million to support, you know, these initiatives, you know, that that will allow us to do a number of things. And I'm just going to talk about three things of the many things that the IRA opportunity offers.

And that's the data acquisition part, which is about 105 million, the data modernization and management, which is about 40 million. And the climate ecosystem and fisheries, which is also on the order of about 40 million.

And the idea, of course, you know, with this investment is you know, to incorporate the climate and ecosystem environmental data into, you know, into -- to be able to provide management advice, and then obviously, also to support management decisions, you know, to all of the sectors and communities that require it.

So it is a, as Janet mentioned earlier, it is a transformational piece in terms of how we're thinking about moving into the future and as part of riding the rapids, if you will, that I talked about earlier. Because we have, as was noted earlier as well, we have about three years or so to really implement a lot of what we're -- what we need to do and what is on this slide.

And so our survey or data acquisition vision for the future, you know, is that we need to sustain certainly the core strength that we have while we build additional capacity. You know, with advanced technologies and others.

And so we have, you know, in order to maintain what we have, you know, we have, you know, additional funding and appropriate funds, as you see up there. You know, the 14 million that we received from Congress to help us with that, as well as, you know, the IRA essential data acquisition, the EDA mitigation funds.

We also look to modernize our observing capabilities, new technologies and the development of how we collect data, as well as how we modernize and enhance our work force in order to be able to address all of this. Also not just the tools but how we analyze them, so it's a method of analysis that also goes in there with the advanced technologies and associated efforts.

As well as, you know, strengthening and you know, the planning of how we prioritize and how we manage, it says survey resources but you can think of it more broadly as our data acquisition resources, as we think in terms of how we go into these next, you know, three to ten years.

And we'll talk a little bit about, you know, this establishment of a national survey program, which we're working on actively now and hopefully, you know, we can begin to roll out that national survey program in early -- early in '24.

Again, it's not working. Sorry, it's stuck again. There we go. Thanks.

So I'll talk about two things here on the data collection, which have to do with the data, the essential data acquisition both in the mitigation of surveys. So as I mentioned, we have a lot of issues ahead of us in terms of how we make sure that the surveys are completed.

And we will be using, you know, funds and support from the IRA to help us through this period as we make sure that we minimize any impact to our surveys.

The pictures I have up there are on purpose in that I put the West Coast picture up there because I already said one of the things that we really have to be ready for is when the Dyson goes offline in two years, that we are able to continue, not just to do the surveys on the West Coast, but that the Shimada can go up north.

And so we're working on, as I said, an integration of surveys on the West Coast, and that's represented an investment in new nets, and a single net deployment that can do not just the surface and midwater, but also the deeper net. And this is something that we have successfully, with industry, have secured this net.

We're hoping to take the net out for testing this December. And this is jointly with the northwest center, the southwest center industry, and we'll be in the water testing this net out. Hopefully we'll then be doing a full sort of engineering and further testing this summer, and be ready to have a couple of years of testing on this net so that we can make sure that we combine and consolidate surveys on the West Coast, again, to allow for the Alaska surveys to be conducted with the Shimada.

We're setting aside funds, you know, for doing these charters on the West Coast, for protected species and such. There's funding for a purchase of a research vessel on the East Coast. The Alaska Fishery Charters, again, the national survey program that we'll talk about in a second, as well as other priorities, you know, that might come up.

But the point of part of this funding is to make sure that we can get through this three year period to make sure that, again, to minimize any impact on our survey mission.

Oops. Now I went back too much. Okay. So that's the mitigation part, to make sure that the surveys continue. The second part, if you will, is the modernization and the transformation of our advanced technologies.

I think I've talked to you in the past about proof of concepts if you will on a number of these topics. Uncrewed systems, you know, say when COVID hit our surveys and we weren't able to go out, there was the example of how we were able to send uncrewed systems from Alameda, California to the Bering Sea to do surveys.

And they were able to collect data that allowed us to bridge some assessments. You know, they didn't provide everything, but they allowed us to do things and it was a very successful proof of concept.

The same proof of concept with 'omics. You know, including environmental DNA. We've used this on the West Coast, you know, to begin to actually develop indices of hake abundance, using molecular approaches, and we're doing that study in parallel with the acoustic approaches to see if -- how they line up.

And again these are our focus of interest remarkably successful at proving -- at completing these proof of concepts. You know, the optical systems is something that we used in the Pacific Islands, again during COVID when our ships were unable to go out, we were able to deploy cameras, you know, to conduct the surveys of our bottom fish out there.

Again, that in combination with artificial intelligence machine learning, allowed us to analyze all of this data in a way that was able to then provide the input for the assessments to take place.

So these were, these three are examples of things that we have to get out of the gate a little bit quicker, perhaps, than we wanted because we, you know, we had to deal with the situation in 2020. But these are now technologies that we're investing in, in a way that will go beyond this proof of concept. I mean, this is now something that we are seeing how quickly can we operationalize these and where.

The other three are, of course, you know, the acoustic -- active and passive acoustic approaches as well as remote sensing. You know, these are technologies that are perhaps you know, more stable in the sense that we've relied on them for a number of years.

You know, passive acoustics, you know, to -- as your listening for protected species and such. Active acoustics of course is in all our vessels, you know, to

actually sample hydro-acoustically what's out there.

And remote sensing is -- it covers a number of areas. It's satellite as well as instruments that are mounted on our ships that allow some of the data collection to happen.

And so these are six initiatives that we are supporting, again, through IRA. And they are part of our strategic initiatives that, again, have, you know, we're looking to make progress towards operationalization in the next three years or so.

And this is, again, a national effort led by people in different science centers throughout our system.

The next two slides I'm going to ask Evan to speak to. And so the first one is -- whoa. Something happened with the title there. But anyway.

Dr. Howell: I can reread it.

Dr. Werner: Okay.

Dr. Howell: No, but thanks, Cisco. So there's two slides that I'll cover, both of which are being led out of my office, the Office of Science and Technology and headquarters.

So the first is incorporating and building out a new national NMFS Survey program. So there were many drivers for this. There was a national academy administrators report that really pointed out one of the strengths that NMFS could do is to form more national programs.

So the survey program was identified as one. This isn't to say that these things weren't happening before, but this really does really elucidate and strengthen specific things happening nationally, whereas there was a lot more aggregation of regional prioritization in the past.

So with the idea that strategic planning actually happens nationally, with a lot of the issues that we were having over the last few years with COVID and

beyond, being able to look nationally helps us with contingency planning, mitigation, that was some of the drivers in there.

We know these challenges are only increasing, as Cisco said, with the work force. This did become the third part of that survey vision for the future that you saw a few slides ago. And we also felt that this would really help us use the best available use of resource to get the information needed for the best scientific information available, based on national priorities.

So in terms of what we're doing right now, we're looking at what we're calling a soft launch in January of '24, meaning that we're doing some of these things already, but we're really trying to get most of them completed and in place by January 2024, to be in time to start with the FY '25 planning.

Building a fleet allocation plan starts probably in the January, February timeframe. So that -- getting us in place there gets us in time for that FY '25, as well as FY '24 execution.

So we really do have a vision of encompassing all of the activities and resources under our fishery independent data acquisition. This will include the basic surveys that you know of today, the core data that we need, as well as the advanced technology initiatives that are ongoing.

Our goal is to collect the priority data nationally in the most efficient and effective ways. That does mean working with the regions to try to find out how their survey protocols are going, if there's efficiency gain, things like that, and make the data readily available.

We can also put some national support behind getting the data out and available where possible, as soon as possible. We think that that will help in terms of feedback as well.

You'll see the scope is quite large. We are really trying to take on most of the activities that happen

in our survey, in what we're starting to call our data acquisition program, which means that it's not just the traditional ships that go out and collect data.

We have the advanced technologies, we have new ways of acquiring data that maybe we're buying or using third parties to actually do the acquisition for us, or through cooperative research programs. So really, that data acquisition signifies more than just the traditional surveys that we were doing.

In terms of roles, we have a NMFS science board. It's the SES leads from all the science centers, the national office, and Cisco is the lead of that. They provide the oversight for this national survey program.

The Office of Science Technology will do the management and coordination and support for the regions here. We'll also have individual representatives on the vessel coordination, as well as a steering group for how the activities will go throughout the year.

So again, we're doing a soft launch. We hope to have these groups all stood up and ready to go by January 1st, that's our goal right now. And the hope is that it will bring more efficiency, ability for contingency planning, and organization and also reporting of actual costs and needs, as well, in the surveys program.

If we go to the next slide. So the next thing we'll talk about, this is data modernization. This is a part of IRA that Cisco had mentioned. One of the things that we decided to do in our proposal for the spend plan for IRA funding, there's a huge need for us to really modernize our fishery dependent data.

Survey programs focus on the fishery independent, but we also have a lot of data that comes in through logbooks, other programs, that's fishery dependent. So we really want to transform this into a modern agile system in partnership, strong partnership with coastal states and the fisheries commissions.

So right now, we've identified for FY '23, starting out at IRA which runs through '26, four lines of effort as we're calling them. Really to identify the requirements for an enterprise capable cloud solution. We want to move all of our fishery dependent data to an enterprise capable cloud solution.

We want to enhance our efficiency and the application development for fishery dependent application software, as well as imagery review, in terms of the electronic methods.

We want to facilitate adoption of open science and open data, so we have a three year contract with Openscapes, which is run through the Mozilla Foundation, to start to build a culture of open science relying on the foundation of open data.

Our scientists want this, we want this, we feel that this will really help us get to faster scientific analysis and information. If we could go back one slide, please. Thank you.

I'm not keeping up with modernization. So if we go -- and then the fourth line of effort is really supporting the refinement of an operating model. So we'll get to, if we can support the operating model, meaning that we don't just use this transformative idea to get to a modernization method, and then we hit this fiscal cliff or this work cliff, but that we're really changing the way that we approach keeping data modern through time.

So that's the fourth line of effort. In terms of the out years, again, the focus right now, you know, Nancy Majower, who's our NMFS chief information officer, her and Nori Shoji who is our senior strategist in the Office of Science and Technology, are leading this effort for data modernization.

They've got work going through Google, as well as CRADA, that we have a cooperative agreement with Microsoft to really establish this enterprise capable cloud architecture and develop a plan for

modernizing the data system, that is ongoing right now.

The -- I told you about Openscapes, that's the way that we're going to adopt this open science and open data model. And also, we're working with our fisheries information system program, which is a program that annually goes through a request for proposals to identify the areas of need for modernization or support for our data systems, fishery data systems, in the agency in conjunction with external partners, such as the commissions.

We're going to be leveraging that program to use this additional IRA infusion to develop this operating model and identify and prioritize the data systems that we're going to modernize, in conjunction with the commissions.

So these are all activities that we're doing in FY '24 because we're already there. We expect to see a lot of this work happening in the next three to six months with the project identified and our last planning efforts through FY '24 with an FY '25 and '26 execution.

Again, knowing that IRA has a fiscal cliff for us on the federal side in '26, but if we have projects that are funded, those projects can operate past '26 as long as the money's obligated by that time.

So again, that's where we are. We're currently in our initial execution, final planning stages for data modernization. And with that, I'll turn it back to you, Cisco.

Dr. Werner: Okay, great. Thanks. Megan, I'm going to look at you because we're at a point where we covered a lot of the data part and the surveys and such. And we're about to go into sort of the forward looking climate and fisheries projections and so on. Should we just go on or do you want to --

Chair Davis: Yeah, let's open it up for questions.

Dr. Werner: Open it up for questions? Okay. All right. Yeah.

Chair Davis: I see Pat and then Jocelyn and then Joe.

Dr. Sullivan: Great. Thanks so much for the presentation. And this is -- it's absolutely wonderful to hear. Obviously there's a lot of work going into moving this forward and taking advantage of the IRA funding to do that. My question for you and I think we've communicated before on this, so tomorrow Stefanie is going to be sharing what the Strategic Planning and Budget Subcommittee has put together on this letter to the Secretary of Commerce about funding for the core data collection. And we are obviously experiencing this dance where we can't ask you what you need, but obviously there's a need there. And it seems to us that if we could identify for example a question is -- and I think maybe you covered it here is how much does it cost to do the surveys? That would be a piece of information that we could use. And then when one contrasts with your statement about 1,270 days and that dropping down to 800, that means that the surveys are probably not going to get done to the degree that we would expect them to be if we wanted the core data to be there. And so the question that is, you know, what do we need to accomplish the core information that we absolutely need for all this that we're doing? And so that's my question to you.

But in the larger context, there's this question of -- that we sort of don't understand. We're going to pursue this tomorrow. I'm asking you this today. You may or may not be able to address it today. Maybe Sam could as well is, is there any room for NOAA to negotiate? It sounds to us as if you're given a number and you say okay and that's what we have to work with. Whereas from what we understand, other agencies are able to kind of say hey, we need this more or we talked with this congressman or whatever and this is how -- this is how we work. And I know there's a lot of leverage in this group to make things happen through that pathway potentially individually.

And so it gets back to the question of what do we need to keep this going? And I'm appreciating everything that you've been saying in terms of looking to the future, the repairs on the boats, all of that kind of stuff. And even in looking at the core, one would say well, you know, there's the core in terms of actually getting the boats on the water, but there's also the core of keeping the boats in operation, right, as you're moving forward. So I know this is a kind of complicated question and I'm just putting it out there and seeing if you have something that we can work with here.

Dr. Werner: Yeah. Thank you, Pat and Chair. Great question. And it is -- it is one of the ones that does keep us up at night. I'll try to answer in a way that hopefully makes sense. So getting to your question of the cost, you know, how much does it cost? And this is something that we are now at a point that we have estimates for the last two years for '22 and for '23, but we're revising to make sure that we actually did include everything. And we hope to roll that out maybe in the next couple of months. But ballpark right now, everything included, you know, our folks, so in other words, labor, the ship costs, you know, whatever the travel, the overhead, you know, whatever is about $100 million a year, you know, to do our -- to do our surveys.

Okay. We will be again, you know, hopefully rolling this out soon when we have all the details worked out. This is a question that also comes up when we meet with, you know, our colleagues on The Hill. You know, they ask the same question. And when you saw for example, you know, that additional $14 million that we have, you know, to help bridge where we are right now is a realization from The Hill that additional support was needed.

I think your point about how do we -- how do we include all of these costs in the coming years is going to be an important one. It's a question that we ask ourselves, but it's also one that, you know, as I said in a conversation with our partners on The Hill comes

up. So we have, you know, the part about how do we continue doing what we're doing? The part about how do we integrate, you know, the new technologies that are coming on and what does that mean? As well as you know, there's this other aspect having to do with the mid-life repairs and such that I think what we have to think about is how do we provide a holistic answer to how do we get through this period that is -- you know, that will help us land somewhere in ten years in a way that this can be, you know, sustained more robustly if you will?

You know, we're running into issues every year on cost increases, whether its inflation requests or prices of oil and so on, I think that all of those need to be included. And then come up with a how much do we need so that we can tell Congress or we can tell everybody, what is that number? And I would welcome that conversation to see the numbers that we have been able to collect and have ready to discuss in terms how do we communicate what those needs are. But I agree with you that, you know, in order to be able to say what do we need, we need to say where are we now in terms of our current expenses? And we're pretty close on that to a solid number.

Evan, I'm not sure if you wanted to add a little bit to that or not.

Dr. Howell: No, I think that was good. And I think part of what I feel like I heard in the question was that's what we spent right now. That's what we have and we spend. And I think that there are things that we're choosing to deprioritize to meet that spending top line --

Dr. Sullivan: Which includes not gathering some of the data.

Dr. Howell: Exactly.

Dr. Sullivan: Right. Which seems a little --

Dr. Howell: Right. So I think that we can use that

foundation to show what we're able to do and what we have and what we're not able to do or what we deprioritize. And I think that the three things I heard you mention, you know, we have what we have today. We have the efficiency that we're working through and then we also have the advanced technology. So I think that this will adjust year by year. But by the end of IRA, we'll have a more complete view of what our annual budget is and what it could be.

Chair Davis: Thank you, Pat and Cisco and Evan for that discussion. Jocelyn.

MS. RUNNEBAUM: Thank you. Madam Chair, I think I want to hold my question off to continue this conversation because I'm imagining Stefanie's going to have some follow-up questions and maybe Joe. But can I go after them please?

Chair Davis: Absolutely. We'll keep you on the list. So we have Joe next.

Mr. Schumacker: Thank you, Jocelyn. Cisco, great as always. Really, really love catching up with what you're doing and of course the challenges you're facing. I got briefed last week at Pacific Council on the integrative surveys on the West Coast. This is really unique and new to us. Coast supplies have -- they've been not without controversy in their assessment methods on the West Coast for years now. And now we're integrating them with the Hake surveys and we're going to be trying out some new technology with these new nets that you mentioned that would be adjusted for surface mid-water and potentially deeper troughs. That's very unique as well.

My question is you have a pilot coming up. How are you going to assess the success of that -- that integrated survey? And with pelagics in particular, you always had a problem with the near shore assessment piece of that. How are you going to fill in those gaps as well? Thank you.

Dr. Werner: Yeah thanks, thanks for the question. So you're right. So the schedule that we have right now is to do the net testing in December and that's just, you know, just put it in the water and see if -- see if it works. I mean it really is just a week long test. The deeper testing or the more -- the more quantitative testing starts next summer. We hope to have -- We're looking to have, you know, one of our -- one of our ships, you know, do perhaps something like a side by side if you will if we can on what we're doing with one ship versus -- one kind of net versus this net that can integrate both. And then we have another year to do it. So we have two years of testing, which will -- which will hopefully include as I said side by sides.

To address your question of how do we know that we're capturing the same thing and whether the nets work? The nets are ones that we -- the outfit that bought it or the group that bought it bought it from, I think Norway. And it's something that, you know, those nets have been used in a similar way for some of the fisheries in Norway that are again, you know, near surface and mid-water, you know, fisheries. So we'll also build on that in terms of trying to make sure that what we're measuring is actually calibrated with the way that we -- with the way that we conduct our surveys currently.

So that's the plan for next year -- the two years. So '24 and '25 are going to be those calibration work, you know, efforts. And then in '26, then you know, then we have to actually begin to do the integrated survey, you know, solo if you will.

In terms of the near coastal part, that's a really good question in particular because we're -- you know, I know that we're seeing different signals associated with different populations of the coastal pelagics. As you might know, we do partner with industry on some of the purse seining that they do near shore. We're looking to see if we can deploy some of the uncrewed systems to try to see if we can do some of that near shore. But we know that the near shore

component has been in question for some time. And again, because we're seeing apparently some shifts, you know, from the southern population into the -- into our -- into the West Coast, it adds another question in terms of are we actually capturing that?

So all of these are our front and center in terms of the questions that we were asking. And getting back to the communication part, you know, the Northwest and the Southwest Center, you know, are having regular meetings with folks in industry, as well as with our colleagues up in Canada, you know, particularly with the Hake Treaty and so on to make sure that all of these transitions that we're doing are discussed openly to try to see if we're doing it right. And if we're not, how to -- how to address some of the questions that might come up.

So that's roughly, you know, how we're -- how we're dealing with it. And there is, I think, a website where we try to post when these meetings happen and the outcome of these meetings. So I think I can bring you up-to-date on that if you wish.

Mr. Schumacker: Thank you very much.

Dr. Werner: All right, thank you.

Chair Davis: Okay. Thank you, Joe and Cisco. Cisco, how much longer is the rest of your presentation?

Dr. Werner: It depends on Sam. No, just kidding. No, I have about 15 minutes to go --

Chair Davis: Okay.

Dr. Werner: -- maybe not. Maybe I can do it ten.

Chair Davis: Okay.

Dr. Werner: I can maybe do it in ten.

Chair Davis: Okay. Okay. No problem.

Dr. Werner: But then Sam has a different part.

Chair Davis: And then Sam, exactly.

Dr. Werner: Yeah. Yeah.

Chair Davis: So we can continue the discussion, but if I could ask you all to make it a little shorter.

Dr. Werner: Okay.

Chair Davis: So we have Brett, Stefanie, and Richard and if you can just condense your comments and questions.

Mr. Veerhusen: Thank you, Madam Chair for keeping us on task and on time. Cisco, I just -- I'm sorry if I missed this and there's a lot of moving pieces, it sounds like you're juggling. And I can understand the pressures of inflation and workforce. But in order to reach your target of like 100 percent of what you need for days at sea, how much money are you falling -- like does the Agency need this year -- or next year to reach that? Like what are you falling short on? What is the -- I guess I'm still not hearing what the number is for the Agency to meet 100 percent of its days at sea. What's the delta?

Dr. Werner: Great question. Thank you. And I don't want to say it depends. So I think that, you know, if we looked at what we needed to go forward right now, you know, to complete the surveys that are on our plates, I think we're -- in the next two to three years, I think the delta is roughly around $30 million if I had to put a number up.

