U.S. Department of Commerce

National Oceanic and Atmospheric Administration (NOAA)

Meeting

Wednesday

September 11, 2024

The Marine Fisheries Advisory Committee met at the Kodiak Area Native Association, 111 W Rezanof Drive, Kodiak, Alaska, at 8:30 a.m., Jocelyn Runnebaum, Chair, presiding.

Members Present:

Kristina Alexander, Endowed Chair of Marine Policy and Law, Harte Research Institute for Gulf of Mexico Studies, Texas A&M University
Bob Beal, Executive Director, Atlantic States Marine Fisheries Commission*
Janet Coit, Assistant Administrator, National Marine Fisheries Service
Hugh Cowperthwaite, Senior Program Director, Fisheries and Aquaculture, Coastal Enterprises, Inc.
Jaime Diamond, CEO/General Manager, Santa Barbara Landing LLC; Owner, Stardust Sportfishing
David Donaldson, Executive Director, Gulf States Marine Fisheries Commission*
Thomas Fote, Retired, Recreational Fisherman*
Jamie Goen, Executive Director, Alaska Bering Sea Crabbers
Jim Green, Master/Captain, F/V American Spirit
Amy Green, Director, Center for Science & Technology in Education; Assistant Clinical Professor, Department of Teaching and Learning, Policy and Leadership, College of Education, University of Maryland
Jennifer Hagen, Marine Policy Advisor, Quileute Tribe; Marine Biologist*
Natasha M. Hayden, PE, Vice President of Lands & Natural Resources, Afognak Native Corporation
Bobbi Hudson, Executive Director, Pacific Shellfish Institute
Marissa Merculieff, Director, Office of Justice and Governance Administration for the Aleut Community of St. Paul Alaska
Meredith Moore, Director, Fish Conservation Program at Ocean Conservancy
Linda O'Dierno, Fish and Seafood Development Specialist

Ryan Prewitt, Chef and Owner, Peche Restaurant
Kellie Ralston, Vice Chair; Vice President for Conservation and Public Policy, Bonefish and Tarpon Trust
Jocelyn Runnebaum, Ph.D., Chair; Marine Scientist, The Nature Conservancy
Sarah Schumann, Fisherman; Owner/Principal Consultant, Shining Seas Fisheries Consulting, LLC*
Patrick Sullivan, Ph.D., Professor Emeritus, Department of Natural Resources, Cornell University
Clayward Tam, Cooperative Fisheries Research Coordinator, Pacific Islands Fisheries Group*
Brett Veerhusen, Principal, Ocean Strategies

NOAA/NMFS Staff Participants Present:

Russ Dunn, National Policy Advisor for Recreational Fisheries
Bob Foy, Ph.D., Director, Alaska Fisheries Center
Heidi Lovett, Supervisory Policy Analyst, Office of Policy, and Designated Federal Officer
Emily Menashes, Deputy Assistant Administrator for Operations
Sam Rauch, Deputy Assistant Administrator, Regulatory Programs
Emily Ryznar, Ph.D., Research Fisheries Biologist, Resource Assessment and Conservation Engineering Division
Jenni Wallace, Director, Office of Policy
Cisco Werner, Director, Scientific Programs and Chief Science Advisor
Katie Zanowicz, Assistant DFO

Also Present (NOAA/NMFS Staff and Visitors):

Alisa Abookire, Alaska Coastal Observations and Research
Caitlin Adams, Senior Advisor to the Assistant Administrator

Scott Arndt, Mayor, Kodiak Island Borough
Eva Benedezova, APS Kodiak
Julie Bonney, Owner and Executive Director, Alaska Groundfish Data Bank*
Avelino Carvalho*
Briton Dew, Retired
Laura Diederick, Lead, External Affairs and Stakeholder Engagement
Bill Donaldson, Fishery Management Specialist, Alaska Fisheries Science Center
Paul Doremus, Vice President for Policy and Sustainability Strategy, Trident Seafoods*
Brandee Gerke*
Davis Hovey, KMXT Radio*
Mellisa Johnson*
Nicole Kimball, Vice President, Pacific Seafood Processors Association*
Lindsey Kraatz, Ph.D., Senior Science Advisor
Gabriela McMurtry, Fisheries Policy Analyst, NMFS Office of Policy*
Kate Naughten, Director, NMFS Office of Communications*
Patty O'Donnell, Alaska Whitefish Trawlers Association
Wyatt Rhea-Fournier, Alaska Fisheries Outreach Manager, Marine Stewardship Council*
Sean Rooney, Fisheries Biologist, Alaska Fisheries Science Center*
Tim Sartwell, Deputy Policy Advisor for Recreational Fisheries*
Spencer Showalter, Advisor to the Chief of Staff; Advisor to the Deputy Administrator for Operations
Marc Solano, Seafood Processing Workforce Development Coordinator, Alaska Sea Grant*
Rebecca Skinner
Jeff Stephan, United Fishermen's Marketing Association
Geoff Toy*

Maureen Trnka, Ph.D., Senior Advisor for Regulatory Programs

*participating via webinar

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(8:31 a.m.)

Day 2 Welcome

Chair Runnebaum: It's nice to feel a lot of energy in the room following a long day, but amazing day, so thank you all for being here again.

I think I wanted to first start this meeting with a moment of silence in observation of 9/11. So we'll just take a few minutes for our own reflection.

(Moment of silence)

Chair Runnebaum: Great. Thank you all. I heard on the radio this morning that it's been 23 years, which was hard for me to imagine.

So I want to first let everybody know that Janet had a few things come up this morning. She's attending to some other work, and so she will join us as she can throughout the day.

She was hoping to be here this morning. There's also going to be a test for the tsunami warning system today at 2:00 p.m. It is, like, one to two minutes long, continuous sound.

Natasha is here to guide us in our understanding of that system. So if you have any questions, I'm sure she'd be happy to answer. And I do just want to acknowledge, we are on an island.

And so in the case of an emergency, we would go to the high school if a tsunami were to happen, but I think we would know that because NOAA's awesome and we get a lot of information.

So we're going to have a presentation with the regional science update with Cisco and Bob Foy and Emily Ryznar. We're then going to have a hard stop at 9:35.

So our conversation will end, but we will transition to

a bus. Are we taking a bus? Yeah, to a bus to get to the Kodiak Lab and get a tour with Alix Laferriere, I think, will assist in that tour too, Bob, is that right? Great.

And then we'll have lunch, and then we'll come back and have a public comment period. And then we will have an hour for discussion that we will get to have in the afternoon to reflect on yesterday's panels and the lab tour.

And then we'll get an update from Sam Rauch and then an update from Russ Dunn. And then we'll have a recap and close out the day and enjoy each other's company this evening again. So I will turn it over to the science team, and I think, Emily, we're ready.

Regional Science Update

Dr. Werner: Thank you very much, and good morning everybody. Yes, I'm going to try to build on yesterday's presentations and discussion the panels, which were really spectacular panels in terms of the comments and advice and thoughts that were provided.

And what we're going to do with Bob and Emily is that, I'll give some examples of how we're doing climate-ready fisheries in different regions of the United States. These will be highlights, pilots, if you will.

And then we'll take the deeper dive into the Alaska one. And one of the things that yesterday was discussed was, you know, what is actually climate-ready fisheries?

And I'm just going to take the liberty of reading from the document that was prepared by the committee that was led by Meredith. And climate-ready fisheries is defined in that document is really five things.

And I'll just read, 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 more adaptive systems that include consideration of vulnerability and risk, manages for resilience, and prioritizes equity and thoughtful consideration of impacts to communities.

So it's a broad concept, but it really is one that hopefully you'll see some of the, some -- each one of these reflected in what we're doing in climate-ready fisheries and these examples that we'll develop.

So real quick, the next slide is just simply, at the last meeting I presented an update of, we had just come off what was called the CEFI, the Climate Ecosystem Fisheries Initiative Summit. And this is a slide directly from the presentation last May.

And I was going to provide an update on that. This is because CEFI came up in a number of contexts yesterday, I wanted to just perhaps, for the folks that are here for the first time, say this is an effort that's been going on for a couple years in terms of building it up.

IRA, Inflation Reduction Act, has given us the opportunity to actually begin to implement it. And we had a meeting in La Jolla last May with about 140 people, 200 plus, including people online.

It's across line office. So it's not just fisheries, its OAR, its NOS, NESDIS, et cetera. And perhaps the main thing here is that the CEFI will provide a robust and sustained ability to look forward projections on timescales that are seasonal to maybe 2 to 5 to 10 years ahead, which came up yesterday in conversation of, how do we think ahead in this world that we need to plan for different things happening as we go forward.

So this ability to have this output or this result from the CEFI, gives us a robust way of engaging, perhaps, in scenario planning through climate, I'm sorry, through management strategy evaluations.

Management strategy evaluations is something you'll

see in each one of the examples I'll talk before or next as well as, you know, including everything from the social sciences all the way to the management advice.

So it's really an inclusive way of thinking and it's an evolving way. It's -- we've evolved to being able to do this. And CFI is one component of it. So the next slide, if I could, is --

Participant: Use this because this is not working.

Dr. Werner: Oh, I do. Okay, I'll do it. All right, thank you. Thank you. The next slide is, where we are. And the important box for now is that red box at the top.

Since May, we now have 45 folks from across line offices, like I mentioned, in place. So this has been a pretty rapid incorporation of, or redirection of folks, you know, the, who were in the agency, plus also folks that we have brought in.

And this, the CEFI is a national program but, you know, it is regionally implemented. So there will be, as you see on the left side, there'll be regional ocean modeling teams, which will take these model outputs.

At the bottom you see that there's going to be representations of the West Coast, Alaska and part of the Arctic, and there's a full Arctic component.

And there's an East Coast component, you know, from basically Canada to the -- through the Caribbean. And there's also now one that's being built for the Pacific Islands, so the Western Pacific is also there.

These groups will provide the, what we call, the regional decision support teams information that then produces these socioecological outlooks, you know, assessments, MSEs, et cetera, that again, address the questions and the issues that were brought up yesterday in terms of what's needed as we move forward.

Again, real quick, in terms of where we are on the timeline, it's really accelerated, but it's moving forward, East Coast, West Coast, Great Lakes, Pacific Islands are all moving as planned.

The check marks are obviously accomplished where we are. In '25, we will begin to produce these decadal predictions and hindcasts and so on that will really allow us to begin to explore how we provide advice in a way that is climate informed.

And these climate-informed advice is basically what I'm going to be talking about. I'm going to take specific examples from around the United States, different regions of the United States, and then I'm going to pass it over to Bob and Emily to talk about Alaska.

And so, again, just focusing real quickly, and I only have this and one more slide, is examples and highlights of how this is happening. For example, in the Northeast, I'll start in the Northeast, examples are black sea bass and flounder.

And what the Northeast is doing is incorporating information that is, you know, both CEFI as well as local knowledge and such in terms of, how do you take, evolve the assessments, the actual assessments.

In this case, yellowtail flounder and black sea bass are the two examples that allow us to, you know, to provide, again, climate informed management advice. We know that. We know how climate change affects both of these species.

We know the next step is to be more quantitative in terms of how we provide that advice. If you move a little bit further south, the dolphinfish is the example in the South Atlantic.

The dolphinfish is a fish that is, it's mainly recreational but ultimately, you know, there's been a lot of discussion with the stakeholders that they really want to prevent fishery closures.

And so how to understand, you know, the impacts of the shifting aspects, the shifting abundance, shifting distribution of dolphinfish in a way that allows them foreclosures not to happen.

And we talked about that yesterday, how do we prepare for, you know, decisions so that we can maintain the fishery and not close it? And again, this is, again, involving the local knowledge of the fishermen as well as some of the advances in CFI and others.

If you go to the Gulf of Mexico, the example there that I want to talk about is scenario planning for shrimp, and it's referred to as the Shrimp Futures Project.

And so this is a project that's looking at short, mid, and long-term. So planning for 2025, 2030, and all the way out to 2050 in terms of the evolving aspects of the shrimp fishery.

And the shrimp fishery, you know, again, this one is very strongly tied to the local fishery and their cultural aspects to the shrimp fishery that we need to be more quantitative and begin to be climate ready for in terms of how this evolving in addition to, you know, evolving markets and so on that play a component on it.

And my last slide before I pass it on to Bob is examples along the West Coast and the Pacific Islands. I'll start with the Pacific hake, the Northwest Center and the Southwest Center are working jointly to develop new survey capabilities.

It was talked yesterday that we need to modernize our surveys. And this is an example where we have worked to combine the surveys in the Northwest and Southwest to be an integrated survey that allows us to be more efficient.

It also allows us to anticipate some things that will happen with our fleet overall. But it includes not just the modernization of the survey, but it includes also

bringing in new methods such as molecular approaches, 'omics, gliders, acoustics in ways that we hadn't.

And this also talked about the need to expand our survey capabilities and not just rely on the, on sort of the legacy platforms, but actually begin to take advantage of the advanced technology to cover things more broadly and more frequently.

Moving a little bit further south, the Southwest Center is leading an effort with North Pacific albacore. And this is a species that tends to migrate north, south.

Sometimes it's as far south as California, then it migrates in terms of its distribution, you know, goes further north up all the way up into British Columbia, at least the British Columbia, US border.

And presently, you know, it, we're beginning to see and anticipate, again, the changes in ocean conditions to see what possible scenarios they are in terms of the albacore distribution, and also link that and tie that with the industry on the coast.

You know, are folks ready? Are the -- is the port infrastructure ready to address or to take on these pretty drastic changes, you know? And I'm not talking about a seasonal migration.

These are, you know, it can be down south for 10 years and it can be up north for 10 years. And these things actually do have to be taken into account and anticipated in terms of where that albacore distribution might be.

And I'm going to close with the example in the Pacific Islands. And this is data modernization, the example including data modernization in terms of centralizing community data in Guam, focusing on Guam.

Modernizing the data collection so that the data is, you know, is extended beyond logbooks to actually be electronically available and in essential database,

which wasn't available before, as well as developing some of the bottom fishery independent surveys in those regions.

And so these are examples of how at different regions were taking on and incorporating some of the concepts and questions that were brought up yesterday largely in, as a result of the IRA opportunity that we have right now. So I'm going to, I know that we're short on time, so I'm going to pass it on to Bob and good luck.

Dr. Foy: Okay, thank you Cisco. Good morning everybody. My name is Bob Foy. I am the director of the Alaska Fisheries Science Center. Apologize, I wasn't able to be here yesterday.

I heard you had some excellent discussions. As Cisco said, I'm going to focus on the same topics, climate-ready fisheries in the Alaska region, and go into a little bit more detail.

So, and I'm going to build on each of the principles that Cisco mentioned at the beginning of the presentation that all came through MAFAC in the past. So as a whole, our goal is improving industry fishing community and indigenous climate resilience in the Arctic.

Something that is not unique to the Arctic, but we have a rather large range and breadth in the Arctic, is the dependence on fisheries all the way from small communities, individual families on the Yukon River all the way to the, some of the largest industry commercial operations in the country.

So in working towards climate-resilience fisheries across that breadth is a huge job. Just to reiterate, that the principles that we're focusing on here, the long-term management support, the historic current fisheries states, if you will, using best available science and knowledge base, climate impacts, vulnerabilities and the risks, and then lastly EEJ.

You can see a few staff members here from around

the country. We are located, the Alaska Fisheries Science Center is located in Seattle, Juneau, Kodiak, well, you are here, and you're going to see in a little bit we've got staff in Anchorage, Dutch Harbor and Pribilof Islands and Newport, Oregon as well.

So long-term management support, and I'm going to talk about CEFI a little bit, Climate Ecosystem Fisheries Initiative. I'm not sure if this came up yesterday or not, but this is the national effort to build out projection models that allow us to take advantage of our new skills in communicating what we think the climate is going to look like in the future.

So we are now able to work with our colleagues in other parts of the government to downscale these models for our particular regions. So for Alaska, we're focusing on the Bering Sea, and then the Gulf of Alaska.

We're able to downscale these models and get some predictive information on where we think the climate's going. So now, we get to use the decades of ecosystem data that we've collected and put that climate information into those ecosystem models.

These ecosystem models, tell us roughly what's going to happen when it's warm, what's going to happen to the plankton, the small fish, the forage for the commercial fisheries that we care about?

Can we make any kind of predictive claims in the shorter or longer term about what our expectations are if things are getting warmer, if we might expect a heat wave?

So this effort, again, is a national level effort. We're building on a number of projects in the Alaska region we call ACLIM. And those projects were very species specific.

They weren't as in depth as the whole C-E-F-I, CEFI program is currently. But what we're doing right now is, we're able to start forecasting locations of fisheries in the future.

We're starting to look at where those range expansions or contractions are going to occur in the Alaska region. We are predicting now overlap of different commercial fish species in the future, in particular in the Bering Sea as you have a bottleneck in the Northern Bering Sea.

As the fish move north, as we saw in 2019 as the result of a heat wave, we're starting to see which species are going to overlap. That's giving us an idea of which industries, stakeholders, communities, et cetera, are also going to overlap in ways that they have never before.

Our intentions in the future are to focus on products like our, a hindcast. Can we go back in time and check the value of these models, seasonal forecast, and long-term projections.

Delivering this climate information to managers is the ultimate goal. So we're working across a spectrum of decision makers and stakeholders to get to the point where we can provide people the information that they need moving forward.

When you get a chance to look at these slides a little closer, they picture on the right hand side are various scenarios. And this is a product from the North Pacific Fisheries Management Council Climate Workshop that was held in this room here a few months ago.

And it was a forward-looking effort to build out scenarios, what happens if it gets warmer but production stays the same? What happens if it gets warmer but production in the Bering Sea decreases? And thinking through what those scenarios are for communities and commercial fisheries.

Long-term management support, you know, is also recognizing that there are some stocks that aren't necessarily going to be negatively impacted by climate change.

Sablefish numbers are up extremely right now. We're seeing the highest biomass of juvenile sablefish that

we've ever encountered in our surveys.

At first blush, you say, well, that's a good thing, right? Your numbers are up in your commercial fisheries. Right now, it's a problem. They're too small for most of the markets that need them.

They're flooding the existing markets. They've driven the price down, and those that are dependent on sablefish, communities and fishermen, are having an economic crisis as a result.

The hope is that these fish are going to grow to a point where they become more valuable to these communities. But right now, it's a real problem. And it's created tension among users, and its created tension in small communities.

The last piece of this is the impact on markets. And we're taking a much a more focused view of fisheries impacts and climate impacts on markets and our seafood strategies, and sablefish is a test case for that where you actually have a lot of fish creating a problem in global markets.

So climate resiliency by looking at historic, current and future fishery states, we've got a number of different surveys. I'm not going to go into a lot of details there, but we have five large marine ecosystems in Alaska.

Three of them that have major fisheries that provide product throughout the world. So it has become very clear to us in the last handful of years in particular, that we must modernize this process and that we must think about how we're collecting information in a way that lets us expand with climate change.

Even just a handful of years ago, we held tight to our long-term time series. And we said we have to do everything the same, we can't change from these time series.