Mr. Veerhusen: Is that published anywhere or communicated --

Dr. Werner: No.

Mr. Veerhusen: -- in any email or communications?

Dr. Werner: It's not published though. Right? I mean we're talking to Congress about it, but we haven't -- we haven't -- it's not -- it's not out, no, in the public, no.

Mr. Veerhusen: I think I would in another capacity love to help. Thank you.

Dr. Werner: Okay. Evan, did you want to add -- Sorry, may I --

Dr. Howell: No, no.

Mr. Veerhusen: Okay. No, you're not going to.

Chair Davis: Okay. Let's move on to Stefanie. Thanks.

Dr. Werner: Okay.

Ms. Moreland: How's this work? Thank you for the presentation. This is really helpful and shows a lot of parallel work streams. And they're not really presented as interdependent, which I think is interesting because there's a limited budget in any year. And so if something is being pursued and something isn't being pursued, there's tradeoffs and yet, the interdependencies aren't noted. So I think that's something in terms of communication in the work of the subcommittee that we need to think about how to highlight.

For work tomorrow since you're not going to be here, Cisco, just a couple questions on the presentations so far. For the 400 sea days that are missing relative to the President's budget, what kinds of communication materials are out there on the impact of that?

Dr. Werner: Yeah, thanks. So right now we're working it as two book ends. Right? Two possible funding scenarios. Right? So one is the President's budget and the other one would be a CR or similar. So until the budget is finalized, we don't know which of the -- which of the two or we're going to be somewhere in-between the two bookends.

In terms of the communication, what we're going to do next is come up with a -- is working with our prioritization and see which surveys can be done, you

know, with the 400 days that we have right now say from OMAO. Then what we're going to try to do is say with the funding that we have that allows some of the mitigation, you know, the surveys from IRA, which ones can we cover so that it's not a -- it's not a 400-day shortfall, but that we can make up some of those surveys with some of the IRA funding that I mentioned.

And so an answer to the question in terms of communicating the possible shortfalls and what we can do about it, I think that we will probably be able to do something at the beginning of the year in January, you know, communicating with the councils and such and others in terms of what the real impact is going to be of that shortfall should that shortfall happen.

Ms. Moreland: Okay. I think January is pretty late to be responsive. And so I think the nature of the committee work that we've done is how can the public and the Hill better understand impacts of decisions that are being made? And I think the 400-day impact and getting clear on that, rather than just the effort to mitigate is something that we're interested in the Agency having the flexibility to do. To say here's what the outcome or the shortfall may result in.

Similarly, when we look at the integrated plan for West Coast, you've spoken positively about the next steps to mitigate impact, but I assume they'll be some compromise from that integrated strategy beyond calibration that there might be some challenges in getting days that the full survey is covered. And what types of information may be available and when is the communications element that you highlighted here. Something that would provide impact estimations to external parties, as well as The Hill early.

Dr. Werner: Yeah, thanks. So at least in terms of what we're doing on the West Coast, that communication is ongoing with the councils. And

we're trying to make sure that that is a standing item in terms of what we're doing. And we're have, you know, in-between meetings to make sure that those impacts are there. You know, right now, we are operating under the, we have a couple of years to work through this to make sure that we can have, you know, at least that integrated survey happen.

The other impacts that might happen as you're talking, you know, there's that -- I also mentioned that there's a West Coast charter funds that will also help us mitigate again over the next three year period the impacts of that. So we're hoping that with the IRA support, we can -- we can do the mitigations somewhat internally in terms of what we're doing so that we don't impact the surveys that are out there.

But as was said earlier, you know, beyond the three years, it becomes a little bit more challenging. And I think that's something that, you know, we need to develop that communication strategy on in terms of what exactly might be impacted depending on what we learn in the next three years. And again, I think my sense is that you're saying that we shouldn't wait too much later before we begin that external communication.

Ms. Moreland: I'll allow others to move on from here. I think that's what we're interested in discussing tomorrow. It's my understanding if we were to wait that we're going to be out of the budget cycle and process. And so that is very stressful for stakeholders and for all the interest that depend on a strong NOAA core and date acquisition.

Dr. Werner: Thanks. Thank you.

Chair Davis: Thanks for this discussion. It's very timely with the Strategic Planning and Budget Committee coming forward with a letter to the Secretary. So I really appreciate this discussion. Let's talk and discuss for a few more minutes and we have Richard, then Barry, then Jocelyn. And then let's move back to your presentation, Cisco.

Mr. Yamada: Thanks, Cisco. That was a very informative presentation. And being on the International Pacific Halibut Commission, we're facing the same things with our Independent Supply survey. You know, we have budget cuts. And the question is can we do our survey -- reduce our survey coverage and still be statistically -- provide data for the fishery?

So my question in the, you know, the survey you do up in Alaska, have you looked at, you know, less than 100 percent coverage and still provide statistically significant information? So that's the question we're dealing with our Commission right now. Can we reduce our coverage by 20 percent and still come out with, you know, the cost -- and still come out with data that we can use to direct our fisheries? And that might mean, you know, alternate year surveys. Not surveying every site every year or reducing the footprint of the surveys in places that we know that we have pretty valid information. So have you gone through that exercise?

Dr. Werner: Yeah. Thank you, Richard for the question. And I neglected to -- Can I go back a couple of slides in the other direction? Sorry, backwards. One more. Yeah, thanks. Yeah, so that -- I had purposely -- I put the picture of the Bering Sea -- oops, sorry. Back one more, backward. There we go. I put that picture up there of the Bering Sea as an example and then I neglected to talk about it.

And to answer your question, Richard, this is something that the Alaska Center is working on right now to see. Based on our understanding of the system and you know, can we, you know, reduce, you know, perhaps the resolution or whatever, the number of stations that we take and expand a little bit, you know, to cover more area without giving up, you know, the errors knowing what we know about the system? This was presented at the council meeting of this last October, I think. And we're looking at perhaps do we -- how do we -- how do we increase the coverage while not giving up, you know,

the quantitative aspect of things? So the answer -- the short answer to your question is yes, this is an active area of planning within the Alaska Center. Thanks.

Chair Davis: Thank you, Richard and Cisco. Barry.

Mr. Thom: Yes. Cisco, maybe this discussion confused me a little bit on the math. And going back to the slide where you talked about the days at sea. So I was confused of what the true gap is. So what is the -- What were the days at sea completed in FY '23? Is that the 1,100 or 1,200 days at sea or is it closer to 800?

Dr. Werner: It's the 850 or so, correct.

Mr. Thom: Okay. So the 800 that you're planning for, for '24 with a reduced budget is only a 50 or 60-day reduction in days at sea from the status quo. But the full -- So that's the 74 percent of --

(Simultaneous speaking.)

Dr. Werner: But it's still -- it's still 70 percent of what we would have wanted to have done.

Mr. Thom: Correct. Okay.

Dr. Werner: Yeah, so if everything goes in '24 the way it did in '23, we're still falling short in terms of the surveys that we would have liked to have completed.

Mr. Thom: And even shorter. But the full requirement is closer to the 1,200.

Dr. Werner: Correct.

Mr. Thom: Okay.

Dr. Werner: Yeah. Thanks.

Chair Davis: Thanks for that clarification. Jocelyn.

MS. RUNNEBAUM: Yeah, thank you. I appreciate this conversation. And it strikes me that these budget

shortfalls and the work staff shortages and the vessel needs feel a little bit insurmountable right now. And I've heard cooperative research, shared cooperative approach to the surveys mentioned. But I didn't really hear a plan for what -- how that would get incorporated to keep time series valid from the big white ships in taking a cooperative approach. I think this is going to be pretty essential for figuring out on the East Coast and probably around California when offshore wind is deployed and the vessels can't get any closer than a nautical mile to structures. And so I think like we're having to actively reimagine a survey fleet for the entire nation. And I just can't imagine a path forward that doesn't include the fishing industry themselves. So it would be great to hear how you're overcoming some of the statistical hurdles at the -- from the stock assessment side to keep those time series valid and to actually create a cooperative plan.

Dr. Werner: Great. No, thanks. Thanks, Jocelyn. And great question. I couldn't agree with you more on how the importance of -- you know as we go forward, how to marry the -- even more strongly the work with industry. You know, on the West Coast, I mentioned, you know, the purse seine effort that's happening to capture the near shore work. I think I mentioned in the past, we're looking at what some of our Norwegian colleagues are doing with their partnership with industry or their work with industry where one of the things that they are doing is doing the surveys with the gliders. Right?

So these are just measuring the acoustic part. And working with industry to see where the -- see where they might be located -- where the fishery might be located. And then honestly just giving them a phone call and say hey, you're near here. Would you mind collecting some samples so that, you know, there's agreed to protocols in terms of how many and how you freeze them, whatever? You bring the samples in from the fishing industry and we combine that with our acoustic measurements, you know, taken from uncrewed systems and such.

So that's -- we're looking closely to see how this is working out again with our Norwegian colleagues. And I can certainly see this being a component in various parts, whether it's Alaska, whether it's the West Coast, whether it's the East Coast. Particularly as you're saying fishing might be happening in places where perhaps we cannot be going to doing some of the sampling. So that's definitely part of the way forward. And we're eager to find out how this works out in other places to learn from them and work with them. So I think it's an essential part of how we go forward.

Ms. Coit: I'm going to make this so quick. I just wanted to point out our survey mitigation plan that NOAA and BOEM did together is something we're getting funding for in little pieces each year and then asking BOEM to work to have industry fund it. And we're making some headway, but we could have a bit broader discussion about that too in response to your question. Adding onto what was said.

Chair Davis: Yeah, very good. Very good. Cisco, why don't you move forward.

Dr. Werner: Okay.

Chair Davis: We have half an hour left, so if we can make sure that we leave some time for Sam.

Dr. Werner: Yeah, okay. Can I go forward about three slides? This one, I think will be a little bit faster because it's something that we covered. One more please. Yeah, thanks. So this is a bit of a recap. You know, I think, you know, we've talked about the Climate Ecosystem and Fisheries Initiative and this is just to say that, you know, as you remember, the idea behind the CFI is to be able to look forward in time, you know, two to five years if you will in terms of, you know, how we do ocean projections, as well as, you know, how do we then use these ocean projections to look at, you know, the impacts on our ecosystems and the resources that we manage.

We are in the process right now of hiring a bunch of

folks right now. You know, the idea is to have each one of the science centers increase by three to four folks per science center, including you know, the modeling capability, the assessment capability, and the -- and also the work with the advice and management.

And if I could go to the next slide. Oh, that's me. Sorry. Okay. Oh, I did that and I shouldn't have. You know, the idea then is to once these are standing is to then provide this national capacity for this same provision for climate-related information in our living marine resources management. And the point here is that, you know, we're looking at those groups, you know, integrating the ocean prediction, the decision support teams, and then providing advice on a number of things. You know, that ultimately will either lead to scenario planning, risk assessments, management strategies, and et cetera. So I think I've talked about this, so I wasn't going to spend too much time about this other than an update that we're in the active hiring phase for this group right now.

So I'll do a couple of slides and then I'll hand it over to Sam on the science to management considerations, the next steps. And to recap, again, I know that some folks, you know, weren't at the May meeting in San Diego. I ended with this slide in terms of, you know, we understand that there's non-stationarity. Things are trending as opposed to just fluctuating, which requires, you know, having to have this predictive capability that results in perhaps "what-if" scenarios. One of which the "what-if" is the scenario planning that I think Sam will talk about a little bit more.

And the idea then also on the "what-if" scenarios is how do we not just try to provide a number, but a range of likelihoods of possible outcomes and the idea to manage for variability and adaptability as Richard corrected me last time. How do we -- How do we adapt to this variability that we expect in the future in terms of, you know, that last bottom right figure there? Again, so it's this variability that we're

trying to anticipate.

And the recap, you know, last time there was a series of very nice presentations on the Future Seas Program. And again, we talked about how if we had climate information, you know, we would be able to think about how we do our surveys, how we estimate our stock structure, transboundary management, et cetera. And it was a discussion that I thought, you know, laid out quite nicely in terms of, you know, how would we integrate, you know, climate information on these various topics in a systematic way if you will?

And I'll just jump straight into then a couple of things. Sorry, there was one more. And then we also had this message from the councils that it wasn't just on the science side that we were saying that we needed to think differently about how we -- how we provide advice, but this is a message from the councils. There was a meeting of the SES in Alaska two years ago. And the message was that the councils needed to start preparing for increasingly complex management decisions, you know, new data collection that we talked about, you know, more sophisticated tool boxes. You know, the CFI might be an example of one. And of course, you know, the stakeholder engagement. So there was a moment when, you know, sort of the science advice, as well as the request for advice were coming together. And I think that was one of the highlights of that meeting in May.

And then I'll try to make a transition here, which is, you know, the Alaska crab -- the snow crab crash. And you know, three weeks ago, you know, it hit CNN and you know, a lot of people, you know, got the attention that we knew what was happening out there. But it raised a couple of things on the science to management that I think are important. You know, to summarize it very quickly, if you look at the bottom right figures there, between 2018 and 2021, you see that those red areas where there were, you know, all of these snow crabs in 2021 weren't there.

And so that's, that report of the collapse of the Bering Sea crab.

So when you look at this paper, it's a very nice paper. You know, if you haven't had a chance to read it, it's in Science Magazine. You know, there were a couple of questions that came up in terms of the science and management. The first question on the science is what happened? Right? I mean how did this happen? And the analysis, you know, suggests that it was sort of a combination between as it says up there, caloric demands. So it was warmer and so, you know, there's more demand for food, but there was also not enough food to offset these caloric demands. And so that starvation in the end, you know, resulted in the disappearance of these, you know, 10 billion crabs.

The second question is could we have foreseen it? And you know, that's one that, you know, could we have forecasted these things? And the answer was that under the current approaches, you know, it wasn't -- the blue highlights there -- it wasn't until, you know, they really included the most recent data in their assessments that they were able to see the magnitude of the collapse. And so the idea here is that, you know, this inclusion or the way that we manage, right -- our current management tools, you know, and again, this is from the paper as well. Look at, you know, management tools and you know, base management targets and projected sustainable yields. Right?

And the point I'm trying to -- the point I'm getting at here is a projected sustainable yield in large part have the assumption of prevailing ecological conditions. And that means that we're not looking at outliers or things that are going off the charts. We're looking at small variations about something. And that term of prevailing ecological conditions and the way that we do the assessments, perhaps you know, didn't allow for some of these thinkings that I think we need to do given that, you know, climate really is taking off on -- has these offshoots that we need to be -- that we need to begin to consider.

And so the big question then is how do we -- how do we anticipate these in the future? How do we provide advice on it? And how do we include these environmental parameters or environmental changes in the way that we -- that we think about management? And providing advice on our side -- on the science side is how do we provide management advice to take these into consideration? And so with that set up, I was going to pass it on to Sam to answer the question.

Mr. Rauch: Can you hear me or is this going to -- (audio interference). Okay. Does that work?

Chair Davis: That works.

Mr. Rauch: All right. Thank you, Cisco for giving me 20 minutes. Does that work now?

Chair Davis: Yes. We will go an additional 15 minutes as well.

Mr. Rauch: Thank you, Cisco. You can all blame Cisco for that. All right. So I'm going -- I want to talk a little bit about what the management side does with all this. And to start with, I'm going to talk about some of the tools that we use and try to integrate how we respond to some of these things. Everything that Cisco says is true and it's real and it's creating challenges for us because we've got -- This is a really simplistic way of looking at sort of many of the problems that Cisco addressed. Right?

We've got habits are changing, maybe because of temperature. Like when the plankton changes, that creates food web changes down the line. We've seen distribution shifts maybe because of that, maybe because of temperature gradients. We see changing abundance like the crabs, you know, that are just going and figuring out why. And then we are seeing interactions with other species that are moving their range into the range of fisheries that are creating problems with us. And so all of these are management challenges coming from these changing environmental parameters that are creating issues

for us.

So we have a number of tools that we use. One of them that we recently did is this DisMAP tool, which is great. We and our partners came up with this national online portal that helps us visualize and analyze all the various economic and other tool factors that we have going on. It's a really great tool and it allows us to do things like this. So this is that black sea bass chart on the right. So this is the black sea bass. This is a very -- has been well used to document sort of the changing distribution since I think 20 -- we don't have that number on there, but it is -- it was on the other slide -- the early 2000s to more recently. With DisMAP, the reason it's so easy is I made the second chart, so if I can do it, anybody can do it. Right? This shows the changing ports. So you see the North Carolina numbers, which is where the population used to be is in yellow. It is declining over time. And the landings are now being at least half or more coming from the northern ports, which are increasing over time.

So this has -- we can look at both sort of the ecosystem implications for black sea bass from it moving, but there are profound social and economic and management criteria that come with the changing of the landing ports. Right? The ships are steaming further. They're not being able to catch what's off their ports. This also represents a change in council boundaries. Right? They cross over from one council into another when you go to like the Massachusetts landings. So this creates governance issues too. As you try to tease out what the effects of all these things are.

So DisMAP is a really good tool. Anybody can use it. I use it and so I just wanted to say how easy it is to look at all of the ways that are trending change. You compare that with some of the Social Indicator Working Group things -- and this is on a state level -- but you can also look at port levels and say, you know, do we have an underserved port? How are the landings affecting that port versus a perhaps more

affluent port? You know, where are the landings going? And that has really EEJ and other sort of implications that allow us to look at those social dynamics coming from a perhaps rain shift that we are seeing there.

All right, this is another climate tool that we have. This is also from New England. We look at climate vulnerability analysis because not every species is affected by climate change or affected in the same way. There are some winners. There are some losers. There are some that -- some stocks that collapse. There's some stocks that just move. This is a real brief summary of the New England assessment where they looked at 82 fish stocks and tried to calculate that. And so when we're looking at climate change affects with stocks, we don't necessarily to do everything. We should look at the vulnerable ones and look at that because those are the ones we need to focus on and the reasons why. So that's a helpful tool.

All right, some of this stuff is -- we accumulate in some of areas of the country to ecosystem status reports where we put a lot of this data together. Both the environmental temperature data, but as you can see we also can include revenue data in some of the social economic data, physical/chemical, all the various things that are a tool to management. We have these kind of reports available in eight ecosystems around the country. And it's just a different way to look at the various presentations for the managers. You can get through the Integrated Ecosystem Assessment website or through the National Marine Ecosystem Status website that we have all this stuff. So part of this effort is not just attract the data, but to present it to managers in a useful format.

The next one, let's see -- Okay, so I can't read that chart either on my computer. But it is a way -- This is an ecosystem social economic profile, which is a just a different way to take some of this data. This is for sablefish, which we will -- I'll talk a little bit more

in a minute about one of the things that we did. But it is a different way to map all the various things that are the environmental ones, the economic indicators, and the various other indicators and present them in a common place for managers. This was developed by the Alaska Science Center, but there's interest in other regions in preparing these kind of things in the West Coast, Pacific Islands, and Northeast to help elucidate what the trends are to both guide and stock assessments as they're looking for new and different ways to account for variables. And the managers to sort of present the results in a way that is accessible.

All right. Now this slide -- I want to spend a little bit more time on this slide. So ultimately all this information goes into the stock assessments, which informs catch levels. So I want to spend just a minute to do a really simplistic and overly generalized way in which we set the catch levels, which I'm going to edge away from Cisco when I say this because I'm going to make the science really simple. So when we do a survey, we will survey the same survey over and over again. And if we catch more fish, the quotas generally go up. And if you catch less fish, the quotas go down. Okay, really simple -- overly simple. Sorry, Cisco.

Okay. But that's not -- and particularly, you know, that assumes a lot as Cisco said. Even that simplistic level sort of assumes that the environmental parameters are the same year after year. That what you're seeing is really a population that is bigger or population that is smaller. And we know that, that's not always true, particularly when you look at these environmental parameters and things like catchability. Right? Are we catching more fish because there are more fish or because maybe the fish are going on the temperature gradient and they are just more or less accessible to our troughs to do the same thing year after year.

So understanding the impact of temperature on catchability can help us determine whether there really are more fish or are we just more -- or are our

surveys better able to catch them in any given year because of an environmental parameter like temperature?

And some of them are. Some of these things are related to catchability like this one is yellowfin sole. We have determined that, that one does -- the catchability varies with bottom temperature. So when we account for that in the management model, we're better able to -- the stock assessment's better trend what is actually happening as opposed to the really simplistic thing I said.

And for the yellowfin sole, we were able to use that, incorporate that into the model. And as a result of that kind of thing, the council is looking at increasing the overfishing level in the ABC because of the way that it accounts for catchability in the model makes a sort of really simplistic way I stated. We indicate that that may not really represent what's going on in there, that the population is healthier than we thought because we were able to do things like look at catchability.