With the last set of heat waves that we saw in Alaska, it upended our understanding of the ecosystems. And

it's actually given us an opportunity to take a step back, rethink how we modernize these surveys, again, so that we can push into the Northern Bering Sea and maybe even further.

So we're redoing our entire survey design in this large area. And this is an expansive area. This is 200,000 square nautical miles in the Eastern Bering Sea that we're redoing in effect.

We're taking a 50-year time series and rethinking the nets we use, the stations we occupy, how deep we go. The last heat wave, we saw some of our crab stocks, some of them go deep and we weren't there to track it.

So part of this effort is so that we can put a footprint out there and provide information back-to-back to fishermen. We're looking at innovative new technologies, how can we use eDNA in the future if we don't have the luxury of a full-scale survey?

Can we use eDNA? Can we use artificial intelligence? Can we use drones in more responsible, more effective, if you will, ways?

Sustaining our existing surveys, so this just shows a brief look at our bottom trawl surveys on the left-hand side, our acoustic mid-water trawl surveys in the middle, and then our long line surveys on the right-hand side.

These are vast areas, and each of these represents different ecosystems, both in the water column and on the bottom. It's absolutely crucial that we maintain these surveys.

Modernizing is good, but letting go of data collection is bad. We need this information collected in these various reason, regions, pardon me, and we need to expand as the fish move as well.

So that's just a list of our various surveys that are focused on our stock assessments. Each one of these surveys results make their way to the North Pacific

Fisheries Management Council and inform dozens of stock assessments.

We also must maintain balance and continue to conduct our ecosystem surveys. We can't address the impacts of climate change or predict the effects of climate change without understanding something about the marine ecosystem.

If we can't start thinking about the processes in the marine ecosystem or even the carrying capacity of an ecosystem, then all we're doing is counting what just happened this year. Fishermen, fishing communities need us to be looking forward.

This just shows a handful of our ecosystem surveys focused on early life stages of pollock in the Gulf of Alaska on the left, some Bering Sea ecosystem surveys in the middle and then even some Northern Bering Sea Chukchi work, which is only looking at the ecosystem on the right-hand side.

As 2019 heat wave progressed, we saw a number of our commercial species move into the Chukchi, where we don't have commercial fisheries, so understanding that ecosystem is important.

These are the -- the five different colors here represent the five different ecosystems that I mentioned. Obviously, is, it's a huge area, a large responsibility with respect to both abundance and economic output for the country, and the importance of a number of fishing ports.

And again, we usually start with this discussion of the economic importance of the fisheries in Alaska. But talking about the complexity and the changes and the challenges that we're seeing means that, in order for us to have best available science and knowledge to be climate ready, means that we need to acknowledge these different ecosystems.

It means that we need to acknowledge that to sustain this, we need to keep collecting the information in the previous slides. So for best available science, why is

a balanced portfolio important?

So I alluded to it in the previous couple slides. We can't build resilience in the shifting ecosystem states if we don't understand what's going on in those different ecosystems.

What drives the Bering Sea is different from what drives the Gulf of Alaska. The oceanography is different, the species are different, and their relationship to the commercial fisheries are different.

As an example, we can look at the size and fat content of a juvenile king salmon in the Northern Bering Sea and predict returns to the Yukon six years later.

We can look at a juvenile forage fish in the Bering Sea and predict with decent reliability pollock two to three years later. Each ecosystem has a unique bottleneck that it's our job to figure out what that bottleneck is so that we can move into this prediction space.

In order to do that, you need to have a portfolio that's looking at the environment that provides dynamic management tools, you know, based on a host of information coming from the ecosystem.

And that's what this slide represents, all the different data that we collect from ecosystem information all the way to our socioeconomic data collections to understand the connections to the communities.

What is needed, again, I have, I've alluded to this, we need to understand ecosystems that fish are moving into. It, had someone asked me two decades ago what we needed to do, at that point, we should have been in the Northern Bering Sea.

We did not think that cod were going to move into the Northern Bering Sea in 12 months. The center of distribution of cod in the Bering Sea moved a 1000 kilometers in 12 months.

Had we thought that that was possible, you know, we would've set ourselves up for better understanding that northern ecosystem. And the goal here, again, is to build up the sustainability and have the information so that communities, fisheries can adapt.

So that our work and our, with our co-management partners with Green Mammals can adapt to better understand these changes that might be coming forward.

So what are these risks? I mentioned the cod migration north. That's the top two pictures. That's 2010 on the left, 2018 on the right. The centers of distribution, the darker the color, the, at, the more the fish.

What we saw on the last couple of heat waves, the last one in particular in the Bering Sea, Bering Sea snow crab stock collapsed. Western Alaska salmon, chum and king salmon have collapsed.

On the other hand, sablefish have done very well. Pollock have done average to increasing. Herring in the Bering Sea and Bristol Bay have done very well. And sockeye salmon are seeing all-time highs in Bristol Bay.

So again, the key is not to just assume it is all bad. The key is to understand what is going to change and try and get in front of it.

Equity and environmental justice, what does this mean to us? For me, from a science center perspective, this means I look out to our stakeholders and say, are we collecting data that represents these stakeholders?

Are we representing the family I mentioned on the Yukon? Are we representing the biggest industry in the Bering Sea and everything in between in the information that we collect with respect to climate?

So we're working in that regard. We're building off the national EEJ strategy that you heard about

yesterday. You also heard about our regional strategies moving forward.

And that's been a super exciting effort to reach out to communities and get a lot of feedback on where we need to go in the future. And it really is informing the kinds of information that we need to consider in order truly to be climate ready.

So with that, I am going to pass it to Emily to talk more about this adaptation and specific scenarios. And in Alaska, and you're going to hear this, we aren't necessarily looking out at scenarios that might happen.

As of, as we've talked about, these are things that have already happened in our backyard, which give us a good clue as to where to go in the future.

Dr. Ryznar: All right, thanks Bob. My name's Emily Ryznar and I'm a research fisheries biologist with the Alaska Fisheries Science Center here in Kodiak.

And as Bob mentioned, I'm going to be touching a little bit more or rounding out today's presentation to touch specifically on research that is being conducted at the Kodiak Lab here, along with collaborators in order to help build climate-ready fisheries for Alaska.

So with climate change, there is evidence of increasing volatility in federal fisheries in Alaska. And for us in Kodiak, we take this personally as a community that was built on subsistence fishing.

But with this increasing volatility, there's also evidence of resiliency as Kodiak and communities like Kodiak have responded to this change and adapted and have continued fishing. Yeah?

Ms. Hayden: Right, the picture in the middle is my dad.

Dr. Ryznar: Really?

(Off-microphone comments.)

Dr. Ryznar: They -- I stole it from, well, I didn't steal it. The Kodiak Marine, Maritime Museum has a really neat collection of historical photos and I took it from there, so yeah.

So as a scientist in this, in Kodiak and involved with the Alaska and Fisheries, our goal is to try and provide the best available scientific information to stakeholders in Kodiak, and communities like Kodiak that depend on Alaskan fisheries in order to make adaptation decisions to changes moving forward.

However, there also exists some cognitive barriers to this adaptation decision making that are apparent in the literature. And with this cognitive science background in mind, there was a framework that was developed that identified key piece of information that are integral to this adaptation decision making by stakeholders to overcome these cognitive barriers that were identified.

And the first piece of information that is needed is that, stakeholders need to be able to recognize the cause of these fisheries volatility.

So to what -- like potentially it's temperature, maybe it's a combination of multiple factors, but there needs to be some recognition as to what could be causing it.

Next, there also needs to be information provided that allows stakeholders to attribute the cause of these fisheries volatility. So to what degree is this cause maybe a one-off random event in time versus part of a greater human induced trend.

And third, stakeholders need to be able to anticipate these changes, provided information that allows them to anticipate. So this is usually done by comparing historical, current and next decade climate risk for fisheries under various climate emission scenarios.

And this type of information is most effective if it's simple and provided in a timely manner. So

information that's predicted and provided for potentially 100 years in the future, isn't necessarily useful for stakeholders that are trying to -- that need information now and adapt, and to be able to adapt to changes that are occurring now.

So with this framework in mind, I'm going to run through a couple of examples coming out of the Kodiak Lab, along with collaborators that have tried to provide this type of information for stakeholders to make these adaptation decisions.

And the first example is, Gulf of Alaska Pacific cod. So this stock peaked in the 1990s and then collapsed in 2015 and 2017. And since then, it has failed to recover.

And so scientists set out to try and provide these pieces of information in order to not only understand what happened to this fishery, but also to provide information for stakeholders to adapt moving forward.

And while there's a wide background of information in the literature that show that cod respond to temperature, there was never really any information that provided evidence of the system breaking event that could have caused a fisheries collapse that was observed in 2015 and 2017.

And so collaborators at the Alaska Fisheries Science Center in Newport, Oregon, set out to conduct a series of mechanistic lab studies to understand what maybe could have happened during this collapse.

And what they found was that, cod eggs are only able to survive within a narrow temperature range, which is illustrated in the graph on the left where you can see that the proportion of successful eggs hatching is highest in a very narrow temperature window and declined significantly beyond that window.

So this not only provided evidence of a potential system breaking event if temperatures were outside of this temperature window, it also provides

stakeholders a potential avenue to recognize what could have caused this fisheries collapse, the recruitment failure during these extreme temperatures.

And beach seine studies, our beach seine studies around the Gulf of Alaska during this collapse confirmed that recruitment of cod declined precipitously during these extreme warming events that were observed.

And using this data, scientists were then able to model that the number of age-one cod per seine set declined significantly depending on the extreme, extremity of the temperature anomaly experienced by the egg and larval stages.

So the more extreme warm temperatures those young stages of cod experience, the less likely they're going to recruit to the age-one stage.

From there, scientists calculated the fraction of attributable risk, which is a metric that estimates the probability of an extreme event occurring under human caused current conditions compared to the probability of that same event occurring under natural pre-industrial conditions.

And based on this, it was found that the extreme temperatures that caused the recruitment failure in cod were greater than or equal to 90 percent likely to have been caused by human caused influence.

And so this provided information to stakeholders to attribute that cause of the fisheries collapse to recruitment failure that was entirely, almost entirely due to high temperature conditions caused by human activities.

So now, moving north to Bering Sea snow crab. Winter sea ice in the Bering Sea creates an Arctic and boreal ecotone, which is a boundary between two ecosystem states.

And the panels on the left are illustrating winter sea

ice extent from 2013 to 2018 in the Bering Sea. And you can see that that boundary, that sea ice extent boundary and that Arctic Boreal ecotone shifts throughout the years.

Snow crab are an arctic species, so they prefer arctic conditions. And in 2018 and 2019, they experienced a 90 percent decline in their abundance, which coincided with extreme warming and extremely low sea ice extent.

And 2018 is highlighted by a red box in the bottom right of those maps. And you can see that the sea ice extent is significantly much more north than it was previously observed in the time series.

So this started this research with the premise of whether can, borealization, so how boreal the Southeast Bering Sea is, whether that could be a predictor of the consequences of warming for snow crab, which is an arctic species.

So to investigate this, we collected 12 time series that provided an indicator of whether the system, whether the Southeast Bering Sea was more boreal or arctic.

And these time series included sea ice extent, phytoplankton bloom, size, timing, and type, bottom temperature, zooplankton abundance, cod abundance, other groundfish arctic species abundance and then also disease prevalence.

And these 12 times series were then collapsed into a latent trend of shared variability through dynamic factor analysis, which became the estimation of the borealization index.

And that borealization index is plotted in the time series on the right. And the more negative the borealization index values are, the more arctic the system was at, during those years.

And the more positive those values are, the more boreal that system was. And the more arctic -- the

more negative those values are, the more favorable it was for snow crab.

And you can see in the last nine years and including during the fisheries collapse, that system was very boreal. So through this study, we were able to demonstrate that borealization exhibited a threshold response with snow crab abundance.

So as the borealization index got more positive, as the system became more boreal, it pushed snow crab abundance pass a breaking point where the abundance declined significantly.

And we also were able to find that borealization provided a better predictor of snow crab abundance than bottom temperature alone.

And so these pieces of information provided stakeholders information to recognize a potential cause of the fisheries collapse as the boreal, as a system became more boreal.

From there, we also calculated the fraction of attributable risk associated with the warming and borealization index values that were associated with the collapse.

And what we found was that, those index values and that warming were also greater than 98 percent likely to have been human caused.

And these borealization index values associated with the collapse were more than 200 times more likely to occur now in present day conditions than in the pre-industrial time.

So this provided evidence that the Arctic boreal ecotone, that boundary, is shifting pretty rapidly and that it's more likely to be expected now and moving forward than in present day.

So this allowed -- this provided information to stakeholders to attribute the cause of the fisheries collapse to human induced borealization and

warming, and to anticipate that this, these changes are more likely to occur now and moving forward.

There has been though glimmers of hope for this fishery as evident from the Eastern Bering Sea bottom trawl survey that Bob touched on earlier.

In the last two years, there have been a rapid increase in immature snow crab that likely will provide hope for short-term recovery of these fishery, for this fishery once these young crab recruit to the adult fishbowl population.

Also, as Bob mentioned, populations are moving north with climate change. And this is true for snow crab as well that the Northern Bering Sea is likely going to be -- provide a refuge for this fishery moving forward as sea ice extent may continue to push north, and that arctic ecotone that's preferred by snow crab also continues to push north.

So we can provide information to stakeholders in order to recognize, attribute and anticipate change, but we also try to be responsive to real time stakeholder needs to fisheries changes as they're occurring.

And so how can we be responsive to these real time stakeholder needs in a changing climate? With increasing stakeholder needs for information, there often arises an allocation battle between stakeholder groups.

And with this arises the need to really understand where commercially fish populations are occurring throughout the year and how they may be interacting with different fisheries represented by these different stakeholder groups.

However, sometimes this information isn't necessarily readily available throughout the year. And one example of this is for Bristol Bay red king crab. So Bristol Bay red king crab has exhibited a declining trend in abundance, which closed the directed fishery in 2022 and 2023.

And while there is an abundance of information for this stock in the summertime from the Eastern Bering Sea bottom trawl survey, where the species is occurring in non-summer months is really unknown and as well as how it may be interacting with other fisheries in these non-summer months.

And so one effort to fulfill this gap is through these collaborative pot sampling surveys that are a partnership between industry, federal and state partners.

And they have been occurring for the last two years and will continue for a third year. And the goal of these surveys is to assess red king crab distribution in late winter and early spring.

And the panel on the right, the map on the right, are results from this year's survey. And this was a collaboration between both pot vessels and trawl vessels.

And you can see that most of the red king crab was generally caught in the Eastern Bering Sea, ah, sorry, Eastern Bristol Bay. And this will be, this will continue for one more year in order to keep assessing Bristol Bay red king crab distribution in this season.

In addition to these surveys, there are also modeling efforts to try and understand where red king crab are occurring outside of these summer months as well as how they may be interacting with these fishery, with other fisheries during these months.

In the left set of maps are results from a species distribution model that is trying to predict red king crab bycatch in non-pelagic trawl fisheries.

And these are, specifically encounter probability hotspots of bycatch in different time periods throughout the time series, as well as for different sex, size, maturity categories for red king crab.

And then the right map is also an output from a species distribution model that is utilizing a hybrid

approach that is integrating information that's collected from tagged red king crab in the wintertime, and then predicting their movement and connecting their movement to their summer distribution in order to try and understand seasonal movement between these different seasons, as well as how their habitat preferences may change throughout these different seasons.

And then this model will eventually be overlaid with bottom, predicted bottom contact from the pelagic trawl fishery to again understand how Bristol Bay red king crab may be interacting with different fisheries in different seasons.

And then finally, in relation to the decline in abundance, there was a call among stakeholders, managers, and scientists alike to really try to understand why this decline in abundance was occurring.

And collaborators at the Alaska Department of Fish and Game along with NOAA Scientist, set out to try and provide a -- to assess recruitment limitation as a potential mechanism for declining abundance. And this is the first year of this survey.

And these are photos from May and August of this year, where scientists deployed larval collectors at various sites around Bristol Bay to assess the larval retention and what types of crab were recruiting to those larval collectors.

And they also collected video footage around those larval collectors. Those collectors were then retrieved in August. And the type, sorry, the age and abundance of red king crab were assessed.

And then this will eventually be associated with the bottom video footage that they collected in order to try and understand the habitat preferences of different age crab.

And what they found, the data is still being analyzed from this survey, but they collected over 1500 age-

zero red king crab in these collectors as well as 38 age-one crab.

And they also tagged some age-one crab from this survey. And this will continue for the next year, two years as well. And then I have just a couple more examples.

In relation to the snow crab collapse, there was a call to develop a real-time indicator of snow crab health in order to try and predict potential fisheries collapses moving forward.

And to fulfill this, there, red, snow crab are being collected from the bottom trawl survey every summer. And they've started to collect -- this collection started in 2019 and they'll continue going forward.

And the left maps are sampling distributions of these collections in the Eastern Bering Sea bottom trawl survey. And from the crab collected on this survey, the hepatopancreas is being extracted, which is the organ that's primarily responsible for energy storage in the crab.

And fatty acid content and water content is being analyzed in the hepatopancreas. And from these analyses, the overall energetic condition of these crab is available -- is able to be assessed through time.

And what was found was that, in 2019, so mid-fishery collapse, which is that orange bar in the middle panel, energetic condition of snow crab was significantly lower than in the years post-collapse, which are those blue bars.

Scientists also found that mid collapse, energetic condition was negatively correlated, negatively related to bottom temperature and snow crab density, which is that orange line in the rightmost graphs, and slightly positively associated with bottom temperature and snow crab density in the years post-collapse, which are those blue lines.

And so this, again, is continuously collected year after year to provide in, a real time indicator of snow crab health through time. And then finally, how is all this information integrated into the stock assessment process for managers?

This one effort to do so is through the ecosystem and socioeconomic profiles or ESPs, which are a standardized framework to integrate stock assessment indicators into the stock assessment process.

And to do this, stocks are first identified as potentially benefiting from an ESP. And then once those stocks are identified, stock specific vulnerabilities and ecosystem pressures are synthesized.

And then from there, a suite of indicators is identified and analyzed and updated year after year, which is then communicated to stock assessment authors and managers as an overall indication of stock health.

And these ESPs provide a really great on-ramp to communicate red flags to managers and stock assessment authors year after year. They also provide an on-ramp to communicate buffers for stock assessment models, and also provide more holistic socioeconomic and ecological view of how the stock is doing each year.

And so I've touched on some examples coming out of the Kodiak Lab along with collaborators that are helping to try and build climate-ready fisheries in Alaska.

But I haven't touched on everything because some of that will be covered in the lab tour that's immediately following this presentation. But before that, I'll open it up to any questions. Thank you.

Chair Runnebaum: That was really amazing. Thank you both. And Bob, I forgot to mention, thank you so much for showing up straight from the airport, traveling from Monterey --

Dr. Foy: The fog cooperated.

Chair Runnebaum: -- and giving us a phenomenal and very coherent presentation. And Emily, that was really great to see. And I feel like I've seen a lot of really amazing science communicated really clearly in the Alaska region. So thank you for carrying on that tradition. I'll -- Jamie, kick us off.