We're also able to look at risk tables where we may not -- also I should say before that, we can also look at national mortality events like when red tide comes in or other kinds of things to better indicate what is going on when the stock collapses or when the stock -- when we catch less fish in those nets sometimes, it's not catchability. It is some other environmental factor coming in like red tide. This one happened with the gag grouper there. And we accounted for that, that's still -- that still indicated that some of the historic things that were going on were actually more significant than the catchability. So the council now is considering decreasing the catch levels to account for some of these environmental parameters in that.

I will say it's difficult to link the quota determinations are really complicated. There are a lot of factors that go into how much you're allowed to catch or not. The environmental parameters are just one factor that goes into it. It is often -- It is very rare that you can

say that because we now have a new bit of environmental data, this is the actual management result. It is a better informed management result, but it's really hard to sort of pick out amongst all the different changing variables what that one factor is. So these are some of these things where we were able to tie it back to the environmental factors. But there were other things going on for each one of these fish as well that we need to look at.

So one of the things that they do when they can't -- when it's not clearly -- when it is not so clear or when we don't have environmental parameters that we look at things like risk tables. The risk tables basically -- once again, I'm going to really simplify this, it's the risk of us being wrong. So you know, we come up with scientific advice that come up to the stock assessment, but there's a lot of uncertainty in that.

And understanding the risk that we're wrong and how much of a risk that we're wrong is important. Right? Because if we are -- if we hit our -- if we make a population estimate and every year we hit that population estimate and then the fish show up just like we expect, very little risk. But if we're wrong about that, if the fish vary widely or if there's a lot of uncertainty in our modeling or there's -- you know, there's changing environmental parameters creates a lot more risk.

So we do these risk tables that look at that. And this is something for the managers to think about. Should we have a better buffer? Should we be more cautious about this number, either too high or too low because it might not reflect reality because we have all these risks? And so we look at those kind of things.

One example of those kinds of things being used is with the sablefish, which I talked about earlier with that big chart. A lot of variation going on there. The stock assessment has had some positive sides of incoming recruitment, but there was not a lot of older fish there. There was a lot of concerns about the environmental variability -- the existing

environmental conditions influencing that in the past years. And because we were able to bring those environmental conditions, the council considered a significant reduction in the catch that would otherwise not have been there had we not been able to consider the environmental parameters.

So that was -- but it was all because of the application of the risk tables and looking at, you know, how confident are we that the assumptions and the modeling are the right assumptions. Right? When we're less confident, they do not -- the managers consider a broader, more cautious approach to management. And that was one on the sablefish one.

All right. That's how we use things now. And a lot of these are tools that we originally created through our ecosystem-based report, but part of the ecosystem is the climate and other kinds of things. So you know, we talk about Climate and Ecosystem Fisheries Initiative. A lot of these we've been doing for years through the Ecosystem Initiative, which is, you know, we didn't create all this stuff overnight. We're adding in and strengthening the climate part and also the ecosystem part. But all of this is a different way of looking at the various environmental parameters that affect the fishery.

So we talked about -- Cisco also talked about scenario planning. So this is something that we support and the councils have been doing. This is working to increase our capacity. The councils -- We work with the councils on the fishery management side to do that. I'm going to talk about three councils and their experiences with scenario planning. But it looks at, as Cisco was saying, it looks at not necessarily the current predicted future state, but understanding that there might be multiple different future states. We don't necessarily know which one we're going to be in. And how are we going to manage in that kind of situation where we may be in a completely different scenario than what we think now?

That has happened often enough so this is a realistic likelihood. And so we did what we call scenario planning. What do we do in the event that we are in one of those different scenarios? Or what do we do to plan for the event that we don't know which scenario we're in?

All right, so the East Coast Councils and Commission just finished a large extensive scenario planning endeavor. They looked at the various scenarios. They came up with a suite of recommendations. And I would categorize them both as we need different data to -- That's going to be important if we're in a different scenario or if we're in the unknown in order to allow us to manage when we don't know what scenario we're in. So there's a data management acquisition part, which really matches well with the IRA. It's really timely to be able to do that because it helps us guide those kind of decisions. We've gone through this process. We've outlined new data collection streams, new way to collect data in the event of these scenarios. And we're able to apply that almost immediately, so very timely.

The management side of that is what do we do that? I mean on the management side, there are two things that could happen broadly speaking is we could be in a different scenario. So what is the trigger -- when do we know we're in that scenario such that we could start managing that scenario? Or more likely, we won't know what scenario we're in until we're halfway through it, which Cisco is always telling me, we often don't know until we're -- until we're well into it. So how can we manage for that uncertainty in the interim? And the Scenario Planning Group came up with a number of not just new data, but management recommendations for here's how we think that you should adjust your management cycle.

So that Scenario Group just finished this spring. The managers got together with sort of an implementation team, an implementation group to look at these kinds of things because the implementation on the management side are going

through three councils and the commission. So you know, it now needs to go to the managers to actually carry that forward. And so the managers are going to want data, but they also need to move out on some of things that they're doing there. And that's what this new group, the East Coast Climate Coordination Group -- The Climate Innovation Group, which just met, I think last week, are trying to plan out well, what do you do with all this and how do you translate this into management now or in the future as this data comes online?

So the management response is still to come, but that is the -- I mean what we want is not to just do this as an interesting exercise. There needs to be some management reaction to that. And that's what this group is trying to do. Not just are we going to get more information, but how are we going to actually react as the managers? All right, so that was the East Coast.

The Pacific Council did a similar group -- a similar process -- The Pacific Coast Climate Scenario Planning. They called it the Climate Communities Ecosystem Initiative, which helped them to prioritize work. As similar, the scenario planning then became an information stream into the management process. So the Pacific Council has used this to help identify new data streams for IRA -- potential IRA funding. So that's good -- so much like the East Coast. The Council is looking at this regularly.

It is not clear what they have done in response as management action, this just completed last year. But the Council -- the Pacific Council is looking at this and trying to figure out much like the East Coast Councils are doing. But that still remains to be seen exactly how they're going to do it on the management side to react to this sort of adaptability. And that is one of the challenges. We want new data streams, but we also need to create flexible management systems and that is something that still needs to be done. Is not yet done on either coast.

And then finally, Alaska -- Alaska is doing something similar. They've got a climate change task force. They've got a Alaska Climate Integrated Modeling Project. And the Alaska Climate Change Task Force is working on climate scenario planning workshops in 2024 likely in May. So they are a little bit behind. Doing something similar to what the Pacific and the Atlantic did. The exact substances of those workshops are under development. They want to collate, synthesize, and communicate. It remains to be seen how they're going to react though. You know, you can collate, synthesize, and communicate, you still as the managers need to react. And that is -- We're still working with them on that. It's just still at an earlier stage in the process than the other two. Okay. And then a few more updates. So I mentioned that this -- a lot of what we talked about here started not as the CEFI Initiative, which is new, but as part of our Ecosystem-Based Fishery Management Initiative, which incorporated climate early on. And so that, we have an EBFM policy and a roadmap that is out there. It's been out there a while. I think we've talked to this group about that before. We're currently looking at how to update that to incorporate climate more directly. And you know, it has been almost a decade. I'm not exactly sure when we issued this policy, but it's been almost a decade. And so we believe that it is time to update that policy. We expect to finalize revisions to the policy in 2024, so that's something to look forward to. It will be part of -- to integrate that policy and make sure that everything is all integrated together; CFI and everything else. We're going to do that.

Now the last thing I want to talk -- which is sort of a pure governance issue, we've talked to the councils about this. So you remember like using the black sea bass equation. You know, so the locus of that stock is moving from off the mid-Atlantic to the New England, which crosses a council boundary. And the landings have really shifted from one region to another. Not completely shifted, but they are shifting. So that creates -- that creates governance structures because right -- because earlier, we were

completely satisfied to manage that stock, solely in the mid-Atlantic. It made sense. That's where all the landings were. That's where the locus of stock was.

But as it moves up into New England, how do we incorporate now the New England fishers who are fishing on this stock? At least, that's stock is available off their coast into the government structure. And I don't intend to focus so much on black sea bass because the councils are working it out at the moment, but the Magnuson Act does indicate that the Secretary of Commerce is supposed to designate the boundaries of the councils. So we designate which councils get to manage which stocks. And most of that happened in the 70s based on large marine ecosystems and that made sense.

But as the council stock changed, we need an objective transparent way to look at this if that needs to change. And some of this might need to change and some of it might not. But this is a function that statutorily has been vested with the Secretary and we basically haven't done it significantly for a long time. There hasn't been a need. We have done it occasionally. We did it with like tilefish recently. But there's a need to be transparent. So we put out a statement about what criteria we would use, how we would involve the councils, recognizing that you can't just switch that council on and off.

It takes a lot to work up to -- I mean once it goes to a new council or shared council, they've got obligations. They've got to create an entire fishery management plan with various objectives. So it's a difficult thing to do, but we have to be able to explain when and how we are or are not going to do something like that. So this is sort of the concept. We put that out.

We've talked to the councils about this, the CCC, which is the Council Coordinating Committee. That's all the councils. So this is the timeframe. We have discussed this with the councils in a number of previous meetings. We've put out a draft of the

proposed policy with the councils in May. We discussed them recently in October. Their feedback and all the comments are due on Friday on the draft. And then we expect to finalize this policy and rule it out next summer.

All right, I'm almost done. So looking forward, you know, we talked about the Climate-Ready Fisheries funding piece through the RA. We've talked about the overall Climate Ecosystems Fisheries Initiative, which is broader than just funding, but funding is an important part of it. We've talked about the EBFM policy of the roadmap and the draft Governance policy. A lot of those things are still to come. We've been talking about them, but we still need to finalize a lot of those things.

And the take-home message, which Cisco and I agreed on is we're using various tools to address the climate change, which is true. Right? A lot of them did not -- they're not new. There are new ones that we are building in. They build on the efforts that we're moving forward. And we're looking -- you know, we're looking forward to the upcoming challenges that continues to evolve as sort of the changing ecosystem evolve, our challenges evolve. And with that, I'm going to stop. I'll be happy to take questions for both of us -- we're happy to take questions.

Chair Davis: Thanks, Sam. Thank you both, Cisco and Sam. That was an amazing update. And really great to see all these tools in place and the way the communication governance and everything. So we have -- we have about 15 minutes and I believe that Pat was up first. Actually, I'm sorry. I didn't see all the -- We have Pat, Kellie. And who was next? Anybody? No. We'll just go Pat, Clay. We have Meredith and Richard and then Kellie. Okay, so go ahead, Pat.

Dr. Sullivan: Great, thank you. Thank you, Sam and of course, Cisco and Evan too. Sam, I really like where you're going. The challenge for me is I'm in

the weeds and I'm seeing all of this going on both coasts. And it's really hard. So for example, I'm the Chair of the working group for the scallop, which is being prepared for the research track assessment. And I really had to twist arms to get the ecosystem folks to come and at least talk to us. And I've seen in other situations for the SARC reviews where the ecosystem person was there for the whole period. And this gets to the sort of transdisciplinary approach to trying to deal with this where people are actually working together on this stuff as opposed to here's what you should be doing, see you later. Right? And it's difficult.

But now, you know, there's severe things happening with the scallop and it has to do with warmer temperatures. So we're getting some input now, but it's challenging. On the North Pacific Coast, the ecosystem folks -- I mean after several years, we got an ACLIM presentation, the SSC did. Apparently they were giving it to the council all the way along, but we never saw it. And you know, the ecosystem folks are coming to me on the SSC individually and saying why aren't you using our stuff?

And of course what we see is that, you know, folks like Szuwalski who's doing the stuff with the crab, he's doing like five or six crab assessments. Right? And he doesn't have the time to incorporate something into the assessment. So what happens is we get the report. It starts the meeting. We use it qualitatively to add a buffer or not, which is a very crude way to be actually using this very high level information that's being provided.

So some -- I don't know what to suggest, but something there, which -- what I what I was sort of seeing in this was the ecosystem part of it. And how does it connect with getting individuals to talk to each other and make use of it?

The only other side comment is what I've seen at other levels is people continue to focus on the adults. Obviously with the crab, something else is happening

there. And we're seeing that with like Summer flounder in estuaries. You know, there's all these things. And we want -- We are drawn to the adults, but in fact, this is affecting us at lots of different natural history levels. So the natural history of these affects is happening too.

So I'm sorry, I don't know what to suggest. You're doing the right thing from the high level picture, but people have to be talking to each other and we need a transdisciplinary approach if we can think about how to do that. Thanks.

Chair Davis: Okay, thanks. Because we don't have a lot of time, can you all try to keep your comments very short and then have a direct question? It's fine, Pat. And we do recognize you, Tom, that you're also up on the screen. Clay.

Mr. Tam: Yes, thank you. Just a comment. I think when you're looking at the plan, Cisco and Sam did a great job. But also getting down in the community level. And where I speak from is from the Native groups, especially in the Western Pacific. These are not new issues. A lot of the knowledge -- empirical knowledge from these people that lived on the land, they price they paid for mismanagement was the loss of civilization. And many of them, if you look in like the last meeting we had brought up Charlie Kaaiai. And when you look at the population of Natives and what they've done in terms of moon calendar, lunar calendar, harvesting of fishing cycles, you talk about ecosystem management and that was it in a nutshell. And I strongly suggest to at least have the flexibility within our region to go and touch on these people.

And I would think you would have the same scenario with the Native populations along the Coastal areas. They have knowledge that goes way beyond the last 100 years with our climate change. And I know practitioners out there that have predicted and we have seen the science from these people. And I suggest strongly that instead of reinventing the wheel, that we embrace that and maybe bring them

to the table. Thank you.

Dr. Werner: Yeah. No, thanks for the comment. And again, couldn't agree more. And I believe the Alaska Council has, I think, formally included the traditional ecological, local ecological knowledge in the council process. Or at least they wrote a framework for the inclusion of that knowledge in their -- in their decision making.

Dr. Sullivan: We actually have SSC members that incorporate that as part of our process, yeah.

Chair Davis: Thank you for that comment and discussion. We have Meredith, then Richard, Kellie, Barry, and then Tom.

Ms. Moore: Oh, sorry. Hello. Okay. Sam, hello. Very like appreciate all of the comments. Am I getting a lot of feedback or just a little? Okay, sorry. So I'm a big fan of risk tables, but I note that a lot of councils and fisheries are still developing them or don't have them. And so one recommendation is that it would be great to set a goal for having risk tables for all of those fisheries, like all of our fisheries so that we can understand them. And I know you need to be thoughtful about like which ones are the most vulnerable and target your efforts that way. But snow crabs, climate vulnerability assessment said that it was not particularly vulnerable to climate and then they all starved. So there's a need to have a sense of risk tables, I think for lots of fisheries.

But my main point that I'd like to say is that a lot of fisheries don't even have like thoughtful harvest control rules that gradate with risk or vulnerability or abundance even in the fisheries. And I'm assuming that a lot of the way that the climate information you all are preparing is going to interface with the fishery management system is through buffers, though the management and scientific buffers that ladder down from OFL to ABC to ACL.

And I would be really interested to understand if there is a baseline assessment of the amount of risk

that we currently have in our fisheries because a lot of fisheries set management buffer equal to zero. And also the scientific buffer, not particularly accounting for the issues. Scientific buffers, I think have a lot more credibility to them. But many, many councils simply set the management buffer for their fisheries to zero so that they can fish as close to the ABC as possible.

So I'd be really interested to understand if we know what the baseline of that is so that we can understand if we are then effectively managing using risk tables and thinking about the vulnerability of fisheries to climate change. And see whether we're actually implementing that as we go. So thank you.

Mr. Rauch: Yeah. There's some sweeping statements in your comment that I don't agree with all that. Every one of our councils look at risk while they're setting their quota. And they don't all have -- they don't all have risk tables. And some of it is more fishery-specific, but they all are required to look at that. And as they set the annual, take that into account -- take the uncertainty into account and the uncertainty risk, the same thing.

Some of them do set it at zero and they are required to explain why. So they're supposed to have a rational basis, but some of them do set it at zero. In part, my experience has been those that do are based on the fact that the predictive capability of our models continues to hold up. Right? You know, Cisco talks a lot about the fact that a lot of our parameters are falling apart in terms of some of these terms, but not all of them are. Some of them are still quite predictive and were good at that. And we constantly look at it.

So you know, there's not a baseline for every fishery. Every fishery is different. We have different amounts of scientific investment and research that goes into different fisheries in part because of not every fishery is as important as every other fishery. But they all are supposed to on the record, you know, have a

rational basis for why they select what they do, which includes why they are dealing with uncertainty the way they're dealing with it. And we may disagree with the conclusions, but that's a requirement of all the fisheries is to do that.

So the risk is embedded in there. Some of them are a lot more overt, like those risk tables. And we encourage that. But that risk discussion and the certainty discussion is embedded. Every time we set a quota, it's in there somewhere. But I'm happy to talk with you. It's just you asked is there a national baseline? There's not. Each fishery is different. And some of them are far more robust than others. I think we all agree on that.

Ms. Moore: Thanks. I really appreciate that and am happy to talk more about it.

Chair Davis: Thank you for that, Sam and Meredith. Richard and then Kellie.

Mr. Yamada: So I guess my question is that you know, in your ecosystem management planning that -- I have a specific example. In Alaska, they would take all the ecological components and determine, you know, their interactions. And since this is my last meeting and I can stand on a soapbox here, I've been studying squid. It's a potential commercial fishery in Alaska. And in the -- when we created the EE Zones in the early 80s, late 70s, when we moved all the foreign fleets out of Alaska, there's a huge squid fishery for Manchester squid. They took, you know, hundreds and hundreds of tons of squid out of Alaska waters. And when we pushed them off, no one came into fish with squid. And this is a time when all the fisheries in Alaska were robust. And for 50 years, there's never been a squid fishery in Alaska.

And nobody's -- really no data on the squid populations would have been collected. So I think five or six years ago, squid got -- was kind of looked at and really cursory stock assessment done on it, but it was not a targeted assessment. And then so squid was put into an ecosystem component. And I guess

once you throw in your component, there's no data on it. So I've been -- you know, I did get an SKA grant to look at the market for this squid -- this Manchester squid. But I'm having a hard time finding any data on -- the scientific data on the interaction of this squid population with other fisheries.

So I did a couple years ago work with a professor at the University and we were able to help the Northwest Science Center do some eDNA research on the squid species. And the students just published their posters last month. And these squid are eating herring, cod, and salmon as part of their diet. So you know, nobody's done any of this kind of research to see how -- what role do these squid play in the ecosystem? It may be, you know, a hidden predator in the ecosystem that nobody -- has gone under the radar of fisheries because unless there's a commercial fishery, you don't throw any money into it to do that research.

So I hope that, you know, again, this is my last meeting so if anybody's interested in looking at squid, I'm the squid guy. And so I'd really like, you know, to get more attention on what role does squid play in the ecosystem in Alaska? So thank you.

Dr. Werner: Just to build on that, Richard, I think not just on squid, but there's a whole, you know -- there's a need to look at the shifts in ecosystem. Just look what happened to the Alaska snow crab. We need to be measuring shifts at other aspects of the food chain or the trophic levels. You know, we should be measuring what's happening with those -- you know, with the organisms that can provide those caloric offsets if you will. And unfortunately in our surveys when we have to give something up, it's ecosystem measurements. You know, we're focused on the target species that we need to measure, but we're not looking at perhaps the supporting, you know food web if you will, whether it's squid, whether it's others. This is something that we have to do as we try to understand how the ecosystem is shifting. But good point, thanks.

Chair Davis: Yeah. Yeah, thanks for that. Thank you. Kellie, Barry, then Tom and then lunch.

Vice Chair Ralston: All right, I'll be brief. And I guess this a little bit of a pile on. I really do appreciate the Agency kind of looking more holistically at how to address fisheries management. I think it is looking at everything that's connected. Not only the trophic levels, but also the habitat and the water quality that go with it. In my mind, that goes beyond water temperature, which I know we talk a lot about because that's easy to monitor and assess. But the habitat really is key. I mean when you put it up there for the Snow crab, to look at the fact that there weren't prey items because there's not habitat to support them. It is all interconnected. And I certainly realize that, you know, we're challenged sometimes even on data poor individual species to have information on an individual stock. And so collecting all that information is a challenge. But I think it is something that is key to properly managing our fisheries into the future and addressing some of these climate shifts.

And one other point that I wanted to make that Pat brought up too was really kind of looking more at juvenile species to be able to be predictive so that we don't get halfway down a climate change cycle and then realize that we have a problem. If we're looking earlier on in the life cycle, I think we can -- we can catch that a little sooner and perhaps be a little bit more proactive on it. So that's all I have to say. Thank you.

Dr. Werner: Real quick and just to echo that. I mean we were able perhaps not to have to measure certain things, assuming stationarity, you know, that word that was up there. But now that's no longer the assumption we can make. So what we thought we didn't need to measure anymore, we all the sudden do need to measure. Yeah.

Chair Davis: Yeah, very good points. Barry.

Mr. Thom: Yeah. I guess I'm going back to a couple

of things. One, I just wanted to thank Kevin for highlighting what's going on with the fishery dependent data collection and improvements there. And for Sam for highlighting the importance of that data when it comes to actually managing the fisheries going forward. I know the Agency tends to focus a ton on the internal resources going into the surveys and that assessment piece. But that fishery dependent data is just as important when it comes to actually management of the stocks and collection of the socio econ data and other information.

And so I think related to the budget discussion tomorrow, I think what a lot of us are trying to do is figure out ways to keep that base data collection going. Keeping, you know, modernizing that. And then at the same time, adding to that the ecosystem information. It's not an either/or. It really is an "and". And we need both of those pieces going forward. So hopefully that will continue to be emphasized.

Chair Davis: Thank you, Barry. Tom. Tom, can you hear us? You're up next.

Mr. Fote: I don't know if you can hear me, but I'm not hearing you. I lost sound again. Okay, my question -- since I can't hear what you've been saying for the last few minutes, it's been a -- I'm looking at how we manage fisheries. Management of fisheries in spawning stock biomass for many years. I did Atlantic Stage Marine Fisheries Commission and jointly with the Mid-Atlantic Council for almost 33 years. And basically we're still managing that way. Yet, we know that it doesn't produce what we think it's going to. But we're producing the biggest sporting stock, biomass, yet we have species like lobster, which is not going to make any difference because there's going to be no recruitment. So if we've got bays and estuaries that are not a producing recruitment, it's maybe because of climate change.

One of the things we talked about this afternoon with the climate change is the effects. And again, I'll point out the 1955 study that was done in New Jersey on

recreational fishing. If you look at that study and you look what was important in New Jersey back then for fishing, those species are gone; both the mackerel, whiting, ling, and a whole bunch of others. And what they started moving was from the south from Delaware Bay. We used to be able to get Winter flounder and scup and then it disappeared all the way up the coast.

So I hope you heard my questions. I probably can't hear you answer.

Chair Davis: Thank you, Tom, for your comments. I don't know if you can hear us.

He can now. Anything you'd like to --

Mr. Rauch: I mean I just -- I think that's exactly right is that we -- figuring out the inputs, you know, we are going through a transition. We've always been in transition. Fisheries management is never as simple as I sort of really laid it out simply. It's always included more variances and inputs. And as we learn more as Cisco said, we're learning what to -- what kind of data we need. We didn't think we needed that data. We didn't think that, that was driving the stocks. You know, we really simplistically many fisheries thought that fisheries removals was the -- you know, the predominant factor in terms of health and stocks.

And for me, stocks is not true anymore or at least it's clearly not that simple. And figuring out, you know, is it the bays or estuaries? Is it climate change? It is the prey? That's all important. It is easier to say that, that's important than actually figure out how to measure it. How it actually affects those kinds of things. That's really complicated.

We're working through those issues. It is a long, slow process and it will continue to be a long, slow process. There's no easy answers because you've got to collect the data. You've got to understand what it means. You've got to sort and incorporate it. Then you've got to react to it as the management. That is

a lengthy process. But we're all committed. We've been committed to it for years. The CFI stuff is a new way to invest in it and new tools to bring to the -- to the problem. But the problem remains the same problem it's kind of always been.

Chair Davis: Thank you, Sam. So Cisco and Sam and Evan, thank you so much for this very robust discussion and bringing us up-to-date both from the budgetary side, from the science side, and also for the toolbox that is coming together for the fisheries. I also want to thank the MAFAC members for all your great comments and questions during this discussion.

We are now going to break for lunch. And if you could be back here at 1:15, that will be our start date -- start time.

(Whereupon, the above-entitled matter went off the record at 11:52 a.m. and resumed at 1:24 p.m.)

Chair Davis: Okay. I also want to acknowledge that Matt Upton is on Zoom. Hello, Matt. Nice to have you join us. And best wishes for your upcoming baby. Oh, did he leave? There he is. Matt, can you hear us?

MR. UPTON: Nice to see everyone. Wish I was there in person.

Climate and Ecosystems Subcommittee - Recommendation for Climate-Ready Fisheries Policy

Chair Davis: Yeah. All right, well, we've got a nice session planned for the afternoon. And Meredith and Jocelyn are going to lead us in a presentation and discussion on Climate and Ecosystems Subcommittee recommendations for Climate-Ready Fisheries Policy. And this is one of our action items that will be voted on Thursday.

So, the subcommittee has been doing some amazing work and I'm quite excited to hear some of the outcomes. And then there'll also be a working session after this time. So I'll turn it over to both of you,

Meredith and Jocelyn, to lead. Thank you.

Ms. Moore: Yes. And we're doing it with grace, as we always do. That's what we bring to this. I think it's our number one skill set.

Chair Davis: Okay, so you have a little flexibility on time, depending on how much work time you need. So, we'll keep an eye on that.

Ms. Moore: Perfect. Just so folks know, my presentation is short; then I would like to get feedback and answer questions and figure out next steps. And then, based on how people react and how that goes, we will ideally use the work session afterwards to huddle with anybody whose feedback we need to better incorporate, with the goal of leaving this meeting on Thursday with a finalized letter, if possible.

So that's just sort of the where we are and where we're going on this. So let me take a quick step back, because we have some new folks. Hello, new folks who I have not had a chance to introduce myself to.

I will do a very short, what is happening with this subcommittee, and what are we and how does it work. Because I think we're the first subcommittee to sort of report out during this call.

So, hi, I'm Meredith Moore. This is Jocelyn. Jocelyn? Great.

Also, I just want to acknowledge, like, our subcommittee is very large, and many, many people have helped us with this letter. And I did not do the work I needed to do to list out who all those people are, but I love you all.

And, also, if more people would like to join the subcommittee, you are welcome. So if you watch this, and you're like, "I cannot wait to do more of that," you let me know. Okay, great.

So, we are the Climate and Ecosystem

Subcommittee, a name that I remembered. And we tasked ourselves with trying to figure out how to improve the uptake and implementation of climate information in fisheries management.

And so, early on, we kind of determined that we felt that there were kind of two -- maybe go to the next slide -- two main bodies of work that we felt kind of needed to be addressed. And the rough answer for what the two things are is -- oh, beautiful; I can't wait to mess this up -- is, one, what is Climate-Ready Fisheries? That's question one. And so, that's number one. And then number two was, how do we do it?

So that's the short version of what we put together. But the longer version is up on the slide, which is we wanted to -- we felt that one of the challenges in the uptake of climate information into fisheries management is a lack of a shared understanding of what and why we are doing the work. And so the subcommittee wanted to take a look at how to articulate that Climate-Ready Fisheries is different than just what we've always been doing, although there are certainly similarities.

As well as, like, when we are looking at the fishery management system as it is being deeply strained by climate and the communities that depend upon these resources are further burdened by issues of climate, what are we going to choose to value when we're making decisions about management? And what direction should we be aiming management in, in order to be successful and to have fisheries for the long term?

So, step one was we felt that there wasn't a coherent and collective shared vision of why this matters and what we're doing with it, and that we would like the agency to make that more crisp for everyone who's involved in the management system.

So, that's phase one, and that's the phase that we're currently in. And so today's letter that we will be looking at is our recommendation about how to address that particular question.

The second phase, which the subcommittee will be taking up as soon as you free us from the current letter, is how. What recommendations can we give to the agency about how to go about implementing Climate-Ready Fisheries more into management?

We heard a lot of really good tools and science that's being developed, and we're deeply appreciative and support all of that that's happening. And we also look at the fisheries management system right now and see that only 12 of our FMPs of the 46 actually include climate. Obviously, that's from a GAO study that was recently done.

And so there is just this gap because of the inertia of the management system and other very real issues. Like, there's a reason for all of them, but we want to provide recommendations about how to try to overcome some of those reasons and get us further. So that's phase two, which we will start after this meeting.

Things that the subcommittee has done, besides lots and lots of meetings with lots of agency people, which we're all very appreciative of, is that we did organize a session at the last meeting where we got to hear from both practitioners, and also scientists and others, about what they saw as major challenges in Climate-Ready Fisheries.

And so our work here is building both on what we have heard in all of those sessions, where we're learning from folks, as well as the expertise and thoughts of the subcommittee. So, ideally, our letter, which I'll go over in a second, is a collection of all of those thoughts, with kind of a call to action to the agency.

So that's what I wanted to say about what we're doing. Jocelyn, anything to add to that? Okay, great. There's a big green button. I'm going to push it. Oh, no. Okay, hang on. Beautiful.

Okay, our main recommendation is that there is not a Climate-Ready Fisheries policy, and we would like

there to be one. So, that's what we came up with when we were looking at this. And the reason that we landed on this, although we note that there are other policies that the agency has issued; you could argue that Magnuson's saying "have sustainable fisheries" merits needing to have climate in your fisheries, as well as there is the Ecosystem-Based Fisheries Management Policy and Roadmap, and other similar devices like that.

But what a policy is supposed to be -- and I took these words from the agency, so you're welcome -- is that it's a statement of, and instructions for, implementing important high level internal direction that guide the organization's decisions and actions. It promotes accountability and consistency in management and science practices, informs constituents of agency positions, and demonstrates NOAA Fisheries' commitment to implementing identified priorities.

And when I read that, I want one of those that says Climate-Ready Fisheries. Like, that's -- that just really speaks to me. We need that level of commitment from the agency that's clear and talks about these priorities and expresses them to people. And so, to me, it was clear that the policy system is a useful one for us to be recommending that the agency clarify their priorities on.

And a cool thing about the policies, because, as you know, I probably spend way too much time looking at the agency's policies and procedural directives, but they often contain the exact type of things that our subcommittee found were lacking, which is things like definitions of terms and frameworks for how to achieve certain things. Principles, in particular; policies are a great place for the agency to articulate the principles that they wish to think about and the goals of where they're trying to go.

And so, we were like, great. Policy, please. And then, so, here's what we're recommending. And I'm actually going to spend a little bit of time on the third

bullet point first, which is that I did not try to write the policy. Our subcommittee did not try to hand the agency, here is your Climate-Ready Fisheries policy.

What we did was say, you should have a policy, and here are key things that we think you should consider in your principles and values, and to bring clarity to this issue.

So, just want to be clear, we know it's not a complete document, and we weren't trying to achieve that. We're trying to make recommendations to the agency about what we would like it to value and how it should communicate those priorities to managers, scientists, and the public.

So, thing one, we recommend a Climate-Ready Fisheries policy; you've heard me say that. Thing two, we defined three different things, or prioritized three different things, that we think need additional clarity in the effort of the agency as they think through what to value here.

The first thing -- and I will talk a little bit more about these in a second -- but the first thing was, please tell us what Climate-Ready Fisheries are. Here are our thoughts about it. Then, separate from that, how does the management system -- what does Climate-Ready Fisheries management look like?

And then the third thing is, we know that fishing communities are deeply stressed by this, and we'd like to see more focus and consideration of what they are going through and how to maintain them and help them adapt to these changes, as well. And so we felt it necessary to call that out directly.

This is a -- these three things have overlap, and I just want to admit to that. Fisheries is a combined system of both people and resources. And so we've called out people separately. It's also in the fisheries definition, so there's some overlap. But we felt that the additional priority and focus was necessary to articulate what our concerns were.

And we also pulled the management system out separately because we found that, if we didn't do that, then we lost track of, like, the values and objectives that we wanted the full system to achieve because we were spending too much time saying, like, and in this part of the fishery management system do this thing. So, it was too specific.

So, the document, which I'm sure you all have read, includes all of those pieces to it. And, again, this is what we have been focusing in on. The Climate-Ready Fisheries is our broadest of our recommendations for things that should be clarified and defined, followed by what is the fisheries management system when it is climate-ready? What does that look like? Followed by a number of recommendations about how to consider the vulnerability of fishing communities and how to support them during this period of time.

And I believe that's my last slide. So, here concludes the presentation, because I did not want to walk you through a -- I don't actually know how many pages it was -- eight-page document and slides. And so, what I'd love to do is open it up to questions and comments, etc., which we will attempt to incorporate into our work and move forward with this letter, if we can. Thank you.

Oh, Jocelyn, anything you want to add? I know that was a lot. This is also how the subcommittee meeting goes. Reminder, would you like to join the subcommittee? Jocelyn?

Dr. Runnebaum: I would like to thank Clay Tam, Sara McDonald, Pat Sullivan, Sarah Schumann, Joe. On screen, Matt Upton, Tom Fote, and Natasha Hayden. And a huge thanks to Katie for keeping us on track, somewhat on law, on time, and really pushing it forward. So, thank you. We couldn't have done it without you. And sorry you had to bug us so much.

Ms. Moore: We were terrible to her.

(Laughter.)

Chair Davis: So, questions?

Dr. Runnebaum: Go ahead, Richard.

Ms. Moore: And then Stephanie's next.

Mr. Yamada: So what is Climate-Ready Fisheries?

(Laughter.)

Mr. Yamada: Yeah, I mean, you must have debated this, trying to come up with some kind of definition. So just, you know, like, off the record, give me some idea of what is a fishery that is climate-ready?

Ms. Moore: Yeah, I think it's a great question. And that's one of the reasons why we are recommending that the agency make it more clear, and why we've provided a substantial amount of feedback about what we think it is.

I'm trying to see -- I mean, one of the things that we recognized is, as we tried to narrow it down, that we were leaving things out. And that it does require sort of a different valuation of things.

I think one of the key sorts of statements that we came up with that helps is actually the first bullet point under that section, which is: Climate-Ready Fisheries prioritize the ability of stocks to provide and to support businesses, recreation, and cultures that depend upon them for the long-term, taking into account the protection of marine ecosystems based on the conservation and management principles and requirements outlined in the MSA.

And so it's about managing that long-term even as things vary in management. But I want to be clear, we didn't write a, like, one-sentence definition, because it wasn't sufficient. Which, again, is one of the challenges that we're asking the agency to address, which is that there is no shared understanding of what the point of it is, and what the output and outcome of it would be.

So, there's a non-answer to your question. Because

you can't write a one-sentence definition of this, which, in my mind, is another reason why we need more clarity. Please follow up with your extra points.

Mr. Yamada: So, follow-up. So, in my mind, when I hear that, the major issue, I think, for me, when you talk about climate-ready, is the ability to predict what the future is going to be like and the impacts of climate change. So I think predictability is, like, top of my list.

Second would be, how do businesses or fisheries pivot to a change in fishery? So how do they go from, you know, a high abundance fishery to a low abundance fishery? Do they try to find other fisheries or provide more added value to that fishery? You know, so that they're -- although you may be able to make more money off of a fishery that is not as productive as it used to be in the past.

So, that's the second thing. Which is part of it. I mean, I look at resiliency to climate change as being a major thing that I would like somebody to say, well, the stocks going to be crashing your next ten years, get ready. There are things you can do. You can -- you know, these are, you know, things to prepare your business and your business plan to start anticipating this in the future.

So, you know, how far -- I mean, a lot of these pivot points takes a lot of investment, you know. And so you need time to raise capital for infrastructure. If you're thinking about, okay, we're going to go to aquaculture stuff. We're going to go to -- we're going to raise oysters instead of whatever. And it takes infrastructure and time to sort of -- give me, like, you know, when is -- what is happening in a fishery? When do I need to prepare to pivot into another fishery? And what are my options? You know, those are questions.

Ms. Moore: Thank you for that. I'll do a quick response, and then I'll give it to Pat. I would say, of your three points that I wrote down -- which is, one, predictability; two, how to pivot; and three, resiliency

-- I think that the one and three are included as much in this as we can.

So, we recognize that many of these fisheries will not be as predictable, but we have a language in there supporting, especially in the Climate-Ready Fisheries management section, the various tools and other predictive capacities that the agency has walked us through earlier, and support for things like CFI, and risk tables, and all of those things.

So we're wildly supportive of doing as much prediction as possible, while recognizing there's going to be a substantial amount of just, in some cases, buffers or precaution we need to put in for the situation where we don't know the answer and we need to be careful so people can keep fishing for the long-term.

So, yes to predictability, trying to include that, while recognizing we are going to be in a less predictable state. So I think we've included some of that, but if we haven't gotten to what you want out of that, and this open to everybody, I encourage you sending us red lines or working with us to try to add some of these to make sure that it's in.

For resiliency, resilience is one of the primary things that we noted as a key factor. Both on the community side, and also the fish stock side, is that Climate-Ready Fisheries should prioritize resilience and ability not only to bounce back from things, but to maintain fishing for the long-term.

So to your middle point, sorry, which is how, how do they adapt? That's phase two. Sorry to kick that one over. But those sorts of questions about, like, what should the -- what should fishing communities and those sorts of things do, how do they adapt, we want to cover that more in the how section, which I think is going to be phase two. But what we tried to do to bridge us there is highlight, in the community section, the conditions and values and considerations for what a community that is part of a functioning climate-ready management system is.

Like, how do we value them? What are we thinking about? Because if we have that sort of guidepost of what we want the communities -- how we want to support them, then that creates the conditions where we can figure out the how's.

And so that's how we tried to address some of that in this policy document.

And I know Pat also wants to jump in and try to help answer some of your questions, too.

Dr. Sullivan: Yeah, if I may. I have this sort of very black-and-white cartoon version of how to think about all of this. If you think of a fish, basically, with the climate changing, the fish either has to adapt, move, or die. Right?

And, frankly, it's the same thing for communities. And we don't want to say it exactly that way, but you actually said that. In the sense of, like, you want to know if something is going to happen that is going to make everything go away and you have to do something else. Right?

So I think it's important to recognize that last point, that there may be some action -- so, it's not all about resilience in the sense of, like, we'll figure something out. You may have to choose something different.

And so that's an important point to kind of consider in that, in the realization of how to implement this, that may have to be -- you know, humans are very creative, but that may have to be one option. So I appreciate that you noted that. Thanks.

Ms. Moore: If I could just riff for a second, I always think it's "adapt, move, die, or just have a really bad time." Because some of them just hang out and get real stressed out, which is how most of us live, so.

But thank you. Are you feeling, is that helpful? Would you like to offer recommendations for us to, to like, clarify, or ensure some of those points are better included?

Mr. Yamada: I think if I read the document, I'd like to how to. Which is to me -- I'm more of a practical person, instead of getting away from esoteric values. You know, I mean, a lot of times that just escapes me.

I like to, you know, like, okay, I need to get some concrete answers to some of my concerns in the future. And that's the -- you know, to me, the language is important.

That if you're going to communicate that to stakeholders, that they don't see this as just a policy. This is going to be something, hopefully, more concrete that recognizes the situation. That will provide some answers and some guidance. And that's basically what I'm saying there.

Ms. Moore: Thank you. Yes, I really appreciate that. We had to resist, in order to divide the work really. We're going to say the where we're going because we need to know that so that when we're deciding the how we're going, that it actually gets us there.

And so, it feels like we've sort of reversed the order of things here a little bit. And that was a frustration that we put ourselves through as well.

So appreciate your comments very much. And our goal is to get to some very pragmatic how's. I had Stephanie with a card up at some point in time, and then Tom. Stephanie, are you retiring? Very good, thank you. Tom?

Mr. Fote: Yes, Rich, I don't ever see a concrete answer in how do we do this. I mean, I know Bob Beal is be sitting around a table. He manages two fisheries that I managed for 30 years on the Commission, which is with the flounder and weakfish.

We shut the fishery down. We put basically a moratorium. One fish, very small bag limit, 100-pound limit on the commercial fishery. And they were building up, they were coming back before we put these regulations.

But for the last 18 years, we saw no results, and the same thing went to flounder. Not the offshore Georges Bank, but the inshore stocks. Same thing with mackerel. Nobody fishes for mackerel because it's no more inshore.

And it wasn't management's fault, it just disappeared. So I mean, I can't find a concrete answer what we do. Because we manage for things that we can't control.

I mean, and basically, the only things, the tools we have, and even when the stock assessment peer reviewed says that stocked biomass is not the problem because it's big enough, that's all we manage towards.

And then, we restrict the recreational and commercial fishermen, on these stocks that they can harvest and all they see is pain. They don't see any results.

Same, as I said, weakfish, winter flounder, Boston mackerel, and in the Mid-Atlantic region, the stocks that had disappeared beside that.

So you know, I don't see a concrete answer yet. I mean unless we can do something about climate change. And we don't seem to be getting anywhere on that. So I'm not sure what the answer is.

Dr. Runnebaum: Richard, if there are specific sections, we have, I have a couple of sentences flagged that we can step through, when we go into the work session. I don't -- I think Tom's right. That we're not going to get to, and Meredith, that we're not going to get to specifics.

And that this is just the first step in a process, which is, can be frustrating. So as long as we're sort of heading in the right direction that you're comfortable with, I think that would make me feel good.

Dr. Runnebaum: Okay, great. All right, Brett, Megan. Megan, Megan, please, Madam Chair.