Ms. Goen: Hello. Thank you for the presentation. That was incredible. And I just want to echo the exciting work going on with crab. We had a collapse a few years ago and the Science Center and NOAA Fisheries has responded quickly to try and figure out what's happening.

So I really appreciate the presentation and all the collaborative work. One thing I was going to add to the ecosystem socioeconomic profile slide one back was that, fishermen's knowledge is being incorporated into that process now.

We do a survey of our fishermen after every season that we're open, and then we provide that information in an anonymous way to the scientists that then incorporate that in, anecdotally into the health of the stock.

And we heard some talk yesterday that sometimes we often hear first from our fishermen and communities when there's warning signs of a stock collapse or the health of the stock isn't great.

And I think it's an important way that we're showing that we can start incorporating that information into the process. So thanks for all the work that you all are doing.

Chair Runnebaum: Thanks, Jamie. Meredith, you --

Ms. Moore: I think Linda was before me.

Chair Runnebaum: Oh, sorry. Okay, Linda, go ahead. I see there's --

(Off-microphone comments.)

Ms. O'Dierno: I think that was a phenomenal presentation, but given the complexity and the intricate interactions in these fisheries, you mentioned IA as a possibility in data collection. What about the use of IA or other machine learning strategies in predicting future biomass of species and distribution of species?

Dr. Foy: Sorry. I can jump in on that and there might be broader answers as well from other regions, but it's a great question and the answer is, yes, we need to be using artificial intelligence and machine learning to build on this incredible database of information that we have.

We are in the process of testing that right now. So we have traditional methods that we use in stock assessment that are based on population dynamics and understanding of, you know, a specific species, maybe a couple of species interactions.

What we're looking at are more ecosystem-based approaches where we're allowed to put more information into an AI type of a framework that lets us look into the future. Right now, that is -- these ecosystems in our case are really too complex to trust those AI outputs, if you will.

So it's up to us to refine those outputs into management strategy evaluations, for instance, which are models that incorporate information that we know allow us to put information in and then predict what might happen in the future.

It's a statistical way that's similar to AI but it allows us to refine it based on the information on the bottlenecks that we have.

Again, there's just too much going on in these ecosystems to just put it all in one pot and say, you know, here's the outcome, what this going to look like in the future.

Dr. Werner: I'll just add to that. And that's another part of where the CFI comes in because like Bob says,

there just simply isn't that amount of data for AI to actually learn.

And so the CFI is not just looking forward, but it's also doing hindcasts. And those hindcasts can provide, again, model based, model generated data if they're good enough that then we can use AI to project, you know, these potential scenarios.

So it's like Bob said, this ties the data and the modeling together in a way that we could take advantage of these new approaches. Great question.

Chair Runnebaum: Great. Thank you. Brett, did you -- okay, Meredith, go ahead.

Ms. Moore: Hi, thanks so much for the presentations. I have one maybe quick question and then one extra question on top of it that's more complicated in typical Meredith form.

So the first, like, shorter question is, I know we're doing a lot. A lot of this is looking at predict forecast for species shifts due to climate change.

I'm wondering if we are also able to do forecasts with respect to, like, anticipated size of the stock as they're moving into certain areas since, obviously, with the sablefish example, size is such a big determinant of how well the species is doing, but also how well the industry is doing.

So that's supposed to be my small question, so sorry. The bigger question I want to ask is, it seems like you all are doing a really huge effort to focus on science and research that's really relevant to the needs of stock assessors and the managers and the fishing community.

And I'm wondering if you have a sense of who is able to react to that information and incorporate it more quickly into the way that they are either doing their science management or their business practices.

And if you have a sense of, like, why some folks are

picking that up more quickly or what the barriers might be to those folks that are a little bit slower to bring this information into the way that they're part of the management system. Like, how that might look from your perspective and how you might be responding to that. Thank you.

Dr. Foy: I'll take a crack at that. There's a lot there. Thanks very much for the questions, Meredith. I'm going to start with your small question first, the first one, and stock size not just species shift.

So the short answer is, yes, we are trying to get to a point where we understand carrying capacity, how much production can an ecosystem create that then supports a fishery. And sadly until recently, those are difficult things to come by.

The snow crab example that Emily presented is us hitting carrying capacity. It, it's knowing a certain number of crab at a certain temperature cannot, is not sustainable.

We hit a wall. That gives us some idea of that species, that stock and how they might react in the future. There's a couple of other research projects going on.

Cod right now, for instance, that have defined a certain temperature that is important for them and looked at future distributions in the northern Bering Sea and said that actually that habitat, that temperature habitat will be lower in the future as those stocks move north into an area that doesn't have the same amount of that habitat.

Therefore, the capacity for those stocks to persist is going to be lower. And I wouldn't say we've taken it beyond that. So, you know, to suggest that we're going to be able to say exactly how much is going to be in the future, at least in our region, we wouldn't be able to do that.

But again, we're trying to get to that point where even if we could talk in generalities, that's going to be important for fishermen to understand, is it going

up, is it going down? Is it going up now, but it's probably going to go down in the long run. You know, those kinds of conversations are really important.

Ms. Moore: Can I ask a quick clarifying question?

Dr. Foy: Certainly.

Ms. Moore: That was great, thank you. I was also referring to the size of the individuals in the population.

Dr. Foy: Oh, got you.

Ms. Moore: Sorry, if I --

Dr. Foy: Yes, is the answer. Growth is a very important topic for us to understand not only adult biomass for the population dynamics also what's important to fisheries, so we track that. You know, all of our surveys, we're looking at size distribution, we're looking at growth, and we model changes in growth.

And there are some specific process, studies that have looked at the potential for growth to change over time. I'm going to keep using snow crab as the example.

There used to be five to seven times more snow crab in the Northern Bering Sea that, than were in the area that we fished. But they were all that big and the processors didn't want them, there's no market for them. And actually they were all mature. Those numbers have come down but the big question for the industry is, are they going to grow?

And so there's been a couple of studies done that have shown that, well, yes, with increased temperatures, as long as there's food, they're going to grow just because of the species. So shorter answer is yes. Was there another response over here too? No?

Dr. Ryznar: No, I'm good.

Dr. Foy: Okay, so going on to the second part, who can react quickly, I'm going to take a circuitous route on an answer there. I think it starts with awareness, right?

It's one thing for us to say that we're going to put predictive models out and wait till we get good at it, and then we'll try to provide a product into the future that you can react to.

That's probably more important on the science side of the house because we want to make sure we're making smart decisions on conservation of stocks, on being aware of how much we can remove for commercial fisheries.

But from a business perspective, the more and more I hear from individual fishermen communities, just knowing the general direction they can react.

You know, no one knows these oceans better than the fishermen. No one knows what's going on with these stocks better than those that are paying attention to the bottom line.

So for us to be able to just communicate general direction, if we could've said something about snow crab in advance, we saved people major decisions when those stocks were actually at their highest abundance, and people were making very different decisions than they had to make a couple of years later.

So I would say that those businesses that have the awareness, to go back to my original point there, are able to react. So again, our job to bring that awareness. Does that answer your --

Ms. Moore: Yeah, awesome. I look forward to bothering you more

Dr. Foy: I'm happy to chat more.

Chair Runnebaum: Great. I think we're going to have to leave it there, so Natasha and Kristina, my

apologies. Please write your questions down and we can pick this conversation back up at the lab.

So you can leave stuff in this room, it will be locked, whatever you want to leave, take what you want to take. We're going to meet downstairs in the same place we met yesterday to get on the buses to go to the lab, so posthaste, please.

(Whereupon, the above-entitled matter went off the record at 9:34 a.m. and resumed at 1:17 p.m.)

Chair Runnebaum: All right. Thank you, everybody, for making it back. Bob, thanks so much for that tour. It was awesome. Thanks -- well, thanks to your staff. They did a great job and I think everybody really enjoyed it.

I got some great pictures with a red king crab so thank you for helping make that happen.

We're going to open it up for public comment so if there's folks in the room that have signed up for public comment I'm hoping you can join us at this time and then we will go to online to see if there's anybody online that wants to make public comment. Okay.

Public Comment

Mr. O'Donnell: Just in case you can't hear me so I'm going to talk slow because I'm Irish and I've been told that if I talk fast that not too many people understand me, which I hear from my kids and other people.

Some of you I know and most of you I don't know, but this is the first opportunity I've had to testify or give public comment at MAFAC. And I joined a little late yesterday. I got the second panel. I should have been here for the first but I got hung up doing office stuff. I was going to use a different "S" word but stuff, and I didn't make it but I should have made it.

So just a bit of background. I grew up in Ireland

fishing with my father and grandfather. Started at the age of three, which I don't remember. My mother told me that.

But, however, I do remember at the age of seven where I started fishing four months every summer with my father and my family has fished and I wrote all this down because my memory is not too good and I don't necessarily remember what takes place the day before or what I had for breakfast. But --

Chair Runnebaum: Paddy, can you introduce yourself to us please?

Mr. O'Donnell: Sorry. So Paddy O'Donnell. I own a 85-foot trawler here in Kodiak. I've been fishing here since 1990. I grew up fishing in Ireland and that's all I've ever done. I've never had another job. Well, I have had other jobs but for a very short period of time.

So, anyhow, my family has fished for well over 400 years and I can only go back to 1641 which was the Cromwellian conquest of Ireland which was an invasion by the English where all the records were destroyed.

So I can't trace back but I can trace back to 1641 with complete accuracy. I'm a member -- I sat on the advisory panel of the North Pacific Fishery Management Council for the last 11 years. I also sit on the advisory panel to the Department of Fish and Game here in Kodiak.

Listening to the conversation yesterday I came to the conclusion that we have no idea what climate-ready fisheries is. And, to me, climate-ready fisheries is being proactive rather than reactive, and I think that's where we have to go.

So you heard yesterday that the loss of the crab survey was detrimental in what happened, in not informing the conditions of crab and where that ended up, and you also heard that the 2017 survey in the Gulf of Alaska here led to an 80 percent

reduction in the Pacific cod take and since we did not have a survey in 2016 we had a survey in 2015 and the surveys in the gulf are every other year. There was a gap year there and this was detrimental to informing the stock assessment orders and everybody else as to what was going on.

However, we the fishermen were out there on the grounds and we have seen all of this taking place in 2014 and in fact as early as 2014 we have seen conditions changing.

So I think it's imperative that we involve the fishermen in educating and incorporating our information and what we're seeing on the grounds and to the stock assessment process.

Like I say, I've been fishing here 34 years. I have some local knowledge. I don't have traditional knowledge but I have local knowledge.

So the Gulf of Alaska, as you heard yesterday, has been cut in funding for surveys. So we're -- we had three vessels. We're now down to two vessels and the stations that are surveyed have been cut by a third.

And there's data gaps there -- huge data gaps. So back in 10, 12 years ago I participated in a project where we put data recorders on to record information on the ES60s at the time.

Now we have ES80s which is similar to what the Oscar Dyson uses around here, which is your white boat, and incorporate that data into the stock assessment model to some degree or at least have an awareness of what's going on out in the ocean. We are your eyes in the sky, so to speak, because we are out there.

So I think we need to get back to that. The survey vessels are out there in the springtime for three, four weeks if they don't have breakdowns. The bottom trawl survey takes place in summertime when ocean conditions are different and we don't necessarily have

the same biomass of cod or pollock stocks in the same grounds.

Like, right now, my skipper is out there fishing with my boat and he's not seeing fish and I'm telling him, well, as time goes on here coming into September the fish are going to move in off the shelf into the shallower grounds. That's just based on my experience and that's sort of just the way it is.

The other thing you heard yesterday was modernization in Russia and infrastructure. I mean, they're building up and they are building up and I've said this for quite a while, and I'm just looking at my notes because, like I say, my memory is not very good. As you can see, a bit of gray.

So America is falling by the wayside in terms of global markets and keeping this fishery alive, I think. You know, in Ireland in the past they had 40 percent granted to modernize the fleet and that was grants from Ireland and the EU up to 40 percent to build new vessels to be competitive within the EU fisheries and they did that, and I feel that in this country we need to do the same.

We need to do that with processing. We need to do that with the vessels, and this will benefit the fisheries at a national level. It will also benefit the safety compliance and the scrutiny that we're under by the U.S. Coast Guard.

My vessel was built in 1977. Its 47 years old, and I constantly have to replace steel, and I'm working on this vessel to no end putting good money after bad, if you know what that means, just to maintain it and try and meet Coast Guard regulations.

So to some degree the U.S. has to modernize this fleet. All of the vessels, the majority of the vessels in Kodiak, not all, were built in the '60s and '70s. Aging fleet, noncompetitive, and we cannot compete with Russia.

You heard yesterday how Russia's building new

factory floors -- and I keep track of this -- and modernized automated systems and we are losing that battle. The U.S. is losing that battle.

So in order for us to be competitive on the global market and the domestic market, which we have to build up, we need to modernize and we need government support.

That's the bottom line, whether you like to hear it or not. I'm not saying we're going to get it. I don't expect to get it, but I'm trying to send that message. We need domestic processing. We need more consumption of U.S. domestic -- domestically produced seafood.

In Ireland we grew up with the Guaranteed Irish logo. It was a GI green because we're Irish -- we're green -- and we were taught that in school to buy Irish products, support the Irish economy rather than buying foreign produced, you know, whether it be textiles, whether it be farm products, whether it be potatoes, and we do eat potatoes in Ireland, believe it or not.

So do you -- I think the biggest message that has to go out right now is we need to educate the U.S. consumer as to the value of wild sustainable protein -- wild sustainable fish versus what we have in America today, which is for the best part imported and farmed.

And I heard a conversation here yesterday about the price of fish and versus the price of chicken. Like, who's going to buy what.

I have three sisters back in Chicago. I send them fish, and they often call me up and ask me, its Faroe Island salmon and its pen raised.

What does that mean? Pen raised versus hatchery raised -- they don't know. So they call me because I've been fishing all my life and I tell them, well, it's better than chicken but it's not wild.

So I think we need to get -- I think it's up to the U.S. government, you guys, to advise NOAA and whoever. I don't know. I've never been to a MAFAC meeting so I don't know who you need to educate.

But it's up to us to educate the consumer. We have 340 million people in this country and we're relying on foreign markets, right. We shouldn't be doing that. We should be self-sustainable.

There's no reason why all the product in the U.S. could not supplement the food sources in the U.S. We have to get there and after 34 years here I'm a little disgruntled that fish prices are where they're at today and where they're at today I'm getting the same price for pollock today that I got in 1993 and that should not be the case.

But it's because we rely on foreign markets and we shouldn't have to do that. With 340 million people in this country we need to produce affordable protein, not white table cloth high value protein like halibut and salmon because most people can't afford that. We have to produce affordable protein the $6.99 or $5.99 a pound where the average consumer can afford that.

But, anyhow, I could go on and on. I've been beating this drum for four or five years and I will continue to beat it. But the last -- next thing I'll talk about was protective measures for fishing grounds and crab stocks and what have you, and we heard yesterday about crab closures and I'm going to speak about Steller sea lion closures that have been implemented around here for the last 24 years and the king crab measures that have been in place for 40 years or thereabouts and have yet not produced any positive results.

We need to go back to the drawing board and reassess and this is all to do with scientific information -- data, surveys, fishery, local knowledge, traditional knowledge, whatever you want to add to it.

But we the fishermen we're out there. We see what's going on in the oceans. We're the professionals. As Mr. Bob Foy stated earlier this morning, we know what's going on out there.

The sea lion closures were, excuse me, put in place based on predation was pollock and cod. But we have never, to my knowledge and -- or maybe I don't know but we have never actually seen any information that validated that, that it is, in fact, pollock and cod. The population continues to decline, is not rebounding.

And so I was out gill netting two days ago and there was a humpy in the net and I had two seals there. Did they want the humpy? The humpy sat there for four hours in that net because I didn't want the humpy because he was a little morphed.

But the sea lion didn't want him either or the seal didn't want him. They want the silvers or the sockeye. So after about two hours the sea lion left.

Then I decided, well, shit, he knows better than me. I should leave, too, and I did. So I did so, anyhow, but what getting to is we don't know what climate-ready fisheries is but proactive rather than reactive, I think, is the key and then we need to address all of the issues that have been in place for many, many years and address consumption, U.S. domestic product versus farm raised and then -- and keep in mind that farm-raised foreign imports are not under the same stringent measures that we are in the U.S.

This is the most regulated fisheries on the planet right here in Alaska. I don't know what the rest of the U.S. is like but in Alaska we are regulated to death.

So that's all I have. Thank you.

(Applause.)

Chair Runnebaum: Thank you so much, Paddy. I don't know if we have ever received an applause after public comment at the council.

Mr. O'Donnell: I've never received applause. So thank you for that.

Chair Runnebaum: Thank you. Thank you so much for that. That was very helpful.

Katie, was there anybody online that was in indicating interest in providing public comment or anybody else in the --

Ms. Zanowicz: We have two people online. We have Melissa and we have Nicole. So if you are interested in making a public comment please raise your hand and that way we'll know to give you the floor.

(Pause.)

Ms. Zanowicz: Seeing no hands, that is it online. Anybody in the audience if you would like to make a public comment this is your chance. Then that is it.

MAFAC Reflection on the Panel Discussions and Lab Tour

Chair Runnebaum: Okay, great. Thank you so much, and I think now we're going to move into our reflection and discussion session.

So I had a helpful brainstorming conversation during lunch so I'm finding my notes from that. So we're going to have about an hour to really reflect and digest what we heard yesterday during the panel conversations, what we gleaned from the lab and even the science report out that we had this morning and the public comment that we just received.

So I'm really hopeful that MAFAC can start to think about a path forward and how we can take action on some of the things that we have been really fortunate to hear while we have been here in Kodiak and in this community.

But I first wanted to just sort of open it up and give some space to our MAFAC members here to have time to digest what we heard and we heard a lot.

There's a lot of things happening in this community and I want everybody to have the time and space to reflect on what was heard and if you feel ready to move into solutions I'm also ready so and I want to make sure that we have time to digest first.

So we'll start there and, Jennifer, please kick us off and I hope we have some microphones that we can pass around.

Ms. Hagen: I was wondering if possibly we could go back a little bit and have an opportunity to ask Cisco some clarifying questions about the presentation this morning. We kind of jumped forward to subsequent presenters and really didn't get an opportunity for clarifications.

Chair Runnebaum: Yes, please, if Cisco you are ready.

Ms. Hagen: So it kind of combines with some of the things we heard yesterday. But there was -- there was this trend of talking about how we're using -- we're deficient on information but how are we using the indicators that we have that NOAA's identified.

That's not clear to me. I mean, I know you threw a couple of species up there but it's not clear to me in the big scheme of things and certainly it's regionally specific what indicators are.

It seems that we try to or the trend has been to use species at age of harvest and not as much information about particular species in the regions before they're of harvest age.

That's one. I'm not clear on what fisheries research coproduced is and I'm assuming that that's part of the science plan of NOAA. I was just wondering if you could elaborate on those a little bit.

Dr. Werner: Thanks. Thank you.

To make sure I understood the first question was, you know, I covered very quickly some of the species

just to give a sense of the broader approaches that are being taken at a national level and then we were able to drill down into the Alaska examples.