Chair Davis: Okay, thanks. First of all, thanks for the presentation, overview, and the good work of the committee. It's just I have a couple of questions, although probably I'm not allowed to ask more than one.

So I was just wondering, you know, with the information that was shared this morning from Cisco and Sam, in regards to the Climate Ecosystem and Fisheries Initiative, I'm just wondering how you've addressed that in the letter. If that's part of it, I apologize if I missed that.

Ms. Moore: Yes, it's in there. We're largely focused on the need to, to define sort of the full system of this. And so the Climate Ecosystem Fisheries Initiative is absolutely a thing that we acknowledge.

And recognize that in order to achieve clarity fisheries, we need, you know, the full science enterprise to be supporting that decision- making.

And so we've included that in a couple of sections in the report. So it's there, but it doesn't, I think we all recognize how important CFI is and how that work is going to help us.

But also, the climate is happening to our fisheries now. And so we're focused on trying to create a system that, that can work for now, and also when all that new science comes online.

Dr. Runnebaum: So the second bullet point on page 4. And then, on page 5, it's the first full sentence, we appreciate CFI, basically. Okay.

Ms. Moore: And Megan put your card back up if you have more questions. And Brett?

Mr. Veerhusen: Megan, did you want to, do you need to ask more? Go for it.

Chair Davis: Very generous, thank you. I suppose my other one is, I'm just curious, in regards to how the committee worked, where the things, where you

aligned and where there might have been some conflict of, of ideas? I'm always interested in that when committees get together. And so just kind of curious from that standpoint.

Ms. Moore: I feel like I should let somebody else answer this. But I will say, the, I think the, the couple of places that I noted is that is the tension between the how versus the where.

I think we spent a lot of time trying to figure out, like, we also just want to get to pragmatic how to do it and provide those recommendations. But I think we recognize that without a shared understanding of what we value and, and how things are different. It's --

If you're making decisions about what to do without knowing the direction and the intent of it, then it, you can just get so focused on doing the thing that you forget where you're going.

And so, I'd say a lot of the tension came from trying to tease out and organize and order our thoughts about how to get to those things, because there's a lot of really passionate people who want to solve these issues.

And I think navigating some of that, as well, as I would say, some of the, some of our members are they're either themselves or representing folks who are actively experiencing climate impacts and the frustration of those systems.

And I think working through and just making space for some of those things was important for us to do. That's what I would say. But I welcome the rest of the committee highlighting any particular subcommittee, any particular conflicts that they saw that we needed to resolve. Pat?

Dr. Sullivan: Just to echo this thing about, like, I'm very practical in the same way, Richard is. I was going, we have to have examples in there, otherwise, nobody's going to understand what we're talking

about.

But I fully understand that we need a policy first, right before we kind of dive in. And it makes a lot of sense, although it's harder for me to grasp. So we talked about that a lot.

Dr. McDonald: So and I want to emphasize the second thing that you said, you're emphasizing the first thing, which was the members actively experiencing climate impacts. And just the variety of the impacts to the variety of communities that are experiencing, from rural to tribal, to commercial fishermen.

And I think that that there was, there were, there were some really interesting conversations around that. I don't know if it was a conflict.

But it was definitely trying to make sure that we characterized all of the opinions and all of the perspectives in the best way possible without representing somebody who wasn't in the room. So trying to make sure all the voices were heard, I think was another challenge you guys handled really well, so.

Dr. Runnebaum: Matt? Matt, can you hear us?

MR. UPTON: Can you folks hear me? I think another part of what came up is since folks, different stakeholders impacted differently, that responses need to be kind of nuanced to the challenges that people may face.

And then also being careful about not making judgments around well, you know, who is more impacted by climate change and less impacted with everyone basically having impacts and there needs to be kind of responsive management to deal with that.

Dr. Runnebaum: Brett, do you want to? Okay, well, we're really wearing you guys down. Pat.

Dr. Sullivan: If I may. So one of the things that I had suggested the last meeting is on the last paragraph on page one basically says, and, and will help. Right?

And I think that can be stay there. But something similar should go at the end, to read to, to continue to remind our colleagues at National Fisheries Service, that we're not just leaving this at their doorstep. We're planning to help with that to you in different wording or something like that.

Ms. Moore: Thank you. We did forget to add that. So just to let people know, what we will be adding is a couple of sentences either, at the -- probably both at the beginning and at the end at the end of the letter, essentially indicating that phase two exists.

And that we're going to work on phase two. And also, that we're available to help the Agency respond to the recommendations that we're making in the letter and figure out how to incorporate them into whatever they're doing.

So I would say, we're simply just going to add that concept of like, we're here, which is important, and we did not include. So thank you, Pat, for raising that. And we'll get those sentences to folks for a final copy. Megan? I love it. Do bring, keep, keep asking questions.

Chair Davis: Okay, thanks. So you said at the end, which I see you have some calls to action. And calls to action are usually like how's as well, right? Or they, they can be.

And maybe for the group, you could summarize the call to actions. I think would be good, because really, that's such an important part of your letter. Can you tell me which thing you're characterizing is a call to action?

Ms. Moore: I would like to phone a friend.

Chair Davis: Okay, yes. Heidi's just told me how they just told me there's bullets under each of your

sections that are the call out?

Ms. Moore: Yes.

Chair Davis: Could you, what are the strongest ones that you're calling out? What, what are -- because calls to actions are things that you want people to do, right? They fall into a how situation.

Dr. Runnebaum: Yes. So I think maybe I would start an offering that we're asking for a definition and for clear principles to be outlined. And for --

In each of these principles that we've laid out, we tried to be as comprehensive as possible. And, as Sara said, encompassing as possible for all of the views.

And I think that our call to action is for the Agency to wade through with stakeholders what this means for us all together. That we have our own perspective as a collective advisory committee.

But we are not necessarily representing the entire nation. I guess, maybe just not the Gulf of Mexico, as well. So I think, I think that's sort of where we're starting for the call to action. But Meredith is having additional --

Ms. Moore: I'm writing stuff down.

Dr. Runnebaum: So I'm just going to keep talking here. I think it's also a call to action to sort of work with us. And that we really value the collaborations with the Agency that we've had so far, and the presentations that we've gotten and the feedback that we've gotten.

And sort of some of the wrestling that staff have been going through at the Agency, particularly around climate-ready communities, which is sort of outside of the scope of NOAA Fisheries, and what can be regulated.

And so, it's kind of expanding support in creative ways. And I think that, sort of, creates some

complexity for the Agency to address. But we've heard the need for a climate-ready nation, and that means people, and fish, and the ocean. Meredith, are you ready?

Ms. Moore: Yes, I got it. Okay. So amazing work. Here's what I'd say. I don't consider these calls to action. I consider these principles for these different terms.

And that's why I got confused and needed help. But here's what I will say. In my mind, the three pieces that we have in here, which are our description of what Climate-Ready Fisheries is.

And then, our focused attention on the principles that are considered, that we suggested under that for Climate-Ready Fisheries management. And then, climate-ready fishing dependent communities.

If I'm going to take a step back and look at what kind of is the umbrella term there, which is the fisheries term, generally. Very roughly, we have four points in there that I would summarize, probably incorrectly.

As sort of, the first point being like, we're still doing long term fisheries management for people and the ecosystem. That's kind of the first one.

It's easy with Climate-Ready Fisheries, I think, or climate, it's easy with climate change affecting fisheries to get very distracted by the near-term thing.

And we want to suggest that we are, we need to maintain a focus on enduring sort of this 30-year period of increasing climate impacts, because emissions reductions will not help us for three decades.

We need to keep an eye on ensuring long-term. We want to leave these fish for generations to come. That's sort of the first one, point to me. The second one is about using the best available science and all of the tools et cetera to achieve that.

The third point in my mind is about creating a more adaptive system and adapting to all the changes. Thinking about risk, thinking about vulnerability, getting all those things done.

And the fourth one is equity. And focusing in on how to make sure that when we come out the other side of this, if we, or as we are doing it, we are being thoughtful about the impacts on communities and trying to reduce any additional burdens and being thoughtful about it.

And so, those are kind of the four main principles in our overarching definition. And I think that's what makes, like those are all the things that I think are part of fisheries management.

But articulating them in a crisp way that that is the key thing we really want, that's what makes it different. Is bringing all the pieces together under the stress of climate change.

And still achieving all the goals that we've set out for ourselves and being adaptive, being clever, being smart, and getting it done and doing it with everybody. I think that's the key thing we're trying to do.

And then the other, the management bullets and the community bullets, I think flow out of those, kind of four main principles. But I did want to emphasize, I think we've taken the community piece really seriously.

Because we see that, you know, tradition, I mean, I don't want to say traditional, but regular U.S. fisheries management has not been, and we all know this particularly thoughtful about some of the impacts and has been, in some ways predicated on removing access for certainly for tribes, subsistence users and native folks.

But then, also, just as a principle of limiting, management has often excluded people. And I think as we're heading into climate change really

impacting, I think all of those communities are additionally vulnerable on top of the strain we've already put on them.

And so, we wanted to take some time to particularly highlight the socioeconomic and cultural impacts. And that to do Climate-Ready Fisheries well, we'll need to have that be part of every breath of the system, in order to make sure that we're really getting it done. So that's how I would suggest I'm going to answer your question. But I'm happy to take a follow-up.

Chair Davis: I think that was great. I think it's really important that, that you could articulate that as well as you did I. I would just make a suggestion to really highlight those in the beginning, maybe in a little summary in the beginning.

It's a lengthy document with a lot of really good input. And having you articulate those so clearly, was really great for the whole group that hasn't been involved, also, as intimately as you have. But it really brought out some really great points there. Both Jocelyn, Meredith, on answering that, so thank you.

Ms. Moore: Thank you. Do we do we have other questions or thoughts? Okay, can I propose? I'm not so sure, necessarily. Here's what I think we're doing.

Megan has asked us to think about how to add the summary that I just made up. I wish the transcript was coming faster. But I took some notes, so we'll get that.

So we'll add that in, and then Pat has appropriately suggested we add sort of the, and now we're still here, sentences. So we're going to do that. We may spend some time with Richard, if you would like, highlighting some of the things that we think in the document may hit some of your main points. If you'd like to, or if you felt like we've addressed that and, but we're happy to emphasize some more things.

I haven't heard more, other things we need to add to

the document. And so I think that is going to be a very doable thing for us and bring you all a final document on Thursday for full committee consideration and approval. And I think that's what our next steps are, but I give it back to Heidi.

Ms. Lovett: So, Katie and I have been taking notes, especially during your question and answer session. Som Katie has been capturing notes because I've been watching her. I mean, watching, we were sharing a document. So we can definitely take the paragraph that she captured and send it to you, Meredith, to help. Or it can be shared on the screen, if you want to work on it now as a subcommittee, which we do have time right now for the subcommittee to just sort of continue this work. So it's up to you how you want to do that, but I just wanted you to know that she's been taking great notes.

Ms. Moore: Brett has his card up.

Mr. Veerhusen: Not sure, I think I'm jumping into Rich's point on the how. But one of the questions I have is, just kind of taking it step to, how this, how and why this is important, of course to the cultures and the people and the communities, but also to the public for access to a food public resource, also including the seafood supply chain.

So all the components dependent upon those who fish recreationally, fish commercially, fish for subsistence are also impacted by climate, you know, climate impacts.

So I think I'm trying to, I don't know if this is a little cart before the horse. Like if this is step two, but when, when a grocery store doesn't have access to buy a species because of climate impacts, it's important that they know that, and they are part of the decision-making process.

Similarly, if a manufacturer or supplier to a recreational fishing operation, you know. I think we need to make sure that we are inclusive of many

other businesses, people, stakeholders who are impacted by these.

Most importantly, the communities, I agree with that. But I'm just trying to, making sure that the general public understands why this is a priority. And how it's going to be implemented, is something I'm just thinking about. And that could also just come later.

Dr. Runnebaum: I think we need to add that into this section to draw clear linkage between this climate and ecosystem work, and tying it to the conversation tomorrow for the budget subcommittee.

And sort of recognizing that this isn't an issue just for coastal communities or fishing dependent communities. But it's an issue for the entire nation for a steady supply of protein, and food security, and national security, to not be dependent on foreign sources.

And we could keep going on, so maybe we can get your help in succinctly summarizing, in one, two sentences.

Mr. Veerhusen: Well, yes, I mean, that's kind of where I'm thinking here is, you know, this is a problem. It could be an opportunity, also, to be communicating the necessity for good science and good data collection.

Not just on to coastal communities, but to everybody who eats seafood or relies on seafood for their business. For whichever component you're in, it's a way to actually bring people together around an issue that many in the nation are familiar with, which is impacts to climate change.

And we are drawing attention to resources in the ocean, but that isn't just impacting those, you know, ocean communities. And that's just the part that I'm trying to think about, which could help on the budget subcommittee.

Ms. Moore: Thank you. Kellie?

Vice Chair Ralston: Thank you. And I love, I love that idea, Brett. Because it isn't just coastal communities. I mean manufacturers, anglers, even that are coming, you know, to visit coastal communities.

I mean, it really is a national issue. And so I think broadening that language, I mean, I get the, the food, the sustenance side of it, but also just access, tourism, all of that is all intertwined between recreational, commercial, and subsistence fishing. So thank you for considering that.

Mr. Yamada: My thoughts on that is that I think there are policies, I mean, we can't be that all-inclusive, because you're going to water down our message, I think. Because, you know, the recreational fisheries has a policy that includes this kind of resiliency, climate change, we have a policy that's, you know, taking some of these elements into account already, you know.

So to include them in this bigger document might, I mean, not that I'm saying it shouldn't be, but I think in the first go around, you need to kind of narrow your message maybe. So it can't be all inclusive.

And I just thought of, you know, like, this is a broader aimed, broader thought to the economics of climate change internationally. You know, we just saw a collapse of the stable fish market in Alaska.

It was nothing to do with the biology and the science, it has to do with marketability, were too depending on an export to Japan. The yen tanked. And now we got thousands and thousands of pounds of black cod that's not moving. And they should have thought about this in advance to say we shouldn't be that dependent on a foreign export.

We should have invested in some, you know, domestic marketing so that the American public appreciates black cod and has it, on a lot more restaurants. And so they're scurrying around right now to develop a domestic market for stable fish. But, you know, there is a broader picture of fisheries.

It's not only the biology, but it's the how these, you know, or climate changes affected other countries to the point where it has an international impact on the U.S. economy as well. But -- so I'm kind of saying don't expand in one sentence and include it in another. So I don't know, I don't know where you want to take that. I just throw it in your lap.

Ms. Moore: I found another one of those disagreements you were asking.

Dr. Runnebaum: Richard, I think I would propose that referencing and in, in any comment related to recreational fisheries and tourism and the relative importance of that under climate change.

We can reference the -- I think you said it was a policy, the right policy to draw clear linkage there. Just to say we don't really want to dig in here, but you've done that already. And then I don't know what to do with it international market climate impacts. So, we'll think about it.

Should we go into our subcommittee time? Great.

Subcommittee Work Time - Climate and Ecosystems

Ms. Moore: I don't really want to edit in front of everybody, and Heidi, I don't know, like I think I've had a nightmare about that.

Ms. Zanowicz: I can do it if you want me to. If you don't want me to, I won't.

Ms. Moore: Can you explain to me is the next session people just looking at us while we try to fix this document?

Dr. Runnebaum: Heidi's going to help us.

Dr. Sullivan: I would rather not do that. But I'd rather --

Ms. Moore: I would love to like free some people.

Dr. Runnebaum: Right.

Ms. Moore: So socialize whilst we edit?

Dr. Runnebaum: You can do it however you wish to that one.

Ms. Moore: Yes, that one.

Ms. Lovett: Sometimes subcommittees are discussing things and we want to make sure you have time. And, yes, it's officially subcommittee time is administrative time.

It doesn't -- everybody doesn't have to stay, only those interested. If you want to pow-wow in a small corner, we can make that happen. And I think this side there is a --

Ms. Moore: I think that's occupied, but I don't --

Ms. Lovett: Okay, so, yes, I would say that people are free to maybe find another space. I don't know if you got how many people want to do it. And maybe it's easier for you all to move somewhere?

Dr. Sullivan: I would propose you just draft something. It's easier for us to complain about it then.

Ms. Lovett: Take like a 10-minute break and then --

Dr. McDonald: I agree with Pat.

Ms. Moore: I also agree with Pat. So do we want to take like 15 minutes, and then we'll show our work? Okay, great.

I'll share, show, and tell. I'll tell you what I'm doing for summer vacation. So yes, so let's say 15 minutes, and maybe it's probably just me and Jocelyn sitting here stressing out while the rest of you have a nice time.

Yes, Joe will stay. Other subcommittee people are welcome to also come over and help us write stuff. And that's the plan. Same for Tom.

(Whereupon, the above-entitled matter went off the record at 2:16 p.m. and resumed at 2:50 p.m.)

Chair Davis: Okay. Thanks, Meredith.

Ms. Moore: Thank you. Okay, we're we have made edits to the document. Katie is displaying the document on the screen. I will now read out-loud the things that we are adding or changing about the document.

Make it bigger is what I have been told. It is getting larger, but it can't get so. It is slightly bigger. Okay, so the first thing that we did in the opening of the document, we have A. added some acknowledgment of the seafood supply.

And then also some edited version of Meredith's monologue is what is in here. So now I'm going to read out loud what we have added. So a sentence now reads the future of sustainable fishing in the U.S., including the provisioning of a sustainable food supply that provides the greatest overall benefit to the nation depends on accelerating our intentional efforts to clearly define and set in motion a major shift to climate-ready science and management and provide for the advancement of climate-ready fishing communities and businesses.

So that is, sorry, I will get closer. Brett saw it earlier. So we're good. Unless other people like to make edits. We wrangled him into our freezing cold room for a little side room, you guys. It's not right. It's unnatural in there.

Okay, on to paragraph. So we took, we could have, we didn't accept the change, we'll do it later. We took Katie's notes about what Meredith said, and I turned it into other sentences.

So that's what the deleted thing is the notes from what I said out loud, sorry, we did this very fast. So here's what it now says. Our recommendations, so the sentence above this says have a Climate-Ready Fisheries policy.

So that's our bold recommendation, and now here's some description of the rest of it. Our recommendation includes descriptions of fundamental concepts necessary to create a shared understanding and sense of purpose for fisheries managers, scientists, and participants as to what a climate-ready fishery future could look like.

Broadly, the concept of Climate-Ready Fisheries encompasses the need to maintain long term sustainability in the face of climate impacts, use the best available science and information, create a more adaptive system that includes consideration of vulnerability and risk, and prioritizes equity and thoughtful consideration that impacts communities.

We support these broad principles with a closer examination of the properties of a Climate-Ready Fisheries management system and considerations for supporting fishing dependent communities as climate change disrupts fisheries.

So that's the, very good, okay, got a thumbs up from me. Okay, scroll, scroll, scroll, scroll. I think we didn't add much more stuff until we get to the end. Community section, great.

We've added two points in the community section. The first one says assess the vulnerability of recreational and tourism-based businesses and management actions, including aligning with the priorities of the saltwater, recreational fisheries policy, which we will link.

And I don't, okay, thumbs up from at least some people. Beautiful. I don't see Kellie, so hopefully she's okay with this. But she'll have time to review it on Thursday. Yes, yes. He gave me a raise the roof, I want it known on the record.

Okay, the next one says support a resilient seafood supply chain and global markets in order to ensure climate resilience for the nation's seafood consumers and fishing dependent communities, which Brett nodded at me previously.

He's okay with but trying to add in the seafood supply, et cetera. Little bit of a wonky sentence people like, okay, we're deleting markets. Just the s.

Again, I was given 15 minutes to write. Thank you. We have a comment from Stephanie, which I could tell what was happening in her face. And so this is why I've been waiting for her to raise her tent. Yes, hello, how can I fix this sentence?

Ms. Moreland: Different comment than what was fully addressed before.

Ms. Moore: Great.

Ms. Moreland: New issue, inserting the seafood consumer in this context, implies consumer access to steady supply of seafood, regardless of harvesting practices or origin would be a high priority as part of climate readiness.

And my view is that if that is the top, a top full in U.S. interest in seafood, we undermine the ability to support resilient U.S. fisheries and conservation objectives that we value.

And so I think we need to clarify how either there's hierarchy there, or that we're looking at seafood consumers through the lens of their role in supporting resilient U.S. seafood production.

Dr. Sullivan: How does it undermine it? Do you see how it undermines it? I didn't see how that does.

Ms. Moore: Pat's question is how does it undermine it? If you can add more sentences to that?

Ms. Moreland: Well, my observation is if a goal is consistent access to volume of a certain seafood type to a consumer as the top priority, then you prioritize consistent demand for a diversity of fisheries that are similar in taste, texture, and quality, regardless of where they're from.

And we're trying to support resilience, adaptation, good science in U.S. fisheries. And you could end up

displacing because this is costly to build resilience and responsible management, you could end up displacing that market opportunity by prioritizing consistent access to consumers above doing so responsibly under this policy.

Ms. Moore: Yes, please negotiate this.

Mr. Veerhusen: True. My goal for this suggestion was to bring in the seafood consumers who are impacted when we do not have climate resilient fisheries in that they are impacted when their access is depreciated.

And so it was a way to sort of bring in not, that having, not having a climate resilient fisheries policy isn't just impacting coastal communities harvesters, recreational fishermen, et cetera. But, that it impacts the American public at large, who consumes seafood. So this was just an attempt, but please butcher my words.

Ms. Moreland: Can I suggest seafood consumers dependent on U.S. fisheries?

Ms. Moore: Can I ask whether we feel like this is a component that should be in a separate bullet point, like the consideration of consumers and some, no? Okay, people hated that. Great.

Dr. Sullivan: I think you captured it earlier when you said net benefit to the nation.

Ms. Moore: Yes.

Dr. Sullivan: That's the wording that we typically use to sort of dodge this issue.

Ms. Moore: Yes.

Dr. Sullivan: So maybe slipping, slipping something in about that. If you want to, you might want to make it less formal, but.

Ms. Moore: Yes, thank you. Good recommendation. Trying to decide I'm going to try to solve this live or whether this is something I'd try to do before

Thursday. That's my current trying to figure it out.

Mr. Veerhusen: It's okay, we have chips and guac.

Ms. Moore: I have to keep working on this one. So, yes, okay, while we think about this one, I'm going to read the last part of the document that's new.

And then we're going to try to figure out if we're solving that one live, or whether we have to go to our thinking palace. The last thing that I have added is to Pat's point.

So Pat, ideally, this meets your need. So this is another very end of letter. MAFAC appreciates the Agency's consideration of a recommendation and looks forward to continuing to work with the Agency to determine the best, breathe, best way to implement them.

MAFAC's future work will more closely examine the tools and approaches that can help the nation achieve climate readiness within fisheries.

We anticipate sending further recommendations to support the Agency's efforts to reduce the barriers to greater inclusion of climate information in management.

Great, any thoughts on that sentence? I really feel like I should be doing like an in-flight safety briefing right now. I don't know why. Thank you. Okay, well, that bought us 30 seconds, so let's go back up to the problematic sentence, and great, thank you.

Dr. Runnebaum: Stephanie: support a resilient seafood supply chain and global market that support climate resilience for the nation, seafood consumers dependent on us fisheries, and fishing dependent communities.

We can live with it? Brett, can you live with it? Great, done.

Ms. Moore: Yes? Yes. This concludes the portion of your flight that involves this document.

(Laughter.)

Ms. Moore: I cede back to the Chair. Thank you.

Chair Davis: A round of applause for --

(Applause.)

Chair Davis: Really good work, Subcommittee. Yes, let's take a 15-minute break and we'll be back here for Sam's overview.

(Whereupon, the above-entitled matter went off the record at 3:01 p.m. and resumed at 3:16 p.m.)

Update from the Deputy Assistant Administrator for Regulatory Affairs

Chair Davis: Good afternoon. We're going to start back up again. Thank you. Okay, welcome back from your break. Those were really yummy treats during breaks. Thank you, whoever decided on the snacks, because that cake's yummy.

So, we're going to have an update, actually, from Sam and Katie. And so we look forward to your update and discussion.

Mr. Rauch: All right, I'm back. Couldn't get enough of me earlier today. So I'm going to give an update on the regulatory program. I'm going to give some isolated updates. I'm going to give a more substantive update on the ANPR, and then I'm going to turn over Katie to give an update on where we are with our EJ activities.

So, from my perspective, for those of you don't know, I gave a brief introduction this morning, but I'm in charge of the regulatory program, which means that, at least our five regional administrators, they all report through me. So all the work of the regional administrators -- not the science center directors, but the regional administrators -- and the headquarters offices of Sustainable Fisheries, Habitat Protection, Habitat Conservation, and Protected Resources.

So I do oversee the regulatory work on like the Magnuson Act and all the ESA work. On the Magnuson Act, you may not realize that we issue the -- in any given year, we're in the top five of the agencies that promulgate rules in the Federal Register, because we're always opening and closing fisheries.

So it's an enormous workload just the paperwork -- and a lot of it's electronic now -- that we push through to keep the fisheries opening and closing.

We monitor -- we have a measure of success -- you may recall the Government Performance Reporting, the GPRA, I forget what it all stands for -- is sort of the overall measurement of success that we had to do for performance-based management. Our GPRA manager is the number of fish that are subject to overfishing, or not subject to overfishing that are not over fished, and that we know about that we have assessed.

So it's both an information standard and then a performance standard. And we constantly beat that every year. For those who want to know, the one from last quarter was 787, we're at 788.5. Isn't that great? Yeah, it's wonderful. That actually is quite a big deal. That 1.5 is quite a big deal. You know, that's -- the councils do a lot, the science side does a lot. I just report out the numbers. But it's really -- yeah, it's fantastic, I know.

On the other side, on the Protected Resources side, we work a lot on consultations. We have over 1,000 consultations a year of various types, under the Endangered Species Act, under the Essential Fish Habitat. We issue permits under the Marine Mammal Protection Act.

And one of the main focuses there, in addition to conserving endangered species, trying to work with industries to make sure that they can develop in a way that minimizes the impact, but still allows them to develop. We're working hard on permitting efficiency. So we've been trying for the last four or

five years to speed up this process, such that we can still achieve our conservation outcomes, but at a way that doesn't create unnecessary delay in the system.

Some of that has required increased staffing, some of it has required an increase -- a different way of looking at how we do things. We've made a 40 percent improvement over the course of the last four years in the time it takes to do an informal consultation. So people get those 40 percent faster now than they used to. Ninety-five percent of our Essential Fish Habitat consultations are on time.

So, all that's good. You know, we did some personnel announcements. One of the things that some of you may know is that on Pacific Islands Regional Administrator has been working for me and the Department for the last year on detail, on a Department-wide permitting action plan.

And that was issued in April, and he has now come over to work permanently as a senior leader for permitting efficiency for me. And so we're really happy to see that. That allows us to better focus our actions on making those numbers even better.

I also have been -- we've talked with this group before about two other ones that were not going to be the focus of this presentation, but we've been working on the 30x30, America the Beautiful Initiative.

Where we worked with the councils to look at -- not as a mandate to achieve a certain number, although that may still happen, because that's still the Administration's goal. But we wanted to make sure that we looked at the different tools we have for area-based management. And some of them are really well aligned to the 30x30 initiative; some of them may not be. But, you know, through fishery management, and to some extent through our ESA work and MMP work as well, we look at habitats and how to protect the habitats. And that is important for making sure that the fisheries are productive or that the species can recover.

And so there's a lot of things that we do with that. And we want to present, at least on the fisheries side, a comprehensive review. The Council put forth, earlier in the year, their really elaborate categorization of all the area-based management tools that they have and where they are. And we've given that to the Administration.

And we're working on that. And the Administration is still trying to put out their ultimate determinations on 30x30. You know, what is going to count, what's not going to count, how this is going to relate? But it was really good to have the Council weigh in so heavily on that about both the benefits and limitations of area-based management.

I've also been working -- we've mentioned it peripherally throughout this conversation -- on wind and the other Administration goal of 30 gigawatts of offshore wind by 2030. Which has -- that is a really ambitious goal, given that we were at none, almost none, at the start of this administration.

We have permitted a number of wind projects that weren't permitted before. One of them was permitted, and they decided not to go forward with recently. But this has been an enormous effort to work with other federal agencies, state partners, science, and everything, to try to get all the science and regulatory work done on these really big wind projects. Which are important for climate change and provides a better alternative to some of the other fuel uses.

But, so, in the long run, they are a key part of our climate change response. But in the short-term, they could have very disruptive effects, and working through that has been really difficult for us.

And then the other part, in our habitat, briefly, I also oversee the habitat work that we do, which in addition to a lot of great work that they do on the ground, working with partners to restore habitat, you know, they are also the ones that are getting at the habitat-related part of the BIL and IRA funds, for like

fish passage and transformational habitat things.

So they've done a lot of good work on that. That is something that has really -- but even before that, their metric for last year, which does not really include BIL or IRA funds, was that they restored 5,400 acres of habitat, important fish habitat, and 1,000 stream miles. Which sounds like a lot, but it's actually not that much in terms of the grand number of acres and stream miles impacted around the country.

We're still barely keeping track, which is why the BIL and IRA funds could be so transformational, right? The levels, they are a $32 million program. That's what they can do with $32 million, and now BIL and IRA has really increased that.

So, with those sort of overviews, I want to talk a little bit about the ANPR on 4, 8, and 9, which we've talked about to this group before. But as a background for those of you don't know, under the Magnuson Act, we have to manage for a lot of things, but one of the things we do is for the ten national standards, which range from things like preventing overfishing while achieving optimum yield, promoting the safety of life at sea, those kinds of things.

But there are four of them -- or three of them in particular that we thought had not been updated for quite some time, and were being part of the national conversation. So we wanted to consider whether or not to update these three. National Standards 4, 8, and 9.

So we put out an Advanced Notice for Proposed Rulemaking, an ANPR, which sought comments from everybody about whether we should amend those. We've gotten comments back and we are considering what to do with it. And so I was going to give you a brief overview of what those three standards are now, a summary of the comments, and then our sort of thought processes as where we're going to go from here.

So, National Standard 4 says that allocations shall be fair and equitable, shall promote conservation, and not result in excessive shares.

National Standard 8 says that conservation measures shall consider the impacts to communities and provide for sustained participation, minimize adverse economic impacts to the extent practicable to the communities.

And National Standard 9 talks about minimizing bycatch and bycatch mortality to the extent practicable. And we have seen the impact, we see a lot of concerns, potential concerns, about people who believe that bycatch in one fishery is causing community impacts in another fishery.

And so issues of allocation, fair and equitable allocation, promoting conservation, this bycatch question, and communities are all wrapped up in what we were looking at.

We particularly wanted to focus on, while we were interested in any recommended changes to these three national standards, we particularly asked people to say whether or not climate-related impacts to fisheries need to necessitate a change in those standards.

Those standards have been out for a long time. They're not new. What I just said were the statutory standards. So what I'm saying we're changing is guidance to those statutory standards. I can't change statutory standards, but I can alter the interpretation; within that, there's some flexibility. That's what our guidance would look at.

So is there anything within our guidance on those statutory standards that people would like to change due to climate, or due to promoting equity and environmental justice in fisheries?

So we asked those two things, although we accepted comments on anything that you wanted to look at for that. The comment period closed on September 12th,

so just two months ago. We got a lot outreach. We got 392 unique comments from the councils, fishery management organizations, tribes, NGOs, and 321 stakeholders. Most of the stakeholders were from Alaska.

The initial impressions is that many of the councils and others indicated that change was not needed, from their perspective. They posited that the current guidelines don't hinder responses to climate or EJ issues. So, basically, if it's not broken, don't fix it.

So, that was a view of the councils and some others. A number of fishery participants, communities, and environmental groups do support changes to the guidelines, especially to 4 and 9.

Most common -- one of the things we'd ask for is whether or not we would change the definition of communities, to de-emphasize the place-based requirement and focus more on a more social definition of communities. The type of people that could be a social community as opposed to our geographic community. Most commenters were against that. They would like us to continue to focus -- to retain the current focus on the geographic nature of community.

And then a large number of stakeholders commented that they were concerned about the impact of trawling on fisheries and habitats, and a lot of those came out of Alaska.

So that's where this, in general, really initial review of those comments. And everything I'm saying to you today, we also told the Council Coordinating Committee last month in October, so none of this is new.

We are currently reviewing all those comments, and we're considering whether or not we want to proceed with the proposed rule. So this was just a solicitation: what are your ideas? We have not decided whether to go for the proposed rule, but if we do, we are likely to issue it in spring of next year. And we will put that

out broadly for engagement, not just with the councils, but for any other groups.

That will probably be an extended time period. So, we're looking for spring for a final decision whether to move forward. If we do move forward, it will only be with a proposal that will then go through its own comments on what we've proposed.

So that is the ANPR update. Before I open up for questions, I'd like to ask Katie to give an update for me on the EEJ. She's a key part of our EEJ team.

Ms. Zanowicz: All right, I'm going to share my screen here. Alright, so, just to recap where we left things during our last meeting in San Diego, the National Equity and Environmental Justice Strategy was finalized and shared publicly in May.

And this strategy is, in part, thanks to you all, MAFAC. You all provided some insightful and thoughtful comments. So just, again, a huge thank you.

So this is probably a familiar slide. And it really just shows the timeline of where we are in the two-year process so far. So I really want you to focus your eyes on the last two blue boxes.

So, EEJ engagement is currently wrapping up and implementation plans are currently being developed. I will say the timeline may shift beyond the end of the year, really to allow more regions for more meaningful engagement.

So, as mentioned during the last meeting in May, really the purpose of the engagement planning phase is to establish and strengthen relationships with partners and communities in order to help inform the implementation plans.

While engagement is still ongoing, a number of the regions and program offices have developed implementation plans, really tailored to the needs of the underserved communities that they serve.

And so, this is a map of the regions. So just to highlight engagement plans are a mix of internal engagement through capacity building, and external engagement through strengthening relationships with partners and meeting with communities.

I'm not going to highlight all of the activities going on, but I just wanted to highlight a few. So, the first being in the Pacific Islands. Eight internal capacity-building workshops were held. And really the goal of these internal workshops was for staff to connect their work to the communities in which they work, and really think about how EEJ can improve that connection. And this will help us get to a place where EEJ is really integrated into our everyday work.

In the Southeast, 29 focus groups have been held, and these were conducted in the South Atlantic, Gulf, and Caribbean.

So, similar to the regions, our program offices have also developed engagement plans that are really tailored to their specific focus areas. And one that I just wanted to highlight for you all, given the agenda for tomorrow, is that IATC is going to engage with the Department of Commerce Minority Business Development Agency and Seafood Value Chain Minority Businesses. So, just to highlight one.

Mr. Rauch: That's International Affairs.

Ms. Zanowicz: Yes, what did I say?

Mr. Rauch: IATC.

Ms. Zanowicz: Yes.

Mr. Rauch: It is the same, but some people need that connection to the --

Ms. Zanowicz: Yes, sorry, thank you. And so that's just a quick sort of status update on where things are. So, any questions?

Mr. Rauch: Yeah, so, I mean, we will -- we'll take questions, but I do want to point out that a lot of that

habitat work, also, the whole underserved communities grant money was influenced by this effort and trying to get that out. And those grants are available to the 19th --

Ms. Zanowicz: Yes.

Mr. Rauch: Okay.

Dr. Sullivan: Katie, I was just wondering, can you give us a few examples --

Ms. Zanowicz: From the region?

Dr. Sullivan: Just something rough about how it's implemented or how people are engaging.

Ms. Zanowicz: So, I can speak to the high level on the slide there. The specifics, I'm not the expert on that right now. But, Sam, I don't know if you want to sort of highlight any specific examples that --

(Simultaneous speaking.)

Mr. Rauch: You go first. You're the boss.

(Laughter.)

Ms. Coit: Well, let me give you an example. This isn't a done deal, but, for instance, working with the Pacific Islands Region, in the West Pac, the Western Pacific Fisheries Management Council, and looking at how to handle the President's requests that we expand the Pacific Remote Islands Monument -- not Monument; Sanctuary. As soon as I said Monument, I said, I think I'm exactly wrong. Sanctuary. You know, we've been, I think, really pressuring the Administration, successfully, to spend more time workshopping, on American Samoa, and listening to, you know, how important fisheries and fishing within that area are to that community. So that's an example of, you know, on the ground, right? It's the right thing to do anyway, but consciously saying something that's being a conservation win isn't being determined by the voices of the community within that area.

Another thing that is a little bit different than your question, but I know the Secretary's really been pushing governors to provide more diversity on the councils and writing letters asking them to do that. We've been working with states, and we're continuing that pressure so that we get more representation at the table where people are, you know, making and considering management decisions.

Sam, I think I'll turn it over to you, if you want to highlight a couple more. I can think of a few.

Mr. Rauch: Okay, so, I will say, just to be a little bit fair to the process, is that the implementation plans, which would have a lot more detail, are still not out yet. So that's still coming. So a lot of these things are done with -- before the implementation plan. So we are really trying to embed concepts of EEJ throughout our workforce, right?

So we've invested in a lot of engagement. We've done a lot of that in the last year to try to figure out what it is, specifically, we need to do. We have done a lot of translation services, which is one of the things we know we need to do.

As we said before, and I think as Janet said, we're trying to approach this humbly, by asking what we should do before we just decide. So that's a key part of that. So there's a little bit of, we don't want to get in front of that process and undermine that.

One of the things that we are doing in, like, say the Southeast, which we have not mentioned -- and I think I've mentioned this before. We continue to look at the potential inequitable effects of things like catch share programs. Catch share programs are wonderful. They are fantastic for achieving conservation benefits in a rational way. It allows people to plan. It allows people to maximize profit while still maintaining within the conservation quota. It's very good. A lot of our success in achieving sustainability in that fine GPRA number is built on the success of our catch share program.

But we do recognize that it's had distributional effects, right? One of the things that it does is it concentrates effort, or can, in certain areas, which may or may not be great, but it could also present barriers to new people coming in. And that could have a distributional inequitable effect. And so both SF, Sustainable Fisheries, is looking at a broader national study within National Academies about, are those happening? Places like the Gulf Council are looking at that question in, say, the red snapper IFQ system. They're trying to look at that. Is there something that you need to do in places like that to, at a minimum, try to avoid any errors, if there were errors in the past, going forward? And are there opportunities to at least create pathways for people of underserved communities to get into the fisheries? Because it does seem like there are less so.

Another thing -- and we might want to talk with Russ when he talks about the recreational policy. He's over there. We've talked about, when you're recreational fishing, sometimes that is just for pure sport and pleasure; sometimes it's for subsistence it is really -- it's not truly recreational fishing as many people think about it. It is much more necessary for the subsistence, not even -- we think of subsistence as sometimes in coastal Alaska tribes, but there are a lot of parts of the country where this is a really important aspect and we sort of just attribute it to recreational fishing.

How can we tease that out and look at that and consider the unique needs of that? That may be a little bit different than the other ways we look at recreational fishing.

So these are just some things that we're doing, but we're still waiting on the regionalized implementation plan for the more robust list. Was that good enough?

Dr. Sullivan: No, thank you for that. I had to ask because, in many other venues, I've seen sort of a superficial sort of approach to this. And you guys are really diving deep on it, recognizing the issues, and

then, it's hard. But you're dealing with it. So I appreciate that. Thanks for that.

Chair Davis: Meredith?

Ms. Moore: Gosh, I keep pulling this closer to me and keep causing problems for Joe. So, I just wanted to take a minute to highlight what I see as an unintended consequence of the greater focus on equity and environmental justice in fisheries.

And I want to say, highly supportive of the policy and its intent and everything that's going on there. But I think -- I recognize, like -- I feel awkward being the one raising this. But it's something I've seen, and it's been highlighted to me by others, so I wanted to take the opportunity to share it. Which is that I think in giving the fishery, the participants of the fishery management system, language around equity and environmental justice and ways to highlight the issues that they are experiencing, there's an unintentional leveling effect between the experiences of tribes, indigenous, and native peoples and subsistence users, and those who may be more -- are part of a fishing community more derived from, essentially, settler-based, original, like, colonization fisheries, so.

And I want to be super-clear that I don't think anyone's trying to do this maliciously, but I'm really concerned about the increased burden we're putting on underserved communities from tribes and others who are historically, and sometimes very intentionally, excluded from fisheries management, as we are asking them to come and engage more in the system while using language about equity and environmental justice that essentially conflates the loss of identity and cultural practice that they are experiencing with what are also very real socioeconomic impact issues that are facing other dependent communities.

And so I think what I'm trying to say very messily here is that we need room for both. And we need to figure out how to have better language that isn't

increasing the burden that we are asking of tribes and others to come and share their experience and pain and loss in those management systems, and work in those systems to try to support their communities and cultures.

And I don't know the solution to this, but I'm seeing that it has been hard for them to have a role. And I'm worried we might be making it worse as thoughtful fishermen and others are learning language and ways to talk more about what also has been excluded, which is the socioeconomic impacts that they are experiencing.

But they're not the same. And I'm worried that we are going to lose the ability to address both things if we're not careful about the way we go about doing it.

And, again, I'm not the best messenger on this, but I wanted to at least raise what I'm seeing experienced. And I'm concerned that we won't be able to address some of, maybe either of, the issues if we don't figure out how to create a more shared sense of the distinctions and what it looks like to try to address all these issues.

So I will now kind of embarrassingly mute myself, because this is not my expertise. But just wanted to raise my concerns around that. Thank you.