You know, each one of those regions we could have perhaps expanded in terms of how we're considering additional species and how -- you know, how some of the more -- you know, more complete explanations about how we're considering and how we're assessing those species in the context of climate-ready approaches would have happened.

So it wasn't -- it wasn't meant to be an end all. It was just we were drilling down from a big picture to say that this is something that they were consistent.

The message was supposed to be or is intended to be that we have consistent approaches and that we know that we need to think ahead. We know that as we're thinking ahead we need to combine, you know, some of the -- perhaps, the new approaches that we're developing through modeling and others together with, you know, the local knowledge and the social aspects that we need to consider through MSEs.

So I try to emphasize that MSEs --- management strategy evaluations -- were a core component in terms of how we formalize and really do that end to end look of how we assess, you know, the particular species, again, that were just examples and highlights.

And then in some ways co-production falls into that because, again, the examples I was trying to highlight were ones where we needed to work with the various constituents in order to complete the circle.

And so I'm not sure if -- it probably did not come through but I was -- that was the intent of this morning. So maybe I still maybe haven't answered your question but --

Ms. Hagen: You're getting there. So I'm coming to

you even though we heard from others talking and other, like, under the environmental justice they're bringing in some of this lingo and actions and activities of NOAA nationwide but I don't -- when we're bringing in the social scientists, which I fully support and we have been active in doing that in the research activities we do at my home, but I don't know how we transition from the way science has been done within NOAA traditionally where it's NOAA scientists or it's academics to be inclusive of the communities and the knowledge is known in these communities, whether you're talking the thousands of millennial years of tribal communities or recent imports or -- but how NOAA's going to make that transition from what I have called in the past ivory tower research that is not traditionally talking with people that are boots on the ground that are people that are on these grounds that are out there, like we just heard from today in the public testimony where this knowledge is out there and we're saying, okay, we're going to co-produce research here, going forward.

But I don't know how that's going to happen. I'm not seeing it happen out of NOAA yet. So and in my experiences, you know, I'm involved in the council process on the West Coast so I don't -- I don't know how we're -- just like we're trying to define climate-ready fisheries how are we defining co-production of research and science going forward.

Dr. Werner: Yeah. And I think the presentation yesterday by Amilee and Maggie I thought touched upon some of those in terms of how, you know, the information that comes out, you know, from the side of social science analysis and social science conversation needs to be fed back into the council so that that is a measure of or that is included in the decision process that, again, feeds back onto the communities that need that information.

To me it's an iterative process, right, and, again, that's part of, I think, this transition that we're in the midst of that is looking to be more inclusive at the

beginning, not at the end, of how we formulate the scenarios, how we formulate the impacts on the communities that depend on it.

And, again, an approach was those MSE approaches but that's only one way to do it and that could identify then also the areas where there is that need for the co-production and bringing in the knowledge that needs to be fed in at the beginning and not at the end of the process.

So it's -- and the other thing that was said yesterday, and I thought it was said very nicely by Amilee and Maggie, is that it is, you know, something that we're taking on -- it's a relatively new process in the sense that we're building on it right now and I think that it's at a stage where it's healthy, it's on the table, and we're trying to do it.

It doesn't mean that we know how to do it yet. So I thought -- I'm building a little bit on what they said because I thought they did a nice job explaining it.

Chair Runnebaum: Thanks, Jennifer, and I think that I would encourage you to think about if there's a recommendation that MAFAC might want to make around co-production of knowledge and what that means to us as a advisory committee.

I think that's worth thinking about and I think that it's multifaceted. There is the cooperative research branches that exist within the regions that have been pretty dependent on commercial fisheries interactions and so I think if we do have some recommendations there to make I think we should think about that and how that might look. So thank you for raising that.

Yeah, Jaime -- Jennifer, did you have any other clarifying questions?

Okay, thanks.

Jaime, I'm curious. Are you a clarifying question or are you -- okay. Great. Go ahead.

Ms. Goen: Yes. I also have a clarifying question for Cisco. In your presentation on climate and ecosystem fisheries initiative you mentioned that it creates a regional decision support team and I'm wondering if you can explain a little bit more what that team does and if it ties in with what we heard from the panel yesterday where they were saying we need to start using some of this great science and using it in decision making.

So does it help bridge that gap and start getting to actions or --

Dr. Werner: Yes. In brief, yes, and that's -- so the decision support team includes, you know, that's -- that's the team that takes, say, the predictions and the quantitative aspects that come out of what we think might happen or what the possible scenarios are and translates that into the advice that includes the climate information in the advice that's given, say, to the regional offices, to the councils and such.

In the decision support team there are then representatives of those groups as well. It's not a -- it's not A goes to B goes to C. There's groups -- there's overlap being folks from the various entities, if you will, that are working jointly as a team.

So it's not -- it's not a disjointed team. So, yes, that decision support team is the one that basically translate that information that comes out of the models into climate-informed advice through a process that includes MSEs and others. Yeah.

Chair Runnebaum: Thank you. I see Kellie and Meredith have their -- and Amy have their cards up. Who has a clarifying question? Are we still on clarifying questions or are we digesting? Okay.

Okay. Amy, please go ahead.

Dr. Green: So I wanted to -- I wanted to just take a second to thank Jennifer and I think -- but I think maybe I interpreted your question a little bit differently with the idea of how or, like, what is

NOAA's plan to not only include the voices of communities, especially its tribal communities.

But when I hear co-construction of knowledge I don't think of NOAA going to these places and collecting information from them and going back.

And I'll give you a tiny example that I'm probably going to mess up. But what this made me think of so at the University of Maryland the honors biology department this professor has a grant -- a federal grant -- that he's working in northwest Canada and they've been tracking caribou populations for, you know, six years and they've noticed a decline in the population. Sorry I'm talking about something that doesn't live in the ocean.

But they've been tracking it for years and they've noticed an incredible decline right now but it's normal for the populations to fluctuate like that.

But what they don't -- they don't have data from before they started collecting data. So they have a grant that's working with the community to collect -- I don't want to say collect data because that's a completely Western way of looking at sense making around the world, but to work with the liberal tribal citizens who have that knowledge for generations about fluctuating caribou populations to better understand it.

That, to me, sounds a little bit more like co-constructing knowledge which is, like, legitimizing that form of sense making around what's happening in the world as opposed to just using, like, some of these groups as sort of input givers or advice seekers sort of thing.

Like, it just seems to me a little bit different and that sort of thing was not quite what I heard with the EEJ staff yesterday, not -- I'm not saying -- what they are doing sounds wonderful but I don't know if that -- when you first asked that question that's what I thought of, like, how are we going to recognize other approaches to science.

You know, science is a Western Eurocentric term, but how are we going to be legitimizing other approaches, other world views that are not typically dominating conversations in science to help us better understand what's going on and respond to it. Yeah.

Chair Runnebaum: So I'm going to put a pause in the co-production of knowledge conversation because I could talk about this all day long and I do think that that is a place where we might want to weigh in.

And so I think let's -- let's say that debate for subcommittee and I don't know what the appropriate subcommittee is, or it can come up following some reflection.

So I want to move us to reflections so that we don't run out of time. So thank you both. Thank you, Amy and Jennifer, for raising this question. I'm happy to sit this afternoon and talk about it until the cows come home.

Okay. All right. We're going to let Meredith go first so that we shorten her list.

Ms. Moore: I will be briefish.

Okay. I have four reflections. Everyone get your notepads out.

The first one is, hey, what are climate-ready fisheries. So I just want to emphasize I think we have heard from a lot of people that that is still a question. It's a valid question. I think MAFAC has been struggling with it. We have been working with the agency to solve it.

So I just want to emphasize that's a live issue and I think I think it's good that we have been working around it and I appreciate the conversations we have had with the agency on it and I just want to emphasize looking forward to continuing to wrestle that down in a way where it's getting to the right people and it's changing the way we manage but it's also changing the way we are all thinking and

experiencing our fisheries and our fisheries management so that we can feel hopeful about the future and we can feel like we're moving in the right direction.

And in case you haven't read our most recent letter I'll just briefly state for sort of the audience is, like, we have realized that climate-ready fisheries is a desired state that we want to try to get to.

It's somehow a characterization of where we would like to be so that we can then try to do things to get to it, and I think figuring out how to describe that in ways that are then measurable and actionable and moving in that direction is something we should continue to work on because it's clear there's a real need for that. So that's reflection one.

Reflection two is that many of the things that we heard from the folks who have come up and spoken to us and what we have learned from this community, which we all know are deeply entwined with the wellbeing of communities and the -- what we're trying to accomplish in fisheries management are still outside of NOAA's jurisdiction and that that is really challenging and MAFAC needs to figure out how we can honor and carry what we have learned here and work with, you know, what we can advise the Secretary of Commerce and others to do in order to incorporate what we have learned in a really proactive way but figure out, like, what are the pieces we can really push NOAA to do and what are the pieces that we need to work with NOAA to carry to other agencies or to get to other decision makers or that sort of thing.

So just want to note there's been a lot that we have learned. We know it's all connected. That's not necessarily how the government we're currently advising is set up so how can we carry these to the right places.

And I know that the agency has been working hard to, like, I think communicate more with other parts of the federal agency.

I think it would be helpful down the line to get some updates from you all on what that looks like and how that's going so that we can provide you with useful recommendations, hopefully, and we can carry those thoughts through. So that's reflection two.

Reflection three is that I think something that's really coming through powerfully in a lot of the work that many of us are trying to do and what we have heard here is the need to focus on fishing community wellbeing in a very intentional way and I think that our current fishery management system struggles to identify, like, what we're trying to achieve, goals and objectives, what it looks like to have community wellbeing, what it will mean to have community wellbeing prioritized as climate affects our fisheries.

And it seems to me there's a real need to find ways to work in community to characterize what that looks like so that it can inform our management so that we can look across our FMPs, across our FEP's goals and objectives and know whether we are delivering community wellbeing outcomes in the way that we're managing our fisheries.

And I don't think that that's a common and intentional practice across fisheries management yet and I think it's something that we could help facilitate and that the agency could help bring together, combining some of the work they're doing under the EEJ strategy, climate-ready fisheries, the working communities.

It seems like a real opportunity to characterize what it means to have long-term wellbeing for communities even as they are suffering disasters. How do we navigate some of those things? How do we plan for the long term? So that's reflection three.

Reflection four -- sorry, I know this is long -- is that our subcommittee has been thinking a lot about the science to management gap as far as climate-ready fisheries is concerned and thinking about how can we make the councils more proactive, faster moving responding to new indicators, and that sort of thing.

That is all important work and I'm not taking away from that. Reflections that I've had listening to folks here in Kodiak is that there's also -- like, we talk about on ramps for climate information but we always say management on ramps and there are community on ramps and, like, to the industry on ramps for this climate information that I'm not sure we have articulated or thought about.

There are ways that the fishing industry can respond more quickly than management ever will to certain things. We are producing a lot of science and information that's relevant to them.

And so, you know, management needs to create the right structures where we are making sure we have the right conservation components in place, making sure we have the right management in place.

But we also need to think about under that structure that, you know, manages us for the long term how do we allow the industry to take all the amazing science and information, et cetera, that's being created so that they can operate under, you know, that precautionary or conservation structure but still thrive with the information that we can give them about how things are changing.

So I just -- like, industry or community on ramps for climate information is sort of another thing I've been reflecting on as we have had these conversations.

So those are my four reflections. Thank you.

Chair Runnebaum: Thank you, Meredith.

Kellie?

Vice Chair Ralston: Well, it worked really well that you had your four because my comments play off of yours. So, yeah. Yeah.

So I guess kind of thinking about the definition of climate-ready fisheries and community wellbeing, and I guess -- Cisco, I think you were the one that

actually read the definition of climate-ready fisheries.

And so to me there's, like, two components to that, right. There's the science, the biological side -- how do we understand what's happened, how can we predict what's going to happen in the future, and then there's kind of the human component, like, how do we help communities be climate ready, how do we help them be resilient, be flexible, have other options when things don't go exactly according to plan.

And so I guess I have two kind of reflection solutions, for lack of a better term, for us to maybe consider long term and, you know, really kind of looking at a pilot program would be my suggestion because I love pilot programs.

They help, you know, work the kinks out, provide proof of concept of looking at both of those aspects of climate-ready fisheries, and I feel like while the human component is a little bit more squirrely within NOAA fisheries when you look at economic development under Department of Commerce I think there's a really great synergy within the agency as a whole.

And so I feel like within the agency there's an opportunity to kind of look at both of those pieces, bring it together and working with a community whether that's Kodiak or somewhere else where we have kind of this really discrete laboratory, if you will, because our fisheries are very contained, the community is very contained, that I think it could be a really great proving ground.

So I just throw that out there as -- and what the actual details look like I don't know. I'm good with throwing out but not necessarily execution.

Secondly, I think a lot of the issues that we heard particularly yesterday on the panels about workforce development, about other opportunities for communities and kind of how to get that information out there. We have talked about seafood marketing. We have talked -- well, we haven't talked about

recreational fisheries yet but we will.

All of those things really fall nicely under the SK Grant program and so I also sit on the American Fisheries Advisory Committee, as does -- Rebecca's back there too -- and we every year try to develop criteria for those grants that fit those major categories.

The challenge is, of course, there's not enough money in that program to go around. We're typically between $10 million and $13 million a year for the entire country. We have the capability, at least under statute, to be much greater than that but to have agency support for that type of expansion would be helpful and then the rest of us can go out and help support that from an advocacy perspective with our congressional folks. So I would throw that out there.

And then the other reflection I have was from this morning. That trip over there was just fabulous and the research that they're doing, particularly to look at growth and abundance and how that's correlated with environmental conditions not only helps with climate-ready fisheries but it also helps -- you know, the fishermen on the ground make those important decisions about where they're going to put their time and their resources.

So I love that. I would love to see it in other areas of the country. I would love to see it for other very economically important species. And perhaps that is going on elsewhere and I am unaware of it, but my sense is, at least in the Southeast, my experience is that we're probably not doing that and for some of those key species that are challenging and problematic to manage that could be really helpful.

So I kind of had three. So you beat me with four, but thank you.

Chair Runnebaum: I have a clarifying question for Kellie. I think you mentioned climate-ready fisheries and then community wellbeing and then a pilot program looking at both of those concepts together. Okay.

Vice Chair Ralston: Yeah. Like, how can we comprehensively and holistically address, quote, "climate-ready fisheries" recognizing that part of that definition sits predominantly outside NOAA fisheries' direct vertical but does fall under Commerce.

Chair Runnebaum: Okay.

Vice Chair Ralston: Like economic development and those types of things.

Chair Runnebaum: Thank you. Okay. Hugh, it looks like he's next and then I want to also recognize there's folks online that might want to jump in the conversation also.

Mr. Cowperthwaite: Thank you. Do we need to take a tsunami break? Did I just hear the -- I'm Hugh Cowperthwaite. I'm from Maine and I've been sort of digesting a lot of things over the last 24 hours. So I do think one of the things I heard was just seafood production and consumption, making a concerted effort to really ramp that up, just hearing about the, you know, seafood imports and the competition that's creating and the real sort of challenges here in Alaska around that.

And I've also been thinking about climate-ready fisheries and what was said yesterday and sort of feeling some confusion around that and I'm just thinking that tagline is pretty important to get it right and I'm coming up with climate-ready fishing communities only because that implies, you know, people to prepare and get ready and sort of brace for the unknown that's happening, you know, globally, from Mother Nature and I just think we -- you know, we have heard how deep these impacts are with the fishermen, the boats, the stocks themselves, the families, the schools, and it's all community.

And the resources out there are moving around as they will where they're impacted but I think it's really the communities that need to respond and not so much the resource itself.

I don't think you can -- I don't think we have any control of that and I think if we call this more climate-ready fishing communities that will resonate with people. They'll start to understand that.

And that's to my next point, which is all about awareness and sort of training and workshops around, you know, being climate-ready in our communities around the U.S.

I do think, you know, possibly some funding for workshops. I know some of that's happening now but just starting to talk about what are my choices, what are my options as a fisherman or an aquaculturist.

In Maine we have been working on an effort for over 10 years now called Aquaculture in Shared Waters and the whole intent is helping train fishermen that are looking to diversify but also, you know, helping new entrants and existing growers, you know, engage and know how to, you know, grow something and it's really about, you know, sustainable fisheries.

So I'm talking about primarily shellfish and seaweed. I personally don't think we should be promoting net pen finfish production in the ocean and there is some efforts to try to, you know, move that onto land.

I still feel like there's -- you know, that's a whole another conversation. But when I talk about aquaculture and training I'm talking about species that have very minimal or no impact on the environment.

And so in Maine we're talking about oysters, mussels, scallops, kelp, seaweed, and we have been running this training for 10 years. It's free. We move it around to different communities.

We have done quite a bit online with COVID, and it's meant to be soup to nuts -- you know, permitting, licensing, what are the different species you can grow, biosecurity, husbandry, business planning finance and eventual, you know, markets and sales. So we have had 450 students go through that

training in over 10 years and many of them have, in fact, started businesses.

So I'm speaking from experience that this works and, you know, I think aquaculture has a place in certain places and communities and it’s not appropriate everywhere, but that's for those communities to decide.

And I just got an email this morning seeing that University of Alaska Southeast is hiring a mariculture program coordinator to run a training program. So I know these things are happening. It's not like it's brand new, but I think some targeted investment to help get these things started because it takes a long time.

And my last point is more of sort of the global outlook of fisheries and technology transfer. I think we can learn about fisheries in other parts of the world that may have, you know, transferability to other communities.

I'm not talking about introducing new species to different areas. It's more, you know, what are they doing with scallops in Japan or France? You know, what's the kelp industry in South Korea? You know, places that are very far along in their development and evolution of production and actually taking people there to learn and to see because seeing is believing.

And I've been involved with a number of those types of projects and you don't always know what's going to come out of it but nine times out of 10 there's a hit.

Something will stick. Something will translate. And I think this is -- you know, this is nationwide. This is let's look everywhere. Look for possibilities, for creation and diversification and, you know, if there were some funding for that from NOAA -- there probably is and I know it's happening.

I think if you require a match, you know, if the

community wants to make a trip to Iceland then they pay 50 percent of it so there's skin in the game. I think, you know that's -- you can get some real traction out of that.

So it's a little bit long winded but there's four or five points there that I've sort of been running through my head in the last couple days. Thank you.

Chair Runnebaum: Thank you, Hugh.

Okay. Next up I have Linda, then Natasha, then Marissa.

Ms. O'Dierno: Thank you. During the past two days I've heard a variety of different challenges facing this industry. Paddy mentioned the aging fleet that we have, the aging infrastructure, lack of processing facilities to process some of the products that we are producing.

Heard a lot of comments about marketing, and we keep going back to the same well all the time. Keep looking at SK money. Bulk of SK money goes to USDA for the export programs and that's appropriate since those funds come from the tariffs.

But there are a lot of other pots of money out there and as an industry I think it would behoove us to look at some of those things.

Everybody has -- all the agencies have a small business innovative research grant. It's a way to get additional money for processing, for on-vessel equipment, if you craft the grants in the right way.