Mr. Rauch: Yes, thank you for those points. And I do think -- I mean, what you raise is true, right? There's no -- there are two different things. The equity and environmental justice is focused on underserved communities and has a very much has a socioeconomic premise behind what is an underserved community.

The issues of dealing with, appropriately engaging with tribes and native communities is a different question. A tribal treaty right is not the same thing as EEJ. There are some similarities. If you make a process more accessible to one group, it might be more accessible to the others. But we do need to keep separate that a tribe is not necessarily an

underserved community. And many of the tribes do not believe that they are underserved communities, and they're not.

Still, we need to deal with tribes as tribes, because they are sovereign entities and have sovereign rights and we need to address them as such.

So, you are right that sometimes we can get those two concepts confused, but they are, as you indicated, distinctive entities with distinct obligations and needs. And we need to keep that in mind.

Many of the solutions, though, do overlap, right? If we are talking about making a council process more accessible to a group by allowing virtual participation or translation services, those are kinds of things that may benefit both. But we do need to not lump tribes as EEJ or vice versa.

EEJ is broader than just tribal interest, right? There are communities out there that are underserved that are not tribes or native communities.

So you're right that's a distinction that we need to be careful about. I do not want to minimize the fact that some, not all the solutions, to one issue may benefit both. And we're trying to look at all that, because this Administration is also a very much proponent of the needs of tribes, the rights of tribes, and needs of native communities, and incorporating those into the systems as well. That is somewhat different, that is different from EEJ, even though they seem very similar.

Ms. Coit: Thank you. And I think Sam addressed a lot of what you said, but I feel like some other things might have been wrapped up in it, too. And I just wanted to comment, and we had talked earlier about capacity, that the system itself can be an obstacle to effective participation. The way it's set up, what it demands of people. And so those are things that were tuned into, as well.

So, and it's not enough to say we'll have a native rep

on a council. That's not addressing the larger issue. It's providing a perspective that we need, but it's not addressing some of the barriers. And I think there might have been a bit more that you were trying to say. So I'm happy to also talk more offline about some of the examples of what you're getting out, Meredith.

Ms. Moore: Thanks. I appreciate that. And, hopefully, I can find you better people than me to try to articulate this. But I appreciate the responses. Thank you.

Chair Davis: Thank you, Meredith and Sam and Katie and Janet. We will take one more question with Jocelyn.

Dr. Runnebaum: I'm sorry, it's just a pile-on. I think just to not let Meredith hang out awkwardly by herself, it may be -- and I'll just jump in here as another white woman to offer my perspective. It may be worth considering working with some of the tribal communities and indigenous and native communities to include a definition, at least, in the EEF strategy, on lifeways and sustenance lifeways and how that feeds into this strategy.

At least in Maine, we don't have the same treaty rights for fishery -- for fishing -- fisheries treaty rights that exists on the West Coast. And so we've also heard that indigenous communities and tribal communities just sort of have different -- are looked at or viewed differently under the eyes of the law.

So we offered a -- there's a great report from the Wabanaki Tribe that I would share that sort of expounds upon their views of lifeways and sustenance lifeways and what that means to them. So, from Maine, that might be a helpful resource to just start as a starting point.

Chair Davis: Thank you for that suggestion.

Okay. Thank you again, Sam and Katie for the discussion and the continued great work that you are

doing with your team.

All right. We're going to shift gears now.

Oh, Tom. I'm sorry. I thought you had your hand up, but I don't see it up. But go ahead.

Mr. Fote: Yeah. You know my long discussions on environmental justice when it comes to subsistence fishermen. A couple of years ago when we did bluefish regulations and without going to the public or whatever, we set up a different category for charter party boats over the beach fishermen and the subsistence fishermen. If you went out in a party or a charter boat, you could have five fish. If you fished from the beach, you only could have three.

So it was not equitable. It was not -- it means you have to have money to go on a party or charter boat so you're treated differently if you're poor.

I mean, the United States Marine Fisheries Commission, I will be on a hearing tomorrow night. It's probably Beth. And basically looking at the same problem. They are basically looking at giving the party and charter boat a larger slot than the normal person.

And it begs the effects of what you can harvest, especially when we have right now a two inch slot limit on striped bass and now you're going to give it a five or six inch slot limit on party or charter boats so even for two inch -- if you can't afford to go on a party or charter boat.

New Jersey has passed a law against environmental justice -- formerly on environmental justice when we handle all these kinds of regulations. So I will bring that up at tomorrow's hearing. But I think NMFS needs to look at it, besides the Atlantic States Marine Fisheries Commission, because this is truly an environmental justice issue. Because if you can't afford to go on a party or charter boat, you can't afford it.

I understand that there are problems, and you have to make a living. And I support them wholeheartedly. And a lot of times the regulations you're putting in are really not necessary. But this is how we have to deal with it.

So, anyway, I wanted to get that on the record too because I've been talking about it for 30 years it because it basically eliminates beach fishermen all the time by raising the size limit where the fish they can catch are not legal size so you basically eliminate them from the fishery. And, again, you've got to own a boat, go on a party boat or a charter boat to basically catch a legal fish. And we need to stop doing that.

Chair Davis: Thank you, Tom. And Clay?

Mr. Tam: Yes. Thank you, Chair. Just a quick comment. As we go through those exercises in EEJ, a concern in the Pacific and more so now, and we've heard it with the Lahaina fire, I think there were 98 boats lost in that fire alone. It's that one small community. And not only the boats but the people and the access. And what that created is because now because this thing has stretched so long in terms of housing, a lot of the residents have opted to move.

And so what do you do with this displaced amount of fishermen or fishing community in terms of that? And it's not only the Lahaina fire, but if you look throughout the islands, most of the beachfront has been purchased by off island people that can afford it. It has pushed the Native population out.

In fact, in the last census over 50 percent of the Native Hawaiians have moved off island. And so when you talk about environmental justice, we're not just a community that surrounds or is a part of a bay. We've seen this also occur in some of the rural island areas, like in Guam where they put up MPAS in fishing villages and banned them from taking fish. I mean, that's not justice.

And the balance of that and identifying and working

with that puts another issue in the matter when it comes down to -- we just had a meeting with the OAAP, and that is a major concern and where it goes from there because as some of these residents move off island and come back and want to fish, they are being told, no, you cannot. You don't live here. And to me those that are born and raised on the island should have access and ability to do it. And it is a major problem for us in the Pacific. Thank you.

Chair Davis: Thank you for your comments, Clay. Jocelyn, did you have anything else? Any other comments or questions? Okay. Thanks, again, Sam and Katie.

All right. Next on our agenda is the NOAA Recreational Fisheries update with Russ Dunn and Evan Howell. And so I think -- okay, Russ is going to join us at the table. Great.

NOAA Recreational Fisheries Update

Mr. Dunn: All right. Are people looking at it on their screens, on the big screen? How are we? So this is the Evan and Russ show or the Russ and Evan show for the next few minutes.

For those of you who I have not met yet, I am Russ Dunn. I am the national policy advisor for recreational fisheries. Oh, wait. Okay. We're just doing intros. That's all right. And next to me is --

Dr. Howell: Evan Howell, you met me this morning. I haven't changed over lunch.

Mr. Dunn: Okay. And I also want to introduce Alex McOwen, who is over here. Alex is actually, normally with the Office of Habitat at headquarters, but she is doing a rotation with the rec fish team for a couple months and is helping us get organized.

So I wanted to start with just a quick update on the rec fish policy. We have spoken about this a number of times. But for the folks who are new or may not be familiar with it, I wanted to give you a quick

update on some recent activity.

I handed out a little piece of paper that has really just the basics of it, the policy, including the goals and guiding principles. And you will find a QR code down in the lower left corner, which will take you to the policy itself as well as the implementation plans for the policy.

So for background, for the new individuals, NOAA Fisheries originally created the first rec policy in 2015, and we have recently updated that with the help and input of MAFAC.

And the policy was really created and is intended to help us better serve both anglers and the communities which depend upon them. And the policy really does reflect, I believe, the voices of anglers from across the country.

When we went out and drafted it initially, we did about 32, 33 public discussions about it. And then during this update, we did about another 20 plus had online abilities, channels for comment among the public.

And the way we use it, the way it is intended to be used, is really as a guidepost or a touchstone for the Agency in our efforts to achieve sustainable recreational fisheries. And it does this by identifying a series of goals as well as the guiding principles for consideration in planning and decision-making by the Agency.

And then what also came out concurrently with the policy were seven implementation plans. We did a national implementation plan and then six regional implementation plans following the NMFS regional structure as well as Atlantic HMS, because they are sort of a unique entity that we really treat as a council for these purposes.

So just again, background for the folks who have not seen this before. What we did in updating the policy was essentially add two new goals, one on climate

and one on EEJ. Those are goals 4 and 5 that you will see on the document.

We strengthened the document overall. We strengthened the aspects of sustainability. We incorporated offshore development and depredation, which were issues, which were really much more background issues back in 2013, '14 when we went out and developed the initial policy.

We also have expanded reference given the increasing importance of cooperative and collaborative engagement and data collection. And at the strong behest of this committee and others, we committed to track and measure implementation of the policy itself.

So with that, I really want to transition over to sort of what we have been doing in the time since we last spoke in June out in California. So obviously we released the final updated policy and the associated implementation plans that we just talked about.

In terms of cooperative research, we continued to work over this summer with the Northeast Fishery Science Center in their efforts to establish what they have now called the Recreational Biological Sampling Project.

That is essentially a cooperative sampling program with the four higher fleet six pack type boats to sample ground fish up in New England. And we were able to provide some additional sport for the West Coast Cooperative Rock Fish Sampling Project, which I think some of you -- Janet and a number of you, I think, got out in June onto one of the vessels where we sampled.

Recreational data, one of the things that has begun to take up a substantial amount of time is working with Evan and his shop and others around the Agency on beginning to develop a vision to collaboratively -- well re-envision the state-federal recreational data partnerships.

And we've also worked with Evan's office on finalizing the outputs from an economic workshop with recreational fishermen that we hosted and sponsored back in April. And his staff finalized it and turned it into a NOAA technical memo and that came out in late September.

Additionally, engagement is always something which is high on our activity list. Alex actually just last -- oh, November 4 was out on the West Coast at a roundtable with recreational constituents on the shoulders of the recent Pacific Council meeting. She learned about Pacific rockfish out there, copper and quillback.

As a team, we went out and we gave a number of presentations and served on various panels at the American Fly Fishing Trade Association. We hosted a number of sort of family fishing events since June where we took out sort of disenfranchised families from Title I schools on a number of trips. National Fishing and Boating week was just occurring when we met back in June.

In terms of additional focus, while we are certainly not the lead on protected resources, it has taken up a substantial amount of energy of the rec fish and many others of our team, and that included the Rice's Whale Petition on vessel speed restrictions as well as working to better accommodate the constituents in the North Atlantic right whale Tech Workshop, which is scheduled for March of this year.

And then we worked with Alex and her team, with her other hat on, to push out the door the solicitation for proposals for cooperative habitat conservation projects with the rec community.

So that's a little bit of what we've been up to since June. So looking forward rather than backwards, obviously one of our priority focuses is implementing the rec fish policy.

In terms of engagement and events, this year is looking to be fairly full. We're trying to do five events

with a group called the National Park Trust teaming up with the Sanctuary's Office to again take out folks from kids and families associated with Title I schools.

We are working right now on planning at least one symposium at AFS this fall, likely on depredation. And then also we're working on -- we're on the board, or steering committee I should say, for the International Billfish Symposium, which will occur in October so it's next fiscal year -- fiscal year '25 but calendar year '24.

Partnerships to improve rec data is again related to efforts to improve MRIP and our recreational data collection system, partnering with officers within the Agency and also with the commissioners, commissions, councils, et cetera.

Cooperative research, we're hoping to be able to continue our focus supporting both the Pacific and the Northeast cooperative research projects. And we've just started discussions with the Southeast about some similar work. We're gathering the information. They're trying to understand how those programs work and what they may be able to do in a similar vein.

Our habitat work we really enjoy and find that habitat is sort of the common denominator, the low hanging fruit if you will. Everybody understands no habitat, no fish. And we've been able to really be effective at engaging the rec community directly on habitat work.

And then we're really trying to sort of kick the door open on addressing EEJ issues. We've got a couple of approaches there. One, as we talked a little bit about, is working with disadvantaged communities through the engagement events, taking families out. Another approach is through our support of the Bristol Bay Fly Fishing Guide Academy.

An interesting note, we just found out that one of the recent graduates from that that we've been supporting for a few years has just won an award at the Banff Mountain Film Festival there. So we're

pretty excited to hear that. We just learned that yesterday.

And then some of the habitat work, for example, one of the things we've done is with Alex and her team is sort of upweigh the proposals that come in that address needs in underserved communities. So we're trying to figure out how our program can sort of partner and leverage opportunities in that regard.

I think that was it for me. I'm happy to take any questions or talk on or offline about the policy or implementation plans, anything like that.

Dr. Howell: Do we do that now or --

Mr. Dunn: No, let's do it now, I think, yeah? Will that work? Oh, sorry. I forget. You're the chair.

Chair Davis: No problem. Okay. We have Clay and then Pat and then Kellie. Thank you, Russ, for the --

Mr. Tam: Yeah. Thanks, Russ. I really appreciate the work out there and the support for recreational fisheries. We'll be in touch next time you get out there.

Chair Davis: Pat?

Dr. Sullivan: Great. Thanks, Russ. I always appreciate the overview that you give. So Donna wasn't able to attend today. She has a wedding to attend to. But she sent a question and so I'm not exactly sure how it fits in, but I'm going to put it to you.

So she said with regard to the saltwater policy and rolling out the plans in the region, she said that they just recently had a roundtable in the region and that it went really well. And it mostly centered around on getting more independent data and how that will be used. Also how managers don't use all the data they have and can they be more flexible?

So I don't think this relates to the cooperative work. It's more like even the individual information that the

individual fishermen are collecting. Do you have a comment on that?

Mr. Dunn: Speculating on what she may have meant. Yeah, I'm not sure whether she meant independent meaning that cooperative data collection or not, or if she really means truly fishery independent data collected out there.

Dr. Sullivan: So from my discussion with her --

Mr. Dunn: Yeah.

Dr. Sullivan: -- one of the things that has come up is, for example, and I'm not sure this is it, but let's talk about it --

Mr. Dunn: Yeah.

Dr. Sullivan: -- and see what happens. For example, is it the goldeneye? One of the fish they were --Mr. Dunn: Yelloweye?

Dr. Sullivan: -- Yelloweye, thank you. One of the fish that was restricting the fishery, the fishers themselves redirected themselves. And as a result, they were getting less of that fish.

Mr. Dunn: Mm-hmm. Mm-hmm.

Dr. Sullivan: And then in turn, that made it look like --

Mr. Dunn: Yeah.

Dr. Sullivan: -- there was something bad happening as a consequence. So I think that's -- I mean, I know that's a difficult thing to --

Mr. Dunn: I mean, that's a classic, as you well know, sort of a classic issue of avoiding a species. Then it can reflect in the data that it looks like there's a stock collapse --

Dr. Sullivan: Exactly.

Mr. Dunn: -- et cetera.

Dr. Sullivan: -- yes. Yeah, yeah.

Mr. Dunn: I'm not quite sure what the question or the answer is.

Dr. Sullivan: I don't know if there is an answer to that. I mean, if there was a way to kind of -- the way I might view it --

Mr. Dunn: Pass along concerns.Dr. Sullivan: -- I might propose would be --

Mr. Dunn: Yeah.

Dr. Sullivan: -- the stock assessment scientist could run a sensitivity analysis --

Mr. Dunn: Yeah.

Dr. Sullivan: -- for example to see --

Mr. Dunn: Yeah.

Dr. Sullivan: -- what it would mean if they had a redirected and it changed their catchability somehow, would that affect the overall picture that's coming through from the fishery.

Mr. Dunn: Okay.

Dr. Sullivan: Now if you do that and you find that it does, well, what do you do? You're still left with that question.

Mr. Dunn: Yeah.

Dr. Sullivan: But at least it would perform some good faith sort of understanding of what's going on there.

Mr. Dunn: Right. So --

Dr. Sullivan: I'm guessing that --

Mr. Dunn: Yeah.

Dr. Sullivan: -- it's something like that she's talking about.

Mr. Dunn: So one of the people who is on our team out there on the West Cost, Melissa Monk, who is one of the assessment scientists, I can -- I will talk to her. I will pass on that concern and then see if we can get Donna a more solid response.

Dr. Sullivan: Yeah. Thanks. Thank you, guys.

Chair Davis: Thank you, Pat, for relaying Donna's question and Russ. Kellie?

Vice Chair Ralston: Thank you, Madam Chair. First I just wanted to say thank you to Russ as well as Office of Habitat Conservation. We had a really great panel at ICAST over the summer, specifically looking at the intersection between habitat and fisheries management. And we really appreciate the support in having Carrie participate in that.

I think it was a really great discussion and a really great cross-pollination between kind of federal and state potential partnerships there. So thank you for that. I just wanted to highlight that.

Secondly, you mentioned the Recreational Socioeconomic Workshop and Report. And I guess I was wondering kind of what next steps the Agency is anticipating there. I think there might be some room for MAFAC potentially to weigh in on that. But I just wanted to see what your thoughts were. Try to tee up the easy ones before I ask the hard ones.

Mr. Dunn: Well, I'm glad that Evan is sitting next to you because -- so my thought frankly is that it was an Agency-sponsored workshop, second of which. And it has now been turned into an Agency technical memo.

So my understanding was that a number of the folks who were involved in the workshop wanted to come in and sit down with Evan and me and others to talk about, okay, here is this report. What are you going to do with it?

I have not seen actually that request come in yet. So

now it is officially in. Okay. But that is my understanding. You know, where it goes, that's subject to priorities and budgets and everything else. But that's what I would anticipate is next.

Vice Chair Ralston: And then last one, you also mentioned the right Whale Workshop that's coming up in March. I guess I was wondering kind of expectations for that workshop, additional funding and then expected timing that the Agency is under as far as issuing a final rule in that regard and kind of how that all ties together.

Mr. Dunn: That I may have to punt because I am not up to speed on the specifics of it or the rulemaking. What are the expectations?

Ms. Coit: I can probably just -- in regard to the North Atlantic right whale vessel speed rule update, we had hoped to have that final by the end of this calendar year. I would say it's looking less likely by the day. So now we're probably shooting for early 2024.

The workshop is related, but not necessary for the final rule. It's about exploring technologies and working to develop existing technologies, exploring new technologies around vessel detection methodologies and avoidance.

There is a lot of work going on in that area. And we had a summit with the offshore wind industry, who is also interested in the topic. We just entered into an agreement with MITRE Corporation to help us look at what's possible or what's available and what is promising. We're working with NASA. We're talking with the Navy.

There is a whole bunch along with some of the other investments we're making around, you know, how we can do a better job by right whales and other whales. So the workshop is something we had talked about particularly, you know, after we got a lot of pushback and opposition from the marine manufacturers about trying to work together because I can say, safely, nobody wants to hit a whale, and they want to work

with us on approaches that can have benefits to conservation without having as many impacts on marine traffic.

Chair Davis: Okay. Evan?

Dr. Howell: All right. Thanks very much. Thank you, Russ. If we could have the slide deck put back up on the screen, please?

Just a little bit of intro. Yeah, so again, if you weren't here this morning, my name is Evan Howell. I'm the Director of the Office of Science Technology in the Fishery Service. We're the headquarter Science Office. So we have the MRIP headquarter program within a branch and a division in the office that I lead.

And today I chose to focus mostly on the results from a Fishing Effort Survey Pilot Study that we did release -- I think they've got to put it on slide show. That's okay. We'll get this together.

And so we focused -- and I am happy to answer any questions about any part of the program that I can. But I chose to focus on there as well as what our plans are for next steps because that was a big concern and conversation point when we released this first in August.

Okay. Perfect. All right. So just to go ahead and recap, our Fishing Effort Survey, it's one of two major surveys that we do to get the final catch estimates for the recreational fisheries program. It represents all of the effort. It uses the Saltwater Angler Registry so it does a lot of sampling from that.

It was probably the one survey that had the most issues with credibility. People felt that the estimates were way too high. And there were a lot of studies done. This is one of the results of a pilot study. And this pilot study actually was the one where the team found that had the most potential impact.

So again, it was one of several studies that they did to evaluate potential sources of bias. What they did

in this, and I'll show it on the next screen, was they actually just reversed the order of questions in the study. The question order, you know, was designed to ask the easier question first, how much fishing did you just do and then tell me how much fishing you did over the last year.

In this study they reversed that and actually what resulted was fewer observed reporting errors or illogical responses, an illogical response being I fished more in the last two months than I did all year. That just doesn't make sense because you can't do that.

So they felt that the effort estimates coming back in, I'll say, qualitatively were better, but also the resulting effort estimates were far lower for the shore and private boat than the estimates produced from the current design. So that question did reduce it.

They had up to 30, 40 percent reduction in some of these. But, again, there were some limitations to the study that if your first question is why didn't just roll this out if you feel that you've got lower estimates and you feel that's closer to reality?

The limitations of the study were it was only conducted over six months, not a full year. It was a smaller sample size than the fall fishing effort survey administration. And the results did vary quite significant from state and fishing mode, meaning that when you break it down, which a lot of times things are done by state and a fishing mode, you are going to get results that vary. Sometimes they are close. Sometimes they were higher, sometimes they were 100 percent lower. But that variance really gave everybody pause. And it caused us to want to move into an extended testing.

So, again, if you're visual, like I am, you will see that the slide is not moving. But there, I got it. So, again, there were two different things that it did. One was they asked about shore versus boat. And they changed that. That did not show an effect when they got the results back.

But changing the question order, which is the left most and then the right most -- I'm sorry, the left most and then one over to the right, did show the impact. So, again, it is as simple as just changing the question order to get those results that are different.

So based on that, we made the decision as an agency to go with the Fishing Effort Survey follow-up study. This is what we also announced in August. This is to administer the revised design for one full year. We are also doing this concurrently in FY24 along with moving to a monthly wave.

Both of these tests are being done concurrently to get us towards understanding what impacts we can change or what we can change in this study to really get increased precision to lower the percent standard error of the sample estimates that come out for FES.

Another area of concern is that a lot of the data that wants to be used, whether it's by fishing mode or by state, has a very high percent standard error, which gives us scientific pause. So any way that we can reduce that and get better quality data through this survey or other ways that is what we are aiming for. This is one way that we have in our control to do it.

So again this new study design is informed by two pilot studies out of numerous ones that we did that showed the greatest potential impact, and that is moving to monthly waves and changing that question order.

So, again, the study will determine the combined effects. This allows for a more efficient transition calibration process so we will be able to understand the impacts of either of those. But if we do the full year and at the end of that testing it does show that yes, this is a change that we want to make, we have that full year that we can use in calibration to get to a faster transition towards implementation.

So, again, monthly sampling was also a priority that we've heard from partners, recreational fishery partners. It will also produce more frequent

estimates and a shorter respondent recall period. So, again, trying to minimize that chance for error, decrease that percent standard error that comes out of those resulting estimates.

So this is what's going on through all of FY24. So, again, in terms of the next steps, we are existing -- we have an existing FES calibration. We would use the results that are coming in to update that calibration to account for the revised design.

That calibration update work has started so that we don't have to wait for all of the data to start that calibration work. We, of course, do need the entire year of data to begin to get the results. But we will be doing that and continue as needed into 2025 depending on the results that come back from this 2024 survey.

A concern that people have, you know, and I will address now, but we will talk about it a little bit. What do we do right now? What does this mean for the data that you're serving right now? I'll touch on that a little bit. But, again, as of now, we have an existing data stream that is still the best data stream that we have. We have to do this testing. We will get that back at the end of 2024.

We recognize that people want to know what they can do right now, and I'll touch on that in a bit. But we're also looking to find way to accelerate wherever possible that system so that we're not taking a full year to get the data, taking a full year to analyze it, and taking a full year to try to implement it. So we're trying to reduce that window for implementation.

So again we do feel right now that full implementation of this improved design, if we decide that the 2024 results were valid and that's the change we want to make. We are not looking at seeing this earlier than 2026 at this point.

And, of course, as I said, it would be dependent on a successful completion of the follow-up study and the calibration updates. We have no indication to see that

that study would not succeed.

The contract is in place. We are looking to implement this starting in January on schedule. So really it is just making sure the contractor can fulfill the sampling, get those results back.

We do want to have a technical peer review. We would want to see that that was a favorable peer review. It is an important part of this process. It is an objective look at our science outside the program. So that is a necessary step.

We also would want to complete the FES transition plan that will help people understand what this change would do for the parts of the system depending on where they are in the country.

Again, the effort study right now is run from Maine to Mississippi and Hawaii. We would continue that unless there were some changes. There are some other changes in the Gulf system that are under discussion. As of right now, that is the current way that we are doing this study.

Again, we would have a fully calibrated historic time series of catch and effort estimates that we could use, assuming that we did this -- the study result and the calibration.

Also in this fiscal year, coming back to the fiscal year, we've already started working with regional fisheries offices, councils and commissions to identify potential implications and actions.

Again, we are doing that based on this 30 to 40 percent potential from the pilot study. As we get results in, we will have more information. We will be able to modify that. But, again, it's working with each region and really approaching this from a regional perspective, not a national perspective, because there is specificity we need to capture. How do we work with you, your regional transition teams, and your implementation teams to understand what potential implications might be there?

And as Russ mentioned, a big part of what we're doing, and it was actually a charge from Janet we got about a month ago. It's actually one of the few charges in my 20 odd year career where I'm glad to get that charge. It's something that helps us. It is to really work across the Agency to re-envision what this federal-state partnership is.

We have engagement that's limited right now to the Gulf. We focus there because of red snapper issues. We are looking to expand that through FY24, again working with Russ and Tim Sartwell as well as others, but also deciding to approach each region differently to try to get to how the regional federal-state partnerships can strengthen and work together, aggregate that back to a national approach, and see what generalization we can make.

But we recognize that we can't avoid the regional needs. And we will be approaching that through going specifically to council meetings, commission meetings where we can and then being available but also talking through all of these steps and things that we're doing now.

In terms of the assessment and management implications, this was a big question that we had. I went to the Gulf -- I think I went to the Gulf States Council meeting the week after we announced this. So there was a lot of active engagement as you can imagine.

Some of the things -- the full potential impacts are unknown until we have completed the follow-up study. You know, the effort data from the FES, again, remains the best and sometimes the only available science that we have for tracking relative year-to-year long-term fishing effort trends.

One of the outcomes was that when we looked at this, the trends stay consistent even if we're modifying it. But for things that need the actual magnitude of effort or that calculation, those are the things that would be impacted. We're looking at allocations, things like that.

So, again, the tracking trends we think would remain consistent, but we would have an offset in the magnitude. In that way, we feel that the stock status would remain relatively consistent when the trend info hasn't changed. But we can focus on continued conversations with partners and to make programmatic improvements to further mitigate disruption.

One of the things that came out that I think was very powerful was the council response, especially the council chairs. And one of the comments that I thought I heard was, how do I do my job based on this?

And I think what we're doing is looking at this in three ways, a scientific perspective, a management perspective, and a political perspective, meaning that all three of those need to be strong and effective for us to -- you know, we call them three legs of a stool. And what I've been saying is Janet needs to sit on the stool so all three of these legs need to be secure. So we can't just say the science is sound, therefore, the management should be great and the politics should go away. We know that we have to approach all three of these at the same time.

In the management piece, that is where we're working with the regional administrators and the councils to truly understand what flexibility we have.

When we talk about Climate-Ready Fisheries, one of the things that I took away from that initial response was, yes, this is a big potential change and councils might have to go back. With climate change, we might see these types of changes without a data issue just in terms of what we're understanding. So we need to be cognizant that there needs to be that flexibility in there to make some management decisions on a much more frequent time stake.

So in some ways I want to try to flip this to a positive thing. I think it's positive that we understand and we can move together. But it is definitely a workload issue.

And I think we need to take advantage of this. You know, never waste a good crisis was something I heard. It's a negative way of looking at it, but what can we take in terms of opportunity here to try to get the flexibility in the management framework where possible and also reevaluate how we're using the recreational data to make sure that we're using it as we can and not going beyond the capabilities of the data in this management piece.

So that is all active conversation. And again, it comes into that federal-state partnership discussion because the goal is to get the best data that we can no matter the source to get the data into the management actions to get to the decision-making.

That's the last slide that I have so I'll stop there. And I'm happy to answer any questions.

Ms. Coit: Before you all pound Evan and Russ, I just wanted to highlight the folks sitting next to them and just -- no, other direction. And just acknowledge -- I know when I was a state agency head how important the Atlantic States Marine Fisheries Commission was to us in Rhode Island and working so closely with Dave in the Gulf. The Pacific Coast kind of does its own thing.

But the commissions are such an important venue for providing a consistent approach across states and working with all the states who were involved and have been really integral, and I think will continue to be integral, to this new partnership that Evan and Russ described. So thank you commission leaders.

Mr. Dunn: Let the pounding begin. Yeah.

Chair Davis: Okay. So we'll take a few questions. And I have Kellie, Pat and then Meredith.

Vice Chair Ralston: Thank you, Madam Chair. And Evan, thank you so much for coming and giving that presentation today. I really want to start with a positive. And I really appreciate the candor with which the Agency has approached this.

You know, I think the recreational community in particular over the last probably five years or so has been concerned with the FES rollout and kind of what those numbers look like. And so thank you very much for your responsiveness.

Janet, thank you for your directive for them to work with the states on how to roll this out in the councils. I think that's key. It's going to take a partnership really to move this forward. And I think as we've discussed all along, there are great applications for MRIP and there is also opportunities, I think, for supplements in specific instances.

And so I guess I have two things, one related to the state kind of partnerships that you were mentioning, Evan. I appreciate very much the funding that's going directly to the Gulf Council to work with the states there on improving management recognizing, you know, in my own little world, the South Atlantic Council is experiencing very similar issues, trying to avoid some of the pitfalls that we've seen in the Gulf process with the state-by-state management.

I would strongly encourage you, and I know we've had this conversation privately, too, but to say it publicly, to engage with the states there in developing whether it's a regional something to be able to narrow our estimates on offshore species, snapper group in particular, in a way that continues to allow access for all. We've talked about that, I think, repeatedly around the table today about making sure that folks have access to our public resources.

And I think, you know, there were some hiccups there that we wouldn't experience in the Gulf because of individual state issues, but I think there is a real opportunity for the Agency to take those lessons learned from the Gulf, take what was going on with MRIP and really wrap it into a good package in the South Atlantic that quite frankly could be a model, I think, for the nation. So I appreciate you all's engagement there. I encourage more in that

direction.

And then I guess the second part is kind of -- you know, you're talking about implementation or the pilot study and kind of when this final one will be in place, recognizing that the councils have management actions that are ongoing now. And I appreciate that you're working with them to develop kind of the path forward.

And I guess the things that I would put out there for consideration really are looking at, okay, once we get the data, we revise the calibration, then we have to go in and redo the stock assessment. And then we have to go back through the management process, which is easily a three year process, at best, once we get the numbers, recognizing that there will probably be a lot of discourse over, again, the validity of the MRIP numbers and recreational.

So I think really paying attention to prioritizing fisheries that are either mixed use or heavy on the recreational side of things is important. And then being very proactive on this front end, and, you know, I realize you're kind of underwater just on the numbers part of things, but thinking really hard about how to expedite those management decisions moving forward so that we can have appropriate measures in place for our fisheries. So thank you very much.

Dr. Howell: Just a comment back. No, thank you. And I appreciate, I mean, I think the candor comes in all perspectives. And I think that's the way that we will be able to bridge some of these things going forward.

I appreciate you mentioning we are working with the councils. And I think an area of focus for us is if there is a council -- I think the Gulf has spun up a team to sort of look at what actions can we do and sort of mitigating it that way. And I think if we can partner there and then have lessons learned, that's something we can look to bring. But I think the focus on the South Atlantic is point taken, and we're aware. Thank you.

Chair Davis: Thank you, Kellie and Evan. Pat?

Dr. Sullivan: Great. Yeah, thanks, Evan. I really appreciated this. I have sort of one comment from Donna but it's interwoven with my own so from a statistical point of view.

And, of course, I read the paper, and I was blown away by the effect that was seen by just flipping this. And so you're really doing the right thing to kind of expand the survey to kind of see and, of course, using that as an opportunity to explore some of these other things.

It's really challenging to see this. And, of course, things that come to mind are things like, you know, what was the rationale, what's the psychology, behind what happened? And, you know, part of that is if you have these two numbers, is one bad and the other good or are they both bad, right?

And this gets back to, like, how are you going to adjust for that? Because if one is just way off, it's kind of hard to justify using it at all if that's really the case. And I continue to be blown away that the order matters that much.

So, anyway, I applaud what you're doing and how it's coming about.

So to get to Donna's question, you know, you were talking about the scientific, the managerial and the politics. And her question is really the communities. And this, again, I'm interpreting some of what she has briefly said in this email to me.

Obviously, part of what's going to go on is the councils are going to have to figure out how to deal with this. But it might be worthwhile -- right now you're focusing on the statistical part, which, of course, I support, right? But the other part would be just to kind of do a thought experiment, what would happen if it went one way and what would happen if it went the other?

And maybe you're doing that already, but I think that would be a worthwhile thing to sort of explore because you could anticipate some guidance that you could give the councils and so forth in terms of how to handle this, phasing it in or whatever.

And, you know, so basically Donna's question is how is this going to affect the communities? And I think obviously they're all thinking about this. You have already mentioned that in some sense. Everybody is anticipating that something is going to happen.

You probably know, I was the chair of the National Science -- National Academy's review of the original MRFS that led to the MRIP and who would have guessed we would have seen all of these additional things that sort of precipitated out of that? But obviously we needed a change from what we had, which was really not working. Unfortunately the additional are not -- you know, we had some bumps in it too but nevertheless they're moving forward.

But we've seen with some of the other adjustments that happened with MRIP of some of the equity things, you know, one group being sort of penalized and the other group not, and so on and so forth.

So anyway, you know, from, you know, my area of not expertise, the social aspect, it just would seem I would want to spend some time thinking about that and thinking if there's anything that would be worthwhile getting in the hopper in terms of moving this forward.

So I want to end by saying thank you for all of the stuff that you're doing. And it really looks like it's going in the right direction, and I will be anxious to see with everybody else what comes out of the additional study.

It will be really interesting to see how these other factors play a role because the signal to noise ratio, right, is a really important part of this whole thing. And are we just seeing a bump that's occurring because of random across space or something like

that as opposed to -- or psychology as the case may be.

So, anyway, I'll cut myself short and say thanks for what you're doing.

Dr. Howell: No, I appreciate those comments. And, you know, I mean, one of the first questions we got was, well, okay, you found the question, what else will you find later? And I think, you know, the answers that we have -- and this is why I was kind of explaining, it was a peer reviewed design to start.

And the reason for the question order was to ask, you know, in terms of psychology, ask the easier question first. And so that's -- you know, you can always say it's standard statistics or it's a standard survey, but you're talking about people. And I'll come back to the community piece in a second.

I was heartened to hear that a lot of other studies were done, and they were not found to be very significant in this. So it's not as if there is 15 more things to test, and they could make it 14 more changes. This really is one of the last, and it's the closest thing to a smoking gun.

For what they found or felt was getting us calibrated towards, you know, there is a Fish and Wildlife Survey that comes out every five years. You don't have the same temporal frequency. Nothing else really exists right now like the Federal Fishing Effort Survey. But there are some points, Florida's survey, some other pieces where you could look and say, yes, we do believe that bringing this down would be more akin to reality to get to that point.

I don't want to appear to be flippant at all in this instance. So when I talk about science, management and politics, none of it matters if the community is not represented. It's all about the community. And so it's all about the people, whether commercial, whether rec, you know, that's why we're here.

And so I think, you know, keeping that engagement

going. And I wrote that down. I mean, I think prioritizing in terms of the mixed use or where you've got these things, I think we can talk through those things.

The second thing that you brought up is that there were social scientists involved in the survey design and even looking at the re-design. I am going to go back and verify how much social science interaction we have on the implications and the ongoing work. So I thank you for that. I'm taking that back as well as a point for something to do. Thank you.

Chair Davis: Thank you, Pat and Evan. Meredith?

Ms. Moore: Thank you so much for the presentation. And I wanted to first highlight that I, too, am one of the people who have read this study. So I think we're up to, I think, around the table all six of us. I really appreciate it.

And I just wanted to say I have been really impressed with the science and with the transparency around it and the sharing of it. That's been really heartening to see.

All fishery surveys have biases. And I think the really methodical approach that you all have taken to investigating those biases and figuring out how to improve MRIP, I think, is really laudable. And I note you are often compared to state surveys or other surveys. And I do not, as far as I know, think that those surveys are also investigating their biases to the degree that you all are.

So I would just highlight that what you're doing I think is really notable and really important for improving recreational data. And I appreciate that as you move forward with this re-envisioning of the kind of state-federal partnerships around this, you're going to continue to run into those sorts of identifying sources of bias among all of the different surveys and how to bring all of the information together with the ultimate goal of having all of the good data that we have to manage fisheries, and I am really supportive

of that.

And I will note that as far as I know, there is no real replacement for what MRIP can provide. It provides time, series, geographic range, scale all that information across many, many, many different fisheries as well. And so it plays a critical role in making sure that we have the data that we need to manage fisheries.

And I am really supportive of you all working through this and making sure that these sources can work together in improving MRIP so that it can serve that management purpose for all of us.

So this is a lot of me saying yes, thank you, I think. And I just want to emphasize

how critically important the federal-state partnership initiative that you're starting is going to be and would really encourage you to -- there are people, like around the table here, and others who are going to really want to make sure that the output of that is better data.

And I think a level of transparency around that as well and engagement with more than just like -- it will be really easy, I think, for you just to go full data nerds in a room, right, and try to figure that all out. And I think you will need to bring all of us along as you're doing it.

And so I just wanted to encourage, like, a very intentional process where we can all have some access to the thinking and building of that system so that we can build the faith and trust as you're doing it. But it is resulting in better data, and it is about bringing all the sources together, and it's about improving MRIP and letting MRIP do what it does best. So I just wanted to state that. Thank you so much.

Dr. Howell: Thank you. I appreciate those comments. I think that the goal, hopefully the goal for all of us in this is to get the best data available in a

transparent and continually improving way.

You know, like I said, for the people that I've worked with over the years, I don't think I've met a group of people that care more about the science and the science integrity almost to a fault. And so I have a lot of respect for the people working in the MRIP program.

And I empathize with where they are. And what I hope to do is be able to kind of bridge a world between that data nerd in the room, and the world that's impacted by the data. And I think that the more people we can bring into that, to join those worlds, I think the better off we'll be.

And I'm hopeful that through showing transparency in this process even if it is a really difficult time for a lot of people based on the implications, based on these things, we end up with a system that has that transparency no matter if it's state, academic, federal, we have the best data going into this system.

And then we'll really be able to get -- I think management needs are far beyond what we can produce. And the more that we can feed the system and get that good data, I think the better management we'll have. Thanks.

Chair Davis: Wonderful presentation, Russ and Evan, and discussion and input from the MAFAC members. Are there any other comments or questions? Okay. Thanks again. Very good work.

Recap & Overview of Wednesday's Sessions

What I'd like to do is go ahead and just do a wrap-up, just a quick summary of our first day and then Heidi will close out today's session.

So we started off the morning with an update from Janet and the types of things that the Agency is working on and also her great work within the community and the interactions with the communities and also with MAFAC members while

she's out on the road.

And then Cisco and Sam gave a great overview regarding the ships, the surveys, the monetary side of things, some good discussions around that. And then the discussion moved into the science and management. That flowed into our discussions with Climate-Ready Fisheries with the subcommittee. And we have a great document that we're going to vote on on Thursday.

We had the EEJ discussion with Sam and Katie. And then we just dropped off with our update on recreational fisheries. And so it's been a very productive day, lots of great input, lots of great discussions.

We really appreciate the updates from leadership and their team and very much appreciate all the wise and thoughtful input from MAFAC members.

So with that, I'm going to turn it over to Heidi and she's going to give you a few announcements, and then we'll wrap-up for today.

Ms. Zanowicz: So on the agendas that we shared, I know we planned a group happy hour tomorrow at a place called the Admiral. We would like to recommend that folks can enjoy a happy hour at a place called Duffy's Irish Pub, which is like 2 doors or 200 feet down the road to the west. Yeah. It makes the walk back really easy. It's very close. It's at 2153 P Street. They're very excited to host us for happy hour. And that was really all I had. But if there is -- no, no.

For today, Duffy's -- we're making a recommendation for both days. It wasn't planned. We heard back from them a little late after we sent out the agenda. And they were like oh, we'd love to have your group. So it's just open area. It's an Irish Pub. Literally, like, as I said, I think it's just two doors. When you walk out the front door, two doors to the right, which is the west. And their happy hour goes till 7 o'clock.

Tomorrow we start at 8:30 here. And the day is very largely focused on continuing our conversation around budget issues. I don't know if there are any other questions.

(No audible response.)

Ms. Zanowicz: It's up to you all. Some of you might want to -- some of us are going home.

Oh, Katie has something to add related to this.

Ms. Lovett: We said at 5:30, 5:30 to 7:00, but it is flexible if you want to come.

Ms. Zanowicz: Yeah, totally flexible. We would love to see you. A good opportunity to meet your fellow members of the committee.

(Whereupon, the above-entitled matter went off the record at 4:45 p.m.)