USDA has a market improvement program. They have a federal/state market improvement program. They have one for individual companies.

So I think there are a lot of other opportunities out there and we have to look at how we can work with those different agencies to secure more funds to develop our industry. So that's just an aside comment.

Ms. Hayden: There's been a lot discussed that we have heard and seen the last day and a half, which has been amazing. Some of my reflections are that there's a theme of needing to support the fishing community and that that includes both small-, medium- and large-scale participants and members, and I think us as advising body could make some recommendations about how to approach that versus overarching policy, not national policy that lumps them all in together because often -- and we have this experience in Alaska because we have -- as Alaska Native people we have both for profit corporations that are landowners and then we have tribes that are sovereign and, you know, intended to support the wellbeing of the people and those are opposing priorities -- making money and then providing for the wellbeing.

And similarly small-, medium- and large-scale participants and members of the fishing community need -- they have different needs.

They have different -- just they're just different and you have to have all of them to be sustainable that they -- and so for us as far as recommendation -- as we develop recommendations I think that that is worthwhile.

We also heard a lot about the national and global forces that are impacting every single person in this community and across the country that are outside of our control as the majority of us as individuals or, you know, industry reps or agency reps but that there's opportunity and a need for interagency cooperation that is -- may or may not be already in existence in some way or another but could be explored for us so that we can make specific recommendations to the Department of Commerce on what the Department of Commerce can do with the USDA and the State Department regarding all of those external or national forces regarding, you know, fish coming in from other countries and tariffs, and, you know, economic disasters and natural disasters, and all of these other things.

In Alaska the largest organization is called Alaska Federation of Natives. It's the largest indigenous membership organization in the state and during COVID they created a navigator program and its sole purpose was to -- there was, you know, major legislation that came out. First it was CARES and ARPA and then the Inflation Reduction Act like all of these very large dollar programs that came out nationally.

AFN's Navigator program has regional navigators. So Kodiak has a navigator that personally reached out to every corporation, every tribe, every municipality -- these, you know, area entities that those federal legislative programs were intended to help.

But AFN recognized that there's 223 federally recognized tribes in Alaska. There's 12 huge regions. I mean, if you cut Alaska in half Texas would be the third biggest state. Sorry, I had to throw that in there at some point.

It's so huge and so many municipalities and so diverse in the types of organizations that we have and so each region has a navigator in that organization that contacted -- personally contacted.

I mean, some places don't have cell phone service. Some places don't have internet. Starlink has changed that, made incredible impact.

But that type of program could be replicated maybe on a -- you know, suited to interagency cooperation so that we have the ability to have small-, medium-, large-scale entities and fishing -- members of the fishing communities know what's available out there.

Like, I always have people tell me it's, like, okay, well, SK funds, I applied for -- actually, NFWF. I applied for a NFWF grant one time and I didn't even get -- I think I got laughed at.

But it was, like, oh, this is a thing. Here, just -- you know, we'll all apply for it and so it was just Natasha coming up with, like, okay, well, this is what I think

we should do and I mean, it was -- you know, it was elementary.

But so I could've used some assistance at that time but I didn't even know it was a thing and -- anyway, so that's my point about like, us making recommendations on how to make those resources available to the communities that need them.

And then we -- it was already mentioned about workforce development infrastructure and then I'm going to put in access because one of the things that came out from a couple of our panelists yesterday was about the permitting or limited entry and the impact on our communities and how that has really created the barrier.

And then I was appreciative that, Ryan, you threw in the greening of the fleet because that's something that's been researched and documented and talked about in Alaska pretty extensively and it's become a big concern.

But as far as recommendations that we could make for workforce development, infrastructure, and access to include how the -- you know, from the ocean to the table and everything that happens in between, and how all of that, all of -- every step in the process has been performed in one way or another within the fishing communities and that they're -- they don't need -- you know, that I think we would benefit from saying, okay, well, the people who are invested in the community not just financially but culturally to benefit from financial support and administrative support to grow our own fishermen, to grow our own processors, our own, you know, small business owners, our own chefs, our own -- you know, like, all of the things that would help us to continue to have a viable fishing community that can be -- continue to be sustained on the resources that it lies -- you know, that is surrounded by.

So I think that covers my comments.

Chair Runnebaum: So I'm going to go to Marissa and

then we'll go to Clay, and then I see Brett also has his card up.

Oh, Pat. I'm sorry. I have you written down, Pat. Okay.

Marissa, Clay, Pat, Brett, Tom.

Ms. Merculieff: So thank you. I was kind of hoping to get through the whole MAFAC meeting without speaking and I've been watching, like, who's been commenting. It's, like, oh, Hugh hasn't spoken but then he just spoke. I'm, like, dang it, Hugh. No, I can't be the only one left.

I'm Marissa Merculieff. I'm from Saint Paul Island out in the Bering Sea. So I think we're probably as of everything we have been seeing the last couple days the most impacted community, the longest history with NOAA, one of the communities that's suffering the most from the crab crash and everything else that's crashing around us, and just kind of listening a couple days.

Like, I mean, people have asked, like, you don't have any comments or questions? I'm, like, I've heard all this and at this point I feel like, as my stepdad worked the North Pacific Council testifying for 20 years his last testimony was, what more can I say 20 years later, and he and he hasn't testified since and that's kind of where I'm at.

I'm just, like, what more can I say to NOAA, what more can our community say to NOAA? Nothing is fast. I know it's a huge bureaucracy. Everything takes time. It's a glacial pace. We came out of the gate, this administration, with some new ideas. Got shot down at every turn, again, because it's a huge bureaucracy.

So I think maybe just reflecting on the last couple days I think that the couple things that I heard that most excited me as far as buzzwords was adaptive management and proactive, and I think for us as a community we need stuff to happen immediately on

the ground. We're working in real time, like, can we survive one more winter out in Saint Paul without a crab fishery and we're not sure we can.

Like, and visiting the lab was awesome and they're talking about one study that, like, it'll be done in 2050 and I'm thinking 26 years, like, we're never going to make 26 years.

So we need -- we do need faster solutions in the communities, in our native communities, and I'm not -- I don't -- I mean spending so much time with NOAA on so many different issues, because we don't just have this.

They have marine mammals too that we're always working on, and it's just so slow, and I'm hoping by becoming part of MAFAC -- and I don't know why I keep joining things because I hate speaking.

But I'm really -- like, when you said, Jocelyn, like, we start working on solutions, like, this is what I'm here for. It's, like, I don't want to see any more presentations on what NOAA thinks it's doing right, which there are some great things coming.

I have to say, Janet, under your leadership a lot of great things have come out that we're excited about, but still very slow, right? Like, it takes -- no matter the best leader in NOAA, like, it takes so much time to get through.

So I'm really hoping as a part of MAFAC that we do -- we can work on some solutions that will make a difference maybe at a faster speed and that's it. I don't really have any clear comments or thoughts, but dang it, Hugh, you drug me into it.

Chair Runnebaum: Marissa, thank you for getting your voice in the conversation. And Hugh, thank you for dragging her into it.

Okay. We're going to go to Clay, and I am hopeful we can hear our online folks pretty okay. So let's give it a shot, Clay.

Mr. Tam: Can you hear me now? Hello? Can you hear me?

Chair Runnebaum: We can hear you.

Mr. Tam: Okay. Anyway, kind of almost here but anyway, great meeting. Awesome discussions about some of the sensitivities of our -- and reflecting on our community I think that's really important and something we strive for even out here in the islands including the community, going back to Cisco's presentation and thanks, Cisco, for support in the cooperative issues research and front and center involved in the expansion to Guam and, you know, involving the community and them coming to and supporting science is a great reflection on the direction that NOAA has taken.

The support from the local staff here has been tremendous. We made I think three trips to Guam since the beginning of the year to engage the community, work with the fishers, brought them into the fold in terms of the sampling much like we did in Hawaii for the last 13 years.

It's been a very integral part of bringing the community around, have our fishermen involved, trained by the scientists and others to recognize and understand the process.

I mean, that's part of it. If we can communicate and speak the same language then it makes it a lot easier and the buy-in from the community is a lot stronger in that sense and, I mean, I mean that's an important aspect.

But it takes -- it takes resources. It takes vision and it takes time and I think that so far we have had that. Only bad news I had was last week a letter came out of the local NOAA office saying that we're going to pull the plug on their project in terms of the independent camera drops within the region and it's -- for us in Hawaii we have had a number of years to, you know, and assessments that have interwoven the camera stuff.

But for the territories, where we lack reliable, dependent fishery data and there's no independent fishery data of what we're trying to bring out there, it is a blow to those communities.

And we have seen it in recent stock assessments in American Samoa and Guam due to the lack of data and that is super important in terms of we went back and we talked to a lot of communities about supporting NOAA and the baseline and getting data and maintaining that data stream for our assessments to support our fishermen, our communities. It's super important and I hope that somehow that that gets restored and we can move in that direction.

But other than that, you know, my hat's off to the cooperative fisheries research done. The other thing that I just wanted to reflect on is that, you know, in the Pacific, this meeting and discussion about climate change, it is a reality.

We feel it out here, too, within the islands and the region, and in addition to all of these I think climate change impacts, we talk about moving stocks and then we run into the wall when we talk about static management or management that's not, you know, I think in line with moving stocks such as sanctuaries. Up to the north 75 percent --

We're looking at a possible disaster in American Samoa where the impact to them if the expansion area for sanctuaries are made. You're talking about a community that 70 percent of the economy revolves around the only cannery in American Samoa and that, to me, is an internal, you know, battle in that it totally disregards EEJ in regards to our community and it's coming from the agency, which is unfortunate because, you know, I think that there can be conservation but there needs to be a blend.

It cannot be all one way and, you know, when you -- once you close an area and we have seen the Northwest being closed for 14 years now. I had in the earlier part of my career been able to fish and do

research up in the Northwest and it's -- if you read the reports it is pristine and I think being managed properly through councils and NOAA, we can still coexist and feed our population.

But if we decide to lock it up and throw away the key and not allow commercial fishing or partake in some of that it's all for naught. I mean, I think that those things need to be weighed, they need to be measured and, of course, the socioeconomic side of protected species needs to be put out front and center because there is an impact to our communities, our fishers, our nation, in terms of resources and management out there. But hopefully someday that'll change. Thank you.

Chair Runnebaum: Thank you so much, Clay.

Okay. Pat, you're up next and I think I'm going to take a pause here for a second and recognize that we have about 15 - 17 more minutes in this session and, Marissa, your urgency for solutions and action is rattling around in my brain, so I'm going to let the conversation keep going for what we have heard or for what -- for the lineup that we have now and then this afternoon -- and the recap and overview might push us to 5:00 o'clock so that -- no? People are -- okay.

In the recap I might come up with some next steps to recommend to this group to think about and then we can discuss it tomorrow in our next session.

But I think your urgency around solutions is -- I'm feeling that pressure. So thank you.

Okay. Pat, I'm finally willing to stop talking to let you talk.

Dr. Sullivan: Great. This will only take me about 20 minutes so -- so I'm hoping that I have a couple of things to contribute here that might help us move forward. One is I keep hearing about workforce development and our committee might not know that we had a subcommittee that did workforce

development and so it might be useful to resurrect that report that we put together.

There may be some ideas in there that would be helpful, relevant to what we have been discussing today.

The second thing I'd like to talk about is this idea of climate-resilient fisheries and I was part of this group that Meredith helped lead and I was really proud of that work that was done and I was happy to hear Cisco highlight the central principles that we thought were relevant there.

But I would like to back off of that a little bit. The idea of resiliency is a kind of complicated issue. If you look in our report we actually do say climate-resilient fisheries but we also talk about climate recovery fisheries and so I want to highlight again -- sorry for sort of ringing my own bell -- but this work that we did with Kathy Mills from Gulf of Maine Research Institute and Kristin Kleisner from Environmental Defense Fund, and then we had 20 or -- 20 or 30 additional advisors from all over the world looking at this.

This is a SNAPP project -- Science, Nature and People project -- part of NCEAS, the National Center for Ecological Analysis and Synthesis.

If you look up SNAP -- S-N-A-P-P -- climate-resilient fisheries, unfortunately, you will find these websites. Our original title for our research project was Operationalizing Climate Resilience in Marine Fisheries Management, so not climate-resilient fisheries per se, climate resilience broadly.

And what I'd like to point out was we spent a lot of time talking about what climate resilience was and we focused on four main areas which I think is relevant to the discussion that we're having here.

So one is resilience of the ecosystem, which we impact but don't really necessarily control, and the other three then were communities, governance, and

economics.

And so if we look at, for example, is a community resilient, is governance resilient, and we can see that things are resilient or are not in different areas depending on various attributes, we have actually put together those attributes. There's about 30 of them.

We also put together maybe 20 or 30 case studies where we saw whether the actions that were taken were helpful or not and how those different attributes played a role in that.

Finally, we recognized early on that being prescriptive was not helpful. What was helpful because clearly there are some fisheries -- big, pelagic fisheries working with government's top down management versus smaller-scale fisheries where grassroots bottom up management was more successful, that these different mechanisms were really better generated locally rather than from the top down from some authority.

And so our idea was to really highlight the kinds of things to look for in your own system to help one work through that and we actually have a tool set that one can work through to kind of see where one would be led in order to achieve resilience in either your community or in your governance or in economics or potentially in the ecosystem itself.

So I think there's a lot to work for with there. So if we -- if we look at that I think we can tap into it pretty heavily.

I'm sorry this is something I was involved with but it seemed pretty powerful approach to take, and I think it's relevant to what we're doing here.

So thanks for letting me speak to it.

Chair Runnebaum: Yeah, thank you, Pat. I think it's a good point to think about things that already exist and that we don't necessarily need to reinvent the wheel.

Brett?

Mr. Veerhusen: Thanks. Mine's just kind of an overview and I'm glad you said what you did, Marissa, because I'm there with you. I'm struggling with, like, the what, and I think the only suggestion I can come up with is zooming out to where seafood plays into the whole political chess board and so much of the decisions made are not in our control.

We are often political chips on a much larger board and I think what I'm hearing is a general clamoring, all of us, for attention, for funding, for recognition, for access, and a lack of an audience that is willing to fight for this industry in the same way that the people are around this room, and I'm talking specifically to elected leaders in Congress and the executive branch.

And so my thought and what I am chewing on is how does the collective we, a unique group that all speak a very unique language that is -- I know when I'm out in the wild is not often spoken with my friends and they have no idea what we do and didn't know that there was an industry beyond ordering fish at a restaurant or buying it at a grocery store or whatever.

And so to me the issue is much greater than coming up with specific solutions. I think of what this group can kind of tweak and to me it feels like a much bigger issue of getting recognition of the value of the agency, the value of the stakeholders that are -- that fall within the jurisdiction of the agency and getting that value communicated and recognized and appreciated from the United States Senate, House, and Presidential offices.

Chair Runnebaum: Thank you, Brett.

Tom?

Mr. Fote: Can you hear me? Am I coming through loud and clear?

I've been sitting here thinking about it and --

Chair Runnebaum: Tom, give us just a second. We're going to turn the volume down a little bit.

Mr. Fote: Yesterday you couldn't hear me.

Chair Runnebaum: Yeah, and then maybe turn your camera off and don't move around because we can actually hear you.

Mr. Fote: Okay. When I -- when we talk about climate-ready fisheries and what we're going to do and I've been thinking. Some of you knew I served in the Atlantic States Marine Fisheries Commission as the governor's appointee and as a legislative proxy for almost 30 years off and on and in those 30 years I made some interesting motions and shut down a bunch of fisheries because we told people we're going to rebuild them by shutting them down and putting in really restrictive regulations.

One of those was with the flounder. Another one was weakfish, and then we basically started looking at lobsters because now lobsters don't happen in the EEZ and they were really managed by NMFS but they decided because we were 14 states arguing over lobsters of 13 that we should really do it.

They gave us plenty of money at the Atlantic States Marine Fisheries to manage it back in the '90s, and we started seeing these species like lobster.

As the water warmed up in the 90s we started getting better production in New Jersey and in north all the way to Cape Cod. But the water went above a certain temperature and all of a sudden we had no recruitment. We have had no recruitment in substantial numbers in the Mid-Atlantic region -- it's what they call Southern New England, which is Cape Cod south to North Carolina -- in 15 years.

Now, if NMFS was managing this fishery it would have been total moratorium because, you know, it'd be all the fish -- everything be taking place. It's not going

to make any difference.

With the flounder I made the motion that we basically -- we're worried about the stock. They brought them in the Gulf of Maine. They weren't in New Jersey anymore. They weren't in Rhode Island.

So we shut it down. I made the motion to keep one fish open for recreational at a 50-pound for the pound net fishery so at least we'd get some data -- That was 15, 20 years ago.

We are still there with the regulation. They have to do it. It's not because we're putting fishing pressure. It's other reasons.

There, one of the most important fisheries in New Jersey was surf clams and I always found quahog and surf clams interesting because they were around in New Jersey at the Revolution, because some of them live to be 200 years old -- 250 years old. And I says, wow, we no longer have any of those 250. We have no surf clams in New Jersey.

All the boats had to move north and out in deeper water. Lucky was -- so it's really the banks just moving their boats and, you know, that the captains are basically doing it.

Now, those are -- I can point out 15 other species and that's what my concern is. We can do what we can. A lot of the problems we're seeing on the East Coast is because the fishery, especially fished at the -- as they spawn and use the bays and estuaries as the nursery grounds.

As they warm up, we get disease. We get algae blooms. We get a number of reasons, and the recruitment is dropping on old species -- striped bass, bluefish, weakfish and all those.

And I always said when I was first involved in this unless we got a giant iceberg, which is no longer in existence and put them down in the water, maybe we'll start cooling off the water, because that's the

only way some of these can survive.

So that's where I -- when I look at climate-resilient fisheries I'm looking at what can we actually do. It's really how we're going to basically get people through the problems we're having.

And luckily -- I'll talk about cooperation -- a co-op. You know, when we work together with NMFS on research projects over the years I've done four or five projects with -- Jersey coast put in Bill Hogarth.

Some of you remember Bill Hogarth, and when he was North Carolina's director he was a good friend. We worked together for years and then he became director of NMFS I invited him to dinner one time and I told him we were going to do a study on my food tournament, which we had thousand votes in the tournament, and get data.

And Bill says, I don't want to be part of this. He says, what are you expecting to spend? I said, about $20,000. He said, I'll give you $20,000 to make it a good study. So we basically drew up a survey and we surveyed the thousand boats except it took me 20 times going back and forth from NMFS before they approved the survey.

Thankfully, Dr. Eleanor (phonetic) volunteered to do this for nothing. Just, Tom, if I was paying you by the hour we would have went through the $40,000 to change it.

But they didn't like the questions we were asking me. So we actually did two surveys. So we did it -- we did it for three years and I put this disc on the desk of somebody that gone and said would look at this. They sat on a desk and were never used.

And Pat Sullivan's sitting around this table. Pat basically was hired by Save Our Summer Flounder, Jersey coast, to look at summer flounder research and I remember how many times you went up with the annual stock assessment to try to get the data, to try to get some information used as cooperative.

And it was always a tough battle and it took years to get any research, and I'll just start off with the first instance I got trained was I went to Woods Hole in '89 where they were doing a symposium on how to tag fish.

And what I found that when I got there four of the scientists says recreation anglers shouldn't be tagging fish because you'll just killing them. The scientists said, we don't like your data because you don't really know how.

Some of the best data -- now, that wasn't Bob Casey who was working with the shark boats -- the shark tournaments -- when he was tagging fish, and that's where we got a lot of our research on mako sharks and everything going back to those days.

And, you know, American Littoral Society has been tagging for years. We do all kinds of research with recreational just like Billfish Foundation, the Bonefish Foundation, and we supplied a lot of valuable data.

But it took a long time to convince the scientists at NMFS that we were able to do that level of research, and luckily it's changed, and I'm happy that it changed. I'll cut it off because I know we got to move on.

Chair Runnebaum: Thank you, Tom.

Okay. I have some notes here. I would propose that in our wrap up session I might offer a couple of next steps for people to think about and then we will resume a reflection discussion tomorrow.

We're going to take a break and we're going to come back at 3:00 o'clock for a presentation from Sam.

Okay. Thank you.

(Whereupon, the above-entitled matter went off the record at 2:44 p.m. and resumed at 3:07 p.m.)

Chair Runnebaum: Thank you, everybody. Sorry to get us started a little bit late.

Sam, I didn't mean to take away from your time with us. So I'm going to turn it over to Sam, and he's going to give us a presentation. Then we'll get a little bit of a chance to have a conversation with him.

Update from Deputy Assistant Administrator for Regulatory Affairs

Mr. Rauch: Yeah, thanks. So just as a reminder, I am the regulatory deputy. I oversee the regional offices and the three headquarters offices of sustainable fisheries, protected resource, habitat, conservation and policy.

So we spend a lot of time talking about a lot of fisheries issues here and impact of fishing on communities and everything and all those other things.

I would just take an opportunity to remind you that fully half of the regulatory work we do is -- involves the Endangered Species Act and trying to recover our oceangoing endangered species. It's some of the most difficult things we do, some of the most politically charged things that we do.

It was great. I'm sorry you didn't hear it. I'm not going to repeat it either.

And MAFAC has in the past taken an active role in the protected resources portfolio. One of the big examples of that is about a decade ago the councils were having a difficult time interacting with NOAA fisheries and synchronizing the Magnuson Act requirements with the Endangered Species Act requirements and MAFAC acted as a mediator in that discussion, helped us to create a MSA, ESA framework that we adopted as a policy. But we would not have gotten there without MAFAC helping to let cooler heads prevail, maybe -- I don't know. But it was really helpful.

We just did a reiteration of that policy last May. We rolled that out, the CCC. It was much -- it was much easier than the first time we did it. But that's an

example of the kinds of things MAFAC could do where we married the -- sort of the fisheries focus with the protective resources focus.

I've been asked to talk about a number of different things. The first one is EEJ, and I have all these EEJ talking points, which, if you were here yesterday, they gave all my talking points. So my talk is half as long as it was going to be.

They did a great job talking about not just the EEJ program in Alaska but nationally. We did roll out the -- we have talked with MAFAC before and I think they gave you a really good overview about our national strategy and they focused on the -- some examples of applying that in Alaska.

We do have 10 other implementation plans of our various offices in other regions and some of our headquarters' offices, and those are all out and we appreciate any comments. MAFAC was really key in looking at our national strategy as we were developing that and we welcome any input you have on how we implement that. You've already given us some yesterday, which we will take. But I'm happy to talk about that more if you want but I'm going to -- since we had that whole session yesterday, I'm going to go on to the other topics that I've been asked to cover.

One is our other FACA committees. So we have lots of advisory committees around the country but only a few FACA committees -- the Federal Advisory Committee Act. You are one of them.

There are two other ones that we have, and we try to make sure that you at least are aware of what they're doing because your time is precious and you're not precluded from working on the same thing they're working on, but you might want to think about whether you're doing that if we're getting multiple advice. Maybe you could work on it together.

So we try to make sure that there is a familiarity. Both of those other two FACA committees were in a

hiatus period for a while in the last administration and were recently reconstituted.

One was the old MPA -- Marine Protected Area -- Committee, which has been reconstituted as the Marine and Coastal Area-Based Management Advisory Committee. It's similar but in both of these -- this one and the next one we'll talk about -- Commerce -- or in this case, NMFS -- has a co-chair role, which we did not have before.

But they're doing a lot of the similar things that they were before. They had their second meeting in this new iteration in August -- August 27 and 28 -- that was virtual. They mostly discussed subcommittee work and their plans on area-based management I think in the past.

As you were all maybe well aware at the beginning of this administration the president laid out a goal of conserving 30 percent of our land and waters by 2030 and we have talked a lot about what that really meant and how you calculate that. And there was an atlas that the White House put out which sort of looks at the various management measures both on land and water and tries to assess where we really are on that spectrum.

And the councils -- the fishery management councils -- also provided a lot of great input into that process. That is still a work in progress but this marine and coastal area-based management is looking at that as one of their main inputs.

So they're working on that. They're looking at the bipartisan infrastructure law, the bill -- the RA law, which we have talked about before -- how those funds could maybe -- how NOAA could better support and prioritize indigenous-led conservation stewardship with some of those funds through that process.

Those meetings are like this. The meetings are all open to the public, and so if any of you are interested, we can arrange participation if you wanted to attend

one of those.

The other one is the Sport Fishing and Boating Partnership Council which the name of that one didn't change but it also was briefly in hiatus and it got reconstituted as part of -- I believe it was the IRA law which reconstituted it, and before it was solely an Interior FACA committee. Now it's an Interior and Commerce FACA committee.

So they are -- so they are advising both of us. The Secretary of Commerce is for the recipients, the AA for fisheries. Janet is the designated ex officio member. I participated in the first meeting in May on her behalf and Russ is also a key part of that -- of that -- of our participation in that.

At the May meeting the council agreed on an updated committee structure and divided issues. Some of these issues I'm going to talk about were things that they were working on before they sort of went on hiatus.

So a lot of this is not new for them but these are the things that they're working on. Infrastructure and Access -- these are the committees that they've created. Infrastructure and Access Committee, which is tackling derelict vessels that was something that the statute required them to do, looking at abandoned recreational vessels. Conservation Restoration Committee and learning more about how the sport fish restoration funds are being spent. Communication and Outreach Committee, which is looking into the Recreational Boating and Fishing Foundation and how they can better interact with that.

And then there's the Finance Committee. The next meeting is -- the second meeting is coming up on the end of October, October 29th and 30th, in Bozeman and they're going to look at appointment of a sport fishing and boating partnership to the National Fish Habitat Partnership.

That -- the National Fish Habitat Partnership, or

NFHP, is a group of volunteer-led organizations that do a lot of on-the-ground fish restoration and we recognize them.

There's a -- it's not a FACA advisory committee, but there is a board which administers about $10 million in money that runs through the Interior Department to these various partnerships and provides an overarching consistency and support structure for all the various partnerships around the country.

There's a number of coastal partnerships that we are very much involved in either through the councils or the commissions. One of the seats on the board is by statute allocated to the Sport Fishing and Boating Partnership and so they're going to discuss who from that committee is going to be on the fishing -- the NFHP board.

They're also going to discuss excise tax slippage. I don't even know what that is but they're going to discuss it. Council communication priorities, disposal prevention of derelict vessels, as I said, and vessel launch facilities and boat ramps.

They've requested an update from us on work to re-envision the federal/state recreational data partnership. Some of that stuff is what Russ is going to talk about after this presentation.

So we have talked with them as I'm talking with you about the fact that these other FACA committees exist and advise the Secretary of Commerce, and it's good to coordinate and at least be aware of what they are doing.

I've also been asked to talk about council work on climate-ready fisheries, and I am well aware that you don't exactly know what that means.

But, nevertheless, we did give the councils $20 million to help work on that issue. So this is part of the IRA funding under the climate-ready fisheries initiative.

We have talked a lot about how we're spending that in other forums but it was something Cisco and I and Janet talked a lot about is what we don't want to do is do a lot of science to better understand how climate is affecting fisheries and not being able to do anything about it.

And once you hand this very impressive body of scientific work off to the decision makers they're going to need to process that and if I don't give the councils funding to process that then nothing will ever happen with any of that money.

So it's important when we look at that to think about not just the generating of the data and the information and the understanding but how it actually gets used. That is something that Cisco and I have focused a lot on as we go forward but the councils are a key implementing force in that.

And so we allocated $20 million of funds that are going to go to the councils. They competed for that through our Office of Sustainable Fisheries and we recently announced the initial announcements of some of those.

Some of the projects are going to include identifying indicators for tracking shifts in species distribution, improving councils' ability to respond to rapidly changing conditions.

Almost all of them are going to add some staff that will make them more able to quickly respond to things. Developing onramps for incorporating local and traditional knowledge into decision making and conducting climate scenario planning and acting on the recommendations from previous planning and a number of other things.

So we have very active scenario planning exercises on the West Coast and the East Coast. To some extent that's the easy part is to identify what potentially could happen in the ocean, how climate could be affecting the ocean.

The challenge for me and for the Agency and the councils is to try to get ahead of that and to put in management measures now or at least have them ready to go now so it won't take us five years once we realize that we're in a new climate regime.

In order to facilitate that work we also last week finalized our work on our governance guidance which, as one of the main impacts of climate change, are shifting fish stocks.

Some stocks are negatively affected by that but others just move. Even if they move they're moving out of a state where the fishermen are. They may be healthy.

They may be going somewhere else. That creates management challenges. It creates governance challenges where they cross over a jurisdictional boundary between the councils.

We see this a lot on the East Coast between the South Atlantic, Mid-Atlantic, and New England councils, but it could happen elsewhere.

The Secretary of Commerce has the authority to assign stocks to councils and say to a council, you shall manage this one and you shall manage that one. And we did most of those in the '70s.

But as the stocks are moving it becomes a question as to at what point do they move out of one council's jurisdiction to another and do we need to change that designation or have them share jurisdiction.

There's a lot of questions swirling around that. The answer for a long time was, well, we'll know it when we see it, which didn't give a lot of people comfort. So we put out some triggers at which we would look at those criteria.

When will we assess whether or not we need to change and what would -- what criteria are we going to consider in making that determination. What was the process for making that determination? How do

we incorporate the views of the councils and others in making that determination?

So that guidance came out last week and I commend you to look at that if you're interested in that topic.

A couple more things that I would ask to talk about. I was asked to talk about the Makah final rule on whaling. This is something that I have been dealing with.

I mean, some of you may have known that I used to be at the Justice Department back in the '90s. I worked on this case back in the '90s where the Makah -- the Makah, whaling is an important part of the Makah heritage, and they have been doing it for millennium.

When the government -- when whaling basically ceased in the U.S., they ceased whaling as well. Now that certain of the whale stocks are healthier, they wanted to reinvoke their designated treaty right.

They've got a treaty right that explicitly talks about whaling but more so to get back to their important cultural subsistence ceremonial hunts to do that and we have been supporting them to do that. It is quite complicated.

It was something called an on the record adjudication, which is an arcane process under the Administrative Procedures Act where you basically have an administrative trial.

So they were the proponent. The West Coast region -- our West Coast region was the proponent to issue them a whaling allowance. It went through a mini trial and an administrative law judge agreed with them and we recently put out a rule supporting the ALJ's recommendations and creating a structure that would allow them to hunt for a small subset of whales.

We actually didn't increase the overall whales that were hunted in any year because years ago the

International Whaling Commission -- this was the part while I was doing it in the '90s -- allocated whales to them.

While they've been pending the federal government's authorization for those whales those whales have been taken by Russian aboriginal people as a temporary measure.

Now that quota will go back to us and we will take them -- so, the number of whales that are removed from the population is going to be the same but they'll be removed by the Makah. There's still some process that they have to go through.

We have to work out a management agreement with them, which is in the works, and they've got a permit. So we approved the overall structure to allow them to whale.

They still got to go through the process to do that and they likely will be -- if all that goes through it'll probably be sometime next year that they can -- given how late in the year it is now, that they can start taking a limited number of whales.

They did it once. They did -- before they were enjoined by the Ninth Circuit they had actually did hunt with our approval one whale, and it was very important.

You can -- if you go talk to many of the Makah they'll still tell you how important that was to their community and we look forward to working with them to implement their treaty rights and to allow them to continue to -- or to restore their important traditions. Happy to take questions about that at the end as well.

The last thing I was going to talk about which has come up, I think, a little bit is the national standards rulemaking, and we have talked with you all about this before.

So we operate under the Magnuson-Stevens Act to

try -- all of our fishery management measures in theory have to comply with 10 national standards.

Those national standards sometimes can be at odds with each other but a lot of them are important and we try to comply with all of them if we can.

Some of them haven't been changed in a long time so we have been looking at national standard four, eight and nine recently. We put out what's called an advance notice of proposed rulemaking and took comments -- MAFAC made these comments, I believe -- on the national standard four, eight and nine.

Four talks allocations and it says they should be fair and equitable. They should promote conservation and not result in excessive shares. Eight talks about the impacts to communities, something that you've talked about a lot in the last 24 hours.

Provide for sustained participation of those communities in fishing, minimize adverse economic impacts practical on the communities. So it's talking about communities, not necessarily -- not necessarily the fishing industry but on the communities.

And number nine is minimizing bycatch. We are required by statute to minimize bycatch to the extent practical and if we cannot then minimize the impact of the mortality caused by that by catch. But it is all modified by the practicability standard.

So we looked at that and we were in particular concerned about a repeating pattern that we have seen where a fishery somewhere was taking fish that was having impacts far downstream or far away from where that fishery was occurring, and how do you address that. You've heard a lot about some of that here. Even if there are larger environmental forces at play like climate change still those impacts have become quite controversial.

So we have been working on a proposed rule that would amend our existing guidance which hadn't been amended in decades. That rule is at the Office

of Management and Budget in the White House. They get to review large rules like this. So, I can tell you it's there. I can't tell you what's in it until it comes out. We expect it to come out by the end of the year assuming it can clear that review.

It will come out as a proposed rule and then we'll take comment on that and try to finalize that next year depending on what sort of comments we get in the comment period.

So those are the main topics that I was going to cover. I'm happy to talk about -- answer questions about any of that or anything else that you guys would like to discuss.

Chair Runnebaum: We'll get a second mic. Thank you so much, Sam.

I see there's a lot of hands around the table and I might take some liberty as the Chair to ask the first question, if that's okay.

Mr. Rauch: I don't have a mic.

Chair Runnebaum: Okay. We'll get you one. Just to follow up on the funding to the councils, have the councils received that funding yet or is that still in motion to them?

Mr. Rauch: I don't think they received that funding. As I think we have discussed with this group, we changed our grant making process last year and while many of those issues were resolved so that things are working now we are still way behind in moving those grants through.

So we are getting the money to them but they've not received it yet.

Chair Runnebaum: I'm going to go get a second mic. Okay. I did not see whose cards went up first.

Ms. Zanowicz: Thank you. We have mics on the tables. We're just going to pass them around to see if this works. If not we'll go back to the old method.

Participant: Brett was first. It's Brett, Pat, Meredith, and then Jaime.

Chair Runnebaum: Okay. Brett, Pat, Meredith, Jaime. Thank you for paying attention.

Mr. Veerhusen: Sam, is there anything we can do as MAFAC to strengthen the proposed rule? Should it come under the Congressional Review Act or congressional review?

Is there anything that the -- that MAFAC can do to strengthen whatever is put out by the agency to ensure that that is taken forward through whichever administration we get next?

Mr. Rauch: You're talking about the ANPR rule?

Mr. Veerhusen: Correct.

Mr. Rauch: Probably the national standard rule. Yeah, okay. So the Congressional Review Act is an act that allows Congress to reach back to -- that we have done the past year and if Congress doesn't like it Congress can say don't do that rule.

All of our rulemaking authority comes from Congress, and so Congress does have that ability. There's an act and there's a process to do that.

It only applies to final rules. The earliest the Congressional Review Act would come into play is after we finalize that rule. In the interim I anticipate a proposed rule coming out at the end of this year and MAFAC certainly can comment during the comment period.

We're going to roll that out through the council process so there will be an opportunity there. So the first step would be if you have good things or bad things or any constructive comments to talk to us during the comment period about, you know, what your views are and let those be known there and then we can go do the Congressional Review Act later.

But it would only apply if there's a final rule. It won't

apply to the proposed rule.

Dr. Sullivan: Looks like it works. Excellent. So, thanks, Sam. I always appreciate you covering all of this broad stuff for us and it really helps me.

I have just three really brief comments. One is thank you for the update on the Makah. I worked with those guys, the scientists there, when I was at the helm of the commission.

Really, respect the group that's out there, and thanks for the updates. I get questions about that occasionally, so it's helpful to know.

Second, with regard to the other FACAs that are out there it might be nice to know how we work together. You said we should. You're briefing us on what they do but maybe we could get some direction how to do that. You don't have to do that -- answer that now.

And then finally something I have to relate. So I appreciated the presentation we got from Cisco earlier on CEFI, the Climate Ecosystems and Fisheries Initiative and I was really pleased to see that going forward.

But one of the comments that I got that I have to bring forward is somebody asked me from -- in the North Pacific why didn't they ask us what we wanted? And so that gets back to the sort of dialog thing that often goes on here.

I can't say whether you -- I don't know whether you guys talked with them there or anybody else anywhere else in the nation and I'm appreciating having the representatives that are there for each of the different sections. But it's a comment I got, and so for what it's worth there you go. Thanks.

Mr. Rauch: Yeah. On that last point, that is what we eventually want to try to avoid, right? We have -- Cisco's been very adamant as have I about trying to make sure that the councils and our regional offices as one of the main customers can influence that.

There is an awful lot of things that can be done and if they did -- there's a lot of money in CEFI but there's not enough to do everything that can be done.

So we need to tailor all that work to the things that the managers can actually use and employ and we have had across the country -- we're focusing in on that.

Some regions are more advanced than others but that is a universal goal is to try to make sure that of all the potential things they can do what they choose to do are the things that, you know, will directly feed into management and be very helpful on that.

Did you want -- did you want to add anything there? Okay.

Ms. Moore: Thanks for the presentation. I'm certainly supportive of the climate jurisdictional shifting stocks memo. I just wanted to say that. I think it's important to give that kind of clarity. I appreciate you all doing that.

My question is, like, tangential to that, which is that I'm not -- I don't know if you all have started work or are thinking about jurisdictional shifts between countries as climate change is causing that and I'm wondering if you could talk a little bit about if we're thinking about the frameworks or the conversations you need to be having with Canada or with Mexico or through the -- how the commissions or any of those sorts of things, about what jurisdictional shifts might look like there and if you're thinking about providing some guidance or something like that for people to understand how we might treat that or even what those conversations look like because I don't know that there are management bodies for all of the things that we're going to be encountering. Thank you.

Mr. Rauch: Yeah. I mean, we are -- those are all bilateral discussions. I do know in some of the RFMOs the big -- the big multinational ones they do look at that and it's less -- I'm not aware of any of them that

have sort of pre-decided guidance but it is part of the negotiations.

I know in a number of our bilaterals with Canada over the years we balance basing the quotas off of things like historical participation versus recent participation, which is a way of dealing with the shifts, and usually it's neither -- it's not 100 percent of either.

It is something that we talk about but it is part of our annual negotiations under each of those individual statutes and the dynamics in each of them are different. It's not something that we can unilaterally provide guidance on because of the nature of the international discussion.

But it is something that comes up frequently as -- because we have to make quota determinations every year and in every one of those forums these issues are coming out.

Ms. Moore: Super brief follow up. Are those -- are the outcomes of that is there -- are the fishing communities and everything that are affected by that that see that happening are they -- does it come through the council process in those regions where they can hear how that's playing out and what those look like? I'm just wondering if we're giving folks that sort of look into the directionality of those conversations.

Mr. Rauch: Yeah. I mean, the representatives in the meeting are often set by the treaties or the statutes and there -- or the U.S. government.

Sometimes with the halibut commissions, you can have -- you can often have private commissioners. We try, as a federal government, to bring in, even if you are not a commissioner to have listening sessions going into those sessions so that we understand.

The councils are actively part of certain of those processes. In other ones they are part of preliminary meetings that are going into them.

So, you know, the North Pacific Council is very involved in halibut. The New England Council is very involved in flounder issues with Canada. The Western Pacific Council very involved in tuna and those kinds of things.

So they are involved and we try to also bring in communities and to take that into account and set it in the U.S. position.

Chair Runnebaum: Is there a microphone this side?

Ms. Diamond: Okay, hi.

Okay. So a couple of questions and comments. One is the idea of -- this is EEJ -- I'm at ballpark right now -- using EEJ as a way to address the burden of inappropriate or overly burdensome mandates or policy on fishing communities and businesses, working through the lens of EEJ to address that type of issue which happens so much to fishing communities whether it's over regulating something or, you know, it's permit upon license upon permit that's required to do something and how -- is there a way to use EEJ as a way to address that for these types of communities because it's -- yeah, that's -- yeah.

Mr. Rauch: Okay. All right.

Ms. Diamond: If you're following me what I'm saying.

Mr. Rauch: You're leading me to believe there's more questions but I'll --

Ms. Diamond: There are.

Mr. Rauch: Okay.

Ms. Diamond: I just -- I figured I'd give --

Mr. Rauch: Do you want to ask them all or do you want me to answer that one first? Okay.

Ms. Diamond: So, I mean -- so you're absolutely right. One of the driving mechanisms behind -- ideas

behind the EEJ is we have unintended consequences of our actions and it has impacts on underserved communities that we didn't anticipate either -- most often it's because those communities didn't have a seat at the table.

But sometimes it was just completely inadvertent. Fishing is like that, too, in allocations. One of the things we see when we do, like, limited entry permits is you see a consolidation of fishing in larger communities, which an effect could be to decrease or make it harder for smaller communities to participate.

The statute allows for things like community quotas and we have talked about some of those. There are some mechanisms in the statute but the better way to do it is to avoid those problems in the first place.

So one of the things we did we asked National Academy of Science to look at our limited entry programs with the EEJ policy in mind and to see whether or not there were disproportionate pressures because, in theory, there could be. Demonstrating that there are is a different question and if so what could we do about it.

So they've given us the first step, which -- the first report, which was to say this is a really complicated question. There's a lot of issues going involved. We're happy to look at it, and we are about to launch the second step which is what to do about all that.

So that is in the process nationally. Each council -- we are pushing it for the councils to look at their limited entry programs like, for instance, in the Gulf of Mexico to see whether or not we have precluded new entrants, that we're having EEJ effects on communities.

And so we are pushing the Gulf of Mexico Council, just as an example, to review their programs with that very thing in mind. The Magnuson Act is flexible enough to take into account those kinds of things.

So we're also working on participation, bringing people in. We were trying to bring in tribal engagement into many council processes where they weren't before. EEJ policy is not just limited to tribal issues but we're looking at other ways to do that.

So the policy would allow us to look at those questions. There's no quick fixes, right. The council process is long and slow, but we're trying to raise those kind of questions.

The other thing I will mention is it is really difficult to isolate what the true economic social impacts are on the communities so we're trying to invest both with EEJ in dollars and elsewhere in social and economic data from communities to try to build on that so that we can understand better as we make the decisions what the impacts are so that we can try to avoid the decisions in the first place if they're going to have disproportionate impacts.

Ms. Diamond: Thank you. And that kind of -- trailing onto that is the notion of creating policy in the name of EEJ that actually hurts the people it's supposed to serve, which happens quite often.

And I'm not saying here necessarily. I'm saying across the board whether it's at state or federal level and so, for example -- well, I'm not going to -- it's a state issue so never mind.

But yeah, so that's just -- that's a lens of which I'm looking at management and other policies is how that is putting burden on the communities we're supposed to be uplifting in a disproportionate way. So thank you for answering that.

And switching over, and it kind of, I guess, goes into the national standard issue you were touching on, and so maybe there isn't an answer that can be given.

But BSIA, my least favorite four-letter word abbreviation, so with BSIA and how information goes into an assessment it goes through the SSC --

Ms. Lovett: Best Scientific Information Available.

Ms. Diamond: Yes. Sorry.

Ms. Lovett: International standard two.

Ms. Diamond: Oh, sorry. Let me clarify. Best Scientific Information Available, apparently. Too many acronyms. So to clarify, BSIA, Best Scientific Information Available, that relates to national standard two specifically and one of the things I was thinking of earlier was the presentation we had yesterday -- or, sorry, this morning -- and it seemed somewhat rosy and not what's happening is rosy but a lot of stakeholder input and things like that.

And so I had asked some of the stakeholders in the area, like, do you feel like you can stand behind as a stakeholder what's being put forward as BSIA because I know that's not the feeling in other regions.

And there was more -- I feel like a little more support for it where they were -- the results I got was about a fifty-fifty, like, more in the middle, medium.

But the thing that we were talking about is, okay, so an assessment or a model that goes through the SSC they're just deeming was this done correctly but not necessarily was the information -- did it pass the sniff test, really.

Like, okay, they took that information and they put the -- ran the model and that scientific process and the method they did was done properly. So, okay, this is best science available and it gets stamped by the SSC and then councils are forced to move forward on that.

And but how are we setting the bar for what is acceptable as that scientific information to be used because we're seen in the Pacific Council very data-poor stock assessment that went through and it was used to make a stock determination and it is proving to be very detrimental for our area and it's because there was, you know, a handful of otoliths and that

was what was best available.

Of course, there's a lot more to the story but what -- where is that threshold other than it just existing and it being the only thing so therefore it is best available? And how can we create a standard or a bar that that must pass before it can go through?

And maybe -- I don't know if that has anything to do with the new national standard issues or not or but it's just -- it's a problem that I'm trying to -- there's a lot of us that are trying to look at how we can get the info but there still needs to be a bar for what goes in.

Mr. Rauch: Okay. That issue is important. It's not related to the national standards but I'm happy to talk about that issue. It's not related to the rule we're doing.

Ms. Diamond: Okay. It's not related to that? Okay.

Mr. Rauch: Right, because that's national standard four, eight and nine, and this is related to number two.

Ms. Diamond: Oh, two. Got you. Four, eight, nine. Sorry.

Mr. Rauch: That's fine. We'll talk about that anyway.

Ms. Diamond: Okay. So you can talk about it.

Mr. Rauch: I can -- I can talk about that.

Yeah. So we are required to base our decisions on the -- we are required to make a decision even in the face of uncertainty and we're required to use the best available scientific information to do that, and sometimes it is really data poor and there's not a lot of information.

So the way that we address that is by looking -- usually is by setting uncertainty bounds so statistically you can account for uncertainty as a policy matter.

The councils often adopt risk policies and they say if it's highly uncertain we're going to manage in this area. If it's not very uncertain we'll manage in this area. Because there's a degree of policy overlay to some of that science when you're looking at how much risk are you willing to tolerate.

And so we have got risk policies around the country in various councils that deal with this exact question. So when -- you know, you've got a management action that is based on three inputs.

Very large uncertainty bounds -- what do you do with that? That is not necessarily a scientific question. The scientists can tell you what the uncertainty bounds are but then there's a policy overlay. And so the councils try to give that guidance ahead of time.

It is true that once they make a recommendation for what the ACL, the annual catch limit, should be the councils are required by statute to follow it. But then we look at that too. We have to ultimately -- it has to be reasonable and not arbitrary for us to adopt it. But the councils are required by statute to follow it.

So there are tools that we can employ in general to deal with uncertainty. You mentioned one of them. In looking at the -- we classify fisheries as data poor or data rich and you have more options.

You have better -- where you have better data you can be more precise in your management. When you have poor data it leads to large uncertainty buffers. But we do classify it for that very reason because we know a lot less about the data poor stocks. So, you know, I don't know exactly which one you're talking about -- you know, the details of what you're talking about.

But there are tools that we have that can get at this very question about how you deal with data poor stocks, how you deal with uncertainty, how you set risk, and what that standard is for management that we don't just necessarily blindly say you ran the model right.

Ms. Lovett: And I guess -- Jaime, I'm sorry.

Ms. Diamond: Sorry.

Chair Runnebaum: I think this would be a great conversation at the brewery later.

(Laughter.)

Chair Runnebaum: We have two more people, three more people that want to say something, and I'm going to end us in five minutes.

So, okay. Okay. So, I think this best available science -- let me regain my composure -- best scientific information available and the co-production of knowledge and information used in decision-making feel related to me. And if this is of interest to MAFAC to pick up, I think that we should pick this up.

Okay. All of a sudden, I have cards disappearing.

So, Jamie Goen, and then, Jim, I saw you also had something.

Okay. So, as Jamie is waiting for somebody to get a mic to her --

Ms. Goen: Thank you. I'll try to make this quick.

We heard on the panels yesterday that one of the ways to help build resilience for fishermen and communities is to speed up the fishery disaster process, to do something more like USDA's Seafood Trade Relief Program did, where they had money out the door within a matter of a couple of months, as opposed to years that it takes for the fishery disaster process.

So, I'm curious from your perspective, you know, if we carry on that thread of conversation, what is the agency currently doing to speed up the fishery disaster process? What do you think -- so three things -- that was No. 1. Two, what do you think of some of the legislation out there? Do you think it will help? And then, No. 3, do you think, congressional

appropriation aside, do you think it's possible for the fishery disaster process to get to a stage where it takes a matter of months instead of years?

Mr. Rauch: So, we have, as you know, a recent congressional bill in 2022, December 2022. So, I have no idea whether Congress is going to pass more bills or not and I wouldn't speculate on what the Administration's views were on those bills.

But there is one that created a lot of efficiencies in the process. It added some new obligations, but also created some timeframes. And we've been implementing that for some of our newer disasters.

And I did not have the data exactly in front of me, but we have massively cut down on at least the NMFS part of the processing time. Certain elements that are affected by that statute have sped up significantly. We need to work with that, on that.

There are no standing appropriations. So, to some extent, the pace at which we can give out money depends on the pace at which we can get in money. I can't give out money we don't have, and there's a process that Congress requires us to do that.

So, we have sped it up. We continue to -- as Janet has said, this is something that she's very acutely interested in. It's not just looking at the things completely under NMFS's control, but can we be more holistic and look at things elsewhere within either Commerce or the Administration, or working with the commissions or the states on their end of the process? Because there's a lot of issues there as well.

Part of the issue with fishery disasters, it's often unclear when the disaster starts and what the magnitude is. Some things are very clear. The season is closed for a year. We know it's going to be closed. That's easy.

More of our disasters are not like that. More of our disasters are some fishing went on; we've got to assess what the true level of economic impact was.

There's a lot of working with the states back and forth to get that information that goes into these kind of things. So, there are ways that we can speed that up. We have been speeding it up and we continue to try to do more.

I don't know that we're going to ever get to the position like USDA. I'm not familiar with that program. I know that FEMA can get out disaster money quickly. It's designed to be a rapid-relief force.

Fishery disasters have never been that kind of rapid relief. We've had this legislation for decades and it has always been a year or more. It is sort of economic assistance well after the fact. So, it's not designed to ameliorate a disaster as it's occurring. It's always going to be an after-the-fact kind of thing. And that limits some of the models we can use.

But, as I said, this is something that Janet has been interested in trying to improve, working with various partners. The Secretary of Commerce is very interested in trying to improve this. And we have improved it and there's more that we are trying to do.

Chair Runnebaum: Great. Thank you.

Sam, thanks so much for your time and conversation with MAFAC. I really appreciate it.

We're going to pass it over to Russ now and we're going to get an update on rec fisheries. And he needs a mic.

NOAA Recreational Fisheries Update

Mr. Dunn: Okay. So, I'm in that enviable position of late in the date. I've been trying to practice speaking more slowly in my presentations, but this is, apparently, not the day because we're crunched for time. So, forgive my old habits. They die hard.

All right. So, I think I've met everyone here, but if

not, I apologize.

And my name is Russ Dunn. I'm our National Policy Advisor for Recreational Fisheries.

My colleague, Dr. Richard Cody, who is the head of the Statistics Division at the Office of Science and Technology, was going to join me today, but he has a family emergency and is unable to.

Oh, that's the clicker? Okay, awesome.

So, today, I am going to give you a status update on what's called the Fishing Effort Survey, a follow-up study, as well as an update on where we stand in re-envisioning the state-federal recreational data partnership, and then, open it up for your inputs, comments, questions, criticisms, et cetera.

So, all right. So, first of all, for those of you who may not be aware of the Fishing Effort Survey or what it is, in short, it is our survey instrument to estimate recreational fishing effort from shore and private boat-based anglers. It's conducted Maine through Mississippi and in Hawaii. And basically, it collects the number of days fished by anglers from shore and private boats for specified periods of time. And those are, specifically, two-month waves and a 12-month period.

And we conducted a pilot study a couple of years ago in our effort to sort of continually improve and look for sources of bias. And what we found -- we switched the question order from two months first to 12 months second. It was reversed. Twelve months was the first question; two months was the second.

And what we found in the pilot study is that this resulted in many fewer illogical responses. "Illogical response" meaning they said that they fished more in a two-month period than the 12-month period.

So, when all was said and done and the numbers were crunched, what it meant was that the estimates of overall fishing effort were substantially lower in

some instances. It varied by mode and it varied by state. It went from no noticeable difference to as much as about 40 percent in some places.

So, given the magnitude of that change, we funded/launched a long-term, large-scale -- or not large-term -- but a large-scale follow up study. It began in January of 2024. It will proceed to the end of this year. And it's being conducted in parallel with the existing survey in every state where the FES is administered.

And so, what we have been seeing with the data that has come back -- we've got about five months of data back at this point -- and what we're finding so far is that those data are roughly in line with what we found in the pilot study, meaning there are fewer of these illogical responses, potentially less recall error.

And at this point, it is premature to make, sort of draw real conclusions about the ultimate findings of the study, because we still have a large amount of data to collect, including all the heavy summer fishing months. But I think we're seeing a general trend that the data are following that same path.

So, what this means is, where are we? Well, we are on track for moving this forward and completing it and sort of moving forward with improvements to the FES.

And I guess let me take a half-step back and explain why is it important to get fishing effort estimates right. Well, the simple answer is catch times effort equals total catch. So, if your fishing effort is overestimated, it is likely that your total catch is overestimated and you can follow the implications of that in both science and management.

So, where are we? Well, we anticipate concluding the study by the end of this year, at the end of this year, beginning in next year. What we are doing right now is laying the groundwork for potentially transitioning to this new methodology and, also, we're beginning work on the calibration model development.

In the spring, this coming spring, we anticipate having the final estimates from the year-long study available. Over the summer, we anticipate putting forward a final report, as well as finalizing a calibration methodology and initiating peer review.

In 2026, the beginning of 2026, we believe would be the earliest the new methodology would be available, assuming all goes well with the peer review, and then, obviously, we would need to update the historical database. And we believe that we may have, in the spring of 2026, we may be in a position to have those estimates fully updated.

So, I'm going to pause there for a second because the next half of the presentation varies. It's related but separate from this. So, why don't we stop here? I'll answer any questions that I can. If not, I may have to punt to Richard and we'll get back to you in the future, if I can't answer any.

Chair Runnebaum: Great. Thank you.

I saw Kellie, and then, Meredith.

Vice Chair Ralston: Okay. So, can you talk a little bit about implications for management? And so, I think a lot of the issue or the frustration that we're seeing as a result of taking these corrective actions -- which don't get me wrong, we want the right numbers; I mean, that's important, right? -- but, in the interim, Councils are making significant management decisions. There are significant conversations going on. Like I can think of South Atlantic and discussions of complete closure of bottom fishing because of recreational estimates.

How is the agency handling that in the interim, given kind of the magnitude of some of these major management decisions that are being contemplated by the Councils based on data that we are pretty much presuming is incorrect at this point?

And I know it's, technically, BSAI, and so, we have to go with what we have. So, you can respond to that -

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Mr. Dunn: End of discussion.

Vice Chair Ralston: -- but that's what I want to hear. I want to hear really on the ground, I mean legally, how can a Council -- I mean I know legally -- but how can they actually make those types of decisions with all of the impacts that we've been talking about to communities? And that's a complete disconnect to me.

Mr. Dunn: Yes.

Vice Chair Ralston: And so, I'm going to put you on the spot.

Mr. Dunn: So, the guidance that the agency has put together and put forward at this time is to continue using the existing FES until we have an updated time series. It would be problematic for managers to use a one-year time series from a new methodology because we've got to get it back retrospectively entered into the catch history, and then, into the assessments, and et cetera.

And so, while, yes, there are challenges in some instances -- and again, those differences between the existing survey methodology and the follow-up study methodology varied by location and by mode. So, it's not a universal.

So, it's difficult to say what the impact would be if we had all perfect knowledge from this study and it was integrated. Some places it may result in additional fishing opportunities. In others, it may not.

Vice Chair Ralston: Well, and I guess, I mean, I don't want to act ungrateful because I really am. I think that I've really appreciated the transparency that the agency has taken in this issue and not trying to sweep it under the rug and recognizing that it is a big elephant in the room and trying to address it in a meaningful way.

I guess my concern, again, to reiterate, is in the short term we have some really impactful management decisions that are on the table that are based on this information. And it would be lovely for the agency to maybe say, Hey, Regional Administrator, who's pushing this -- and we can talk about who that is -- but, you know, that's pushing this, back off until we actually have solid footing and solid data. Even though legally it's BSAI, I mean, you're setting yourselves up, I think, for trouble there, I guess is my --

Mr. Dunn: Oh, I hear what you're saying, but there are also existing, we'll call it, legal pressures from other directions requiring us to act on the information that we have in hand. So, it's going to be a discussion.

Chair Runnebaum: Great. Thank you.

Mr. Dunn: I think Meredith.

Chair Runnebaum: Meredith, yes. Thank you.

Ms. Moore: This is the place where I'll probably diverge from some of my colleagues. I actually really want to compliment you all, that I think the updates that you've been doing, the transparency around it, the testing that led to this, is an exemplary example of best scientific information available. This is what we need you all to be doing, like test our surveys; look for ways to reduce uncertainty; put a thoughtful and methodical process in place to improve these things; roll them out and explain them to people. And so, overall, I've been really impressed by the response -- that the testing even occurred; that you all are working to address this.

And it certainly, like, it hasn't changed the uncertainty. It's just revealed a level of uncertainty. And we still have to manage with that uncertainty, regardless. So, I appreciate, like, hard decisions have to be made. I think the agency has done a really good job of explaining this.

This is going to jump ahead a little bit. Because, often, like it gets merged in. But like Evan Howell has been sending really good, really frequent updates out to the public around this, and that's been greatly appreciated.

I know you all have gone to every Council meeting you could to roll these things out and have those conversations. So, oftentimes, we are harping on you all for communication. This is a place where I think the communication has been really good, and I just want to take a second to appreciate that.

And I will just note that, certainly, you know, as you're doing, in a second you'll talk about the re-envisioning process. But many of the other surveys that you're trying to learn to work with your data partners around don't do this type of testing. And so, you're often being held to a different standard than some of the other surveys. I just want to acknowledge that and that this is really complex. And I'm so glad to see you all creating this participatory process, where people are engaged in it, and I know you take a lot of lumps for this type of work, but I think it's been really well done. So, thank you.

Mr. Dunn: Thanks. Appreciate that.

I think that brings us to an end for today's discussion.

(Laughter.)

Chair Runnebaum: Thanks, Meredith, and thank you, Russ.

So, Jim?

Mr. Green: Don't worry, Russ; I'm not going to beat you up too much. I've bent his ear enough on this.

I also kind of want to shock Meredith and agree with her for a moment. You know, with FES --

Mr. Dunn: Okay, one more comment, that's fine.

(Laughter.)

Mr. Green: When FES first came out, you know, we were excited that there was going to be a change in the effort. We always thought MRIP was highly conservative, and then, when we started seeing FES numbers, we were like, whoa, this is -- like we all agreed in our industry that the truth was somewhere between MRIP and FES, and we felt that it was overestimated.

One of our biggest concerns -- and I agree with what Kellie was saying. You know, I know that there's a legal line to walk, especially when you're talking about closures and stuff like that. But one of the big things in the Gulf was using FES numbers to reallocate a fishery. And I think that that's really at the crux, because you're going to have a lot of problems whenever -- red grouper in the Gulf is one, Amendment 53, that, as you all know, was a big issue between us. We were all at each other's -- at odds with that.

And that's going to lead to probably a legal challenge whenever you finalize your methodology, and then, go back and recalibrate, and that fish is going to come back to the commercial sector. It's going to be kind of a mess.

So, I agree with Kellie's comments. And last year, the wave 4 data, wave 3 or 4 data, on red grouper was tremendously more. And that was another big problem.

So, I think in the short term, you know, dealing with the closure is one thing, but reallocation is something that the agency should veer away from, especially when you have this.

Speaking to the transparency of this, this was, whenever this first came out, I talked to Russ, talked to Andy, and a few others. And I started telling my guys, like, hey, FES is overestimating by 20 to 40 percent, was the original thing that we got. And they're like, oh, great, we knew that.

And when I told them that the agency came out and

admitted it, and that they have a pilot study due, and then, they have not a complete solution, but they're on their way to a solution to correct this and fix this in the fisheries where it is, I'll just say that it bought a lot of goodwill with the fishermen for hire, recreational, whatever.

You know, normally, when NOAA tells us something is screwed up, it's like, sorry, you know, that's what we got. But having a solution and coming out and saying -- like not having someone else say, hey, you know, they could throw the flag on you, and the agency actually throws the flag on itself, and they have a path to fixing the problem, it was refreshing, and I want to commend that.

Mr. Dunn: Hey.

Mr. Green: See, Russ, it wasn't going to be bad. I wasn't going to go at you too hard. I already knew do that enough.

But thank you for that, and I think that's a reflection of what we saw in the Recreational Summit a couple of years ago in D.C., was that buy-in and trust of the agency, and that kind of stuff. I think that what you all heard at that summit really played into how you handled this situation. And I think that's greatly appreciated by every kind of stakeholder there is. So, thank you.

Mr. Dunn: Thanks. Appreciate it.

Okay. So now, it's part two.

So, hopefully, you all have heard -- and you heard just some references to it right now -- that we have launched an initiative to collaboratively re-envision the recreational fishing data partnership with the states. And we did this by, we sort of took the first step internally, getting our ducks in a row, by pulling together sort of a process outline of how might we get to a new vision collaboratively with our partners and what some goals and objectives may be for that.

We, then, circulated that and held a series of four initial webinars in the spring with what I'm going to refer to as our partners. When we say the term "partner," that's shorthand in my mind for councils, commissions, and state directors.

So, we had four webinars with the partners, as well as the rec community and other interested members of the fishing public, and had some immediate takeaways. You can see some of those up on the screen. I won't read them all, but it was some obvious things -- build trust and credibility.

There was a lot of interest in ensuring regional flexibility to meet regional needs.

There was among individual states among stability in those aspects of the program which they believe are working well.

Some other ones that aren't up here that have been really rising to the top is there's a tremendous amount of interest in finding ways to develop additional data streams to more or less ground truth, some of the MRIP data, and that is wholly consistent with findings of the National Academies study about getting additional data streams.

Also, sort of allocation of resources; real interest in using the regional implementation teams to allocate resources.

It was a whole list I can provide you, if you're interested in additional information on findings.

So, what is the existing -- this should really say "working goal," not "draft goal." And this is still a work-in-progress.

But, in essence, what it boils down to is a nationally coherent system that is regionally-specific and allows us to obtain the best possible information for informing sustainable and adaptive management.

And you can see a number of objectives up here. This

has been amended, as you can see on the screen, by incorporating feedback from those four webinars and additional conversations, things like adding -- you know, initially, we had enhancing precision of the data, but people immediately jumped on, well, accuracy and timeliness as well should be in there, et cetera.

So, it's a lot of tweaks. It wasn't wholesale changes, but it's been good improvements along the way. So, this is the existing working goal and objectives that will continue to evolve during the process.

And you can see we followed the rule of very little text and lots of pictures. So, I apologize for that.

So, where are we? So, right now, we're in the midst of information-gathering, both in one-on-one conversations, for example, with state directors, or group gathering sessions, be it at Council meetings, forums like this, et cetera.

We anticipate, in the remainder of this year and the beginning of next year, compiling a report with all the major themes and findings to help us sort of inform our next steps, building workshop agendas, identifying any needed working groups.

In early 2025, we anticipate forming any sort of working groups found necessary to solve specific problems or challenges that may be identified.

Over the summer, we'll take the outputs from those working groups and everything we've heard to date and host a series of regional visioning workshops, where we really hope to get to the nitty-gritty of what exactly needs to change in the existing partnership.

Because, right now, we're getting a lot of broad-brush strokes: oh, improve timeliness; improve -- well, how? What needs to be changed? What's the timeline? When you say, "improve it," when do you need it? Do you need it in a week? A month? Two months? What are the details? And we aren't at that point yet of receiving that input.

Then, coming out of that meeting in the summer, we anticipate drafting a plan, this all collaboratively with the partners, and we'll be bringing in the public, sharing the draft with the public for input as well.

And then, if all goes well, we will transition in 2026; we'll be able to come forward with sort of a final structure and plan for moving forward.

So, that said, what I don't want to leave you with is the impression that we're going to line up all the ducks and wait until after a final report comes out, a perfect plan comes out in 2026, and then, we'll start on things. What our goal and our intent is, is to improve things as we move forward through this process. That is part of our, that is consistent with our approach of continuous improvement, and certainly, something that all of our partner anglers want to see.

So, there's a number of things. These are all projects that are underway.

For example, the first one, one of the more important ones in my mind is state review of preliminary catch estimates. So, we have been working with states and commissions on a new process where you have sort of a formal process almost complete, where we'll be able to stand it up and they can look at the preliminary estimates, flag ones of concern.

And then, along with it, we've got a database being developed that will allow us to track. We've heard concerns about X, Y, and Z. What are they? Who voiced it? When and where? What's being done to address those concerns that were raised with us with a certain estimate?

The third one there, we are working with National Academies. We anticipate having them initiate a review of our national survey and data standards, starting in 2025. We think that will be a year.

We've got a series of data standards that are out there in place already, and we want to make sure

that they are sort of the appropriate, the gold standard, if you will. I know we're not supposed to use that term. And are there gaps? Are there changes that need to be made?

So now, another quick timeline here for everybody. This and the next slide are really just meant to give you a quick sense of where we've been, where we're going.

So, you can see, in August, we sat down with the State Directors' meeting, had an in-depth discussion with them about what do they want to see changed; how can they contribute; how can they join in and really make this collaborative?

The same with the Mid-Atlantic Council, we had a listening session there.

Last week was the Atlantic HMS Advisory Panel.

Today, we actually have three. There's two up here and one on the next slide. We're here. We have staff presenting to the Mid-Atlantic SSC, and on the next page, you'll see, also, the West Pacific SSC today.

But you can see there's a number of planned opportunities through the end of the year here, primarily in the Atlantic and Gulf.

The next slide here really focuses more on the Pacific. So, as I mentioned, we're also doing West Pac today.

There's one missing here. Actually, there was a conversation earlier this week, led by Kristen Koch, who is our Southwest Fisheries Science Center Director, about this just earlier this week.

And you can see others on the screen there.

The American Sportfishing Association will be an interesting one. That is their annual policy summit, and Evan Howell and I are going to go there and speak to them, to really sort of better bring in the recreational community, where we can, because that event really brings together leadership of the rec

community from all around the country.

And one other set of discussions where we're going to have the opportunity to bring this up is I am currently planning with the Recreational Regional Coordinators a series of recreational workshops around the country, starting in November and ending in sort of May, about a whole series of rec issues. It, basically, is a mechanism to allow us to stay connected with the rec community, hear the latest issues and concerns/priorities, but also allows us to begin to do the groundwork for identifying discussion topics for the next National Summit, which will be 2026.

So, we're going to build in the MRIP conversation into those roundtables. We anticipate a minimum of one in every region, but, actually, most regions will have at least two.

So, this is where we're going to transition to more of an actual discussion, listening session. You can see up there the working goal is at the bottom. I don't know how to get that little hand off, so that goes away.

But again, essentially, the goal is a regionally specific, nationally coherent system to better inform fisheries science and management.

So, I'm going to leave these up on the screen. You do not have to take them in order. You don't have to stick with this set of questions or feedback. This is simply sort of a prompt for discussion.

If you are so inclined, and you want to think about it, this is the address to which an email would be best sent in order to register your thoughts on this. And we're going to add a QR code for next time. So, that will make it easier.

But I will leave these up, and I understand we have a fairly limited amount of time. So, I'll leave it to your discretion, Madam Chair, about how long this goes.

Chair Runnebaum: Great. Thanks, Russ.

Mr. Dunn: Sure.

Chair Runnebaum: I think we have a question for the Recreational Subcommittee. Is this something that we are working on providing recommendations for? Okay. What's your timeframe and is this something that we would need to vote on as MAFAC to pass full recommendations on this?

Mr. Dunn: So, I mean, it would be great if we could have input in early winter, I would say. Early winter, you know? So, there's plenty of time for the committee. You know, the sooner, the better, I would say, for sure. I'm happy to work with the committee to develop that. You know, it would be better for us sooner.

Chair Runnebaum: Okay. And Heidi is indicating that, since it's a listening session, it doesn't need to be consensus-based.

Mr. Dunn: Say that again?

Chair Runnebaum: It doesn't need to be consensus-based --

Mr. Dunn: Right.

Chair Runnebaum: -- since this is a listening session.

Mr. Dunn: Right.

Chair Runnebaum: But I do want to think about if the Recreational Subcommittee wants to spend some more time thinking about this and providing more extensive feedback than what we can do in the next 15 minutes.

Okay. Okay. So, I recognize there are two people talking, and I forget you're the Chair of the Recreational Subcommittee. I'm staring at you. Oh, well, okay, hold on.

All right. Pat, comment?

Dr. Sullivan: My impression is that Russ is, basically, asking formally our feedback for this kind of thing here. And so, if people want to respond to this list, I think that would be a positive thing.

I do know that the Recreational Subcommittee is interested in MRIP and its consequences. Yeah, surprising, right? So, I'm sure we'll have some discussion about it when the time comes.

Chair Runnebaum: Okay. So, we're going to spend the next 15 minutes with people providing feedback, and we'll start with Jaime Diamond, and then, we'll go to Jim, and then, we'll go to Meredith. Oh, and Tom is on the line.

Okay. Jaime Diamond, kick us off.

Somebody check her microphone, please.

Jaime Diamond.

Ms. Diamond: Thank you so much.

So, the November meeting, the West Coast Roundtable, that's been going on for a few years now.

And one of the things I brought up last year at that was, you know, we want to engage and have public engagement. And I said, okay, well, who is the public exactly that you are looking to engage? Is it Council groupies? The people that are like us that know the things and are involved? Or Joe Lunchbucket, the guy that's, you know, going out on a party boat or with his buddy in their own boat, and are those the people? Because how you engage with those two different groups are going to look very different. So, that's part of it.

And the other thing, especially on the West Coast, is interpretation services, having materials printed in English and Spanish, or at least QR codes to translated materials. Because we have many different languages, especially in Southern California. But also, interpretation services where it's going to

be something that's a little more -- not that the roundtable isn't public, but general public, not Council public, if that makes sense.

Mr. Dunn: Yes.

Ms. Diamond: Because many of I know the people that come out with me speak Spanish, Mixtec, Vietnamese, Japanese, and Chinese. I mean it's a broad, very diverse community in fisheries, in recreational fisheries. And so, to really be able to engage with them, they need to be able to understand what it is you're saying in the first place or asking.

And then, as far as changes we're seeing in angling and fisheries behavior that could impact survey performance, just jumping down the list here a little bit, and how it would impact survey performance, the biggest issue -- and we are seeing it quite directly, as we are having very sudden and severe management changes, and that is definitely changing our fishing behavior.

And so, how we are targeting or not targeting; what we are targeting, including when we are targeting or not targeting versus how we normally would, had we not had these crazy seasons that we've had the last couple of years of management, it's very different. And so, I know assessors are struggling to make the different fleets, and then, to deal with how to attribute catch with these very different season structures we've had the last few years, as compared to prior.

And so, you know, one of the things we talk about is we prefer consistency in seasons. You know, we're asked, do you want a fish in the bag or time on the water? And the answer is both -- not surprisingly.

But it's getting more challenging. And so, we're trying to educate the general public and the recreational fishermen on these best practices for the right now and how to move forward.

And we've had a fair amount, I feel we've had a fair amount, of buy-in, at least from the folks that we engage with. That may be for -- I can speak for myself.

I know using descending devices is something that we've been pushing for years and years and years, but especially in the last few years. And Daniel Studt from the West Coast has been really great in getting descending devices out to the anglers at the different shows, and that has made a huge difference.

But it's tough when we have so much coastline as compared to, say, Oregon or Washington, where you only have a handful of places where you can get in and out of the water. But from California, from San Francisco, to the Mexican border, you can literally walk out to anywhere and have access.

And so, it's tough to really get to all the people, and I don't know --

Mr. Dunn: Yes. I mean, that's a common problem. Look at the Southeast U.S. with all the marinas and access points.

Ms. Diamond: Yes.

Mr. Dunn: It's very challenging, yes.

Ms. Diamond: And then, another thing is logbooks. We've been doing logbooks on the charter fleet for years now, for forever, and now, we've transitioned to electronic logbooks since 2015. I'd love to be able to talk with you about that more, if that helps.

And then, better private recreational reporting, that would be amazing. That doesn't exist for us and that is another huge piece of the puzzle. That could really help, I think.

So, thanks.

Chair Runnebaum: Thanks, Jaime.

Mr. Dunn: Thanks.

Chair Runnebaum: Jim Green, you're next.

Mr. Dunn: Oh, we're out of time.

(Laughter.)

Chair Runnebaum: Yes, I'm going to ask people to keep it kind of short.

Mr. Green: Oh, yeah. Yeah, I'm sure. Make sure on that one, Lady Chair.

(Laughter.)

Mr. Green: I agree with using the state data. I think that a lot of these states have very robust data systems and I think it's great that the federal government is trying to integrate the hard work of some states that is highly localized -- I think I talk loud enough. I didn't? Okay. But some of it is highly localized data collection that is just tailored within that state, and I think that it would be remiss not to include that in the science at some point and integrate with that.

I agree, touching on what Jaime was talking about in her last little highlight there, it was private recreational data. You know, commercial, you drag it across a scale. For hire, we're working on it in the Southeast and that's an easy bone to tackle in some cases. A lot of for-hire people want it.

But, to me, I think that the growing, the unchecked and the growing use of recreational fishery, the growing use of our resource is by the recreational fishermen. And I think that they have the least path of stewardship. And I'm not blaming them for it. I'm not blaming the agency for it.

But, to me, I believe that we should start looking in the realm of, like, a national, a free national fisheries permit for anybody that's fishing in federal waters all around the Nation. It creates a database. It gives a direct link from the agency to those anglers on information. A lot of the stuff that anglers get from

around the country are from angling associations, charter boat associations, and then, they all have their own little twist on it.

Like when I send out my stuff, I get the information from the agency. I put my own little twist on tailoring that information for what I want my anglers to make sure that they know the most about something, and it's not unfettered. It's fettered.

And I think that, by creating a free national fishing permit for fishing in the EEZ all around this Nation, you create a database that you can sample people from, whether it's surveys or what. You create a contact list where the agency has the ability to provide outreach and education to the anglers specifically.

And I think that that's one of the big things. A lot of stuff that we'll hear little bits and pieces, but they don't get the whole picture.

And I think that, at some point, you provide it to where it becomes part of whatever region they're in, whatever highly regulated species. Like in the Gulf, red snapper, greater amberjack, triggerfish, and grouper are highly regulated species.

And being able to get effort data, catch data, discard data, and what's really been the big thing that nobody has been talking about that we need to start focusing our attention on is depredation -- sharks and mammal interactions. I think that that is like the No. 1 threat to the recreational fisheries.

You know, you start talking about discards, and if your discard rate, you bycatch mortality went up to 80 or 90 percent, your catch advice is going to look way different. And we're watching depredation of fish coming up and harvestable fish being eaten on the way up, or watching discarded fish, whether handled properly, descended or not, getting ate. And we have a big problem with that, that nobody has really created a way to collect that information.

And I think that, by creating a national fishing permit, putting the stewardship on the angler that's utilizing the resource -- you know, not everybody in this country fishes and it shouldn't be on their back to be the steward of that fishery. But someone who invests time and effort to go access the fishery and uses that for whatever reason, they should have a level of stewardship and some skin in the game.

And I think that the start of that is, basically, like a saltwater registry, but you make it a federal fisheries permit and it's free. And you sign up, you know, and eventually, I'd like it to evolve into that region's highly regulated species to help provide data and be stewards of the fisheries that have issues.

We're talking about getting this data from the state. Well, let's get it from the angler. I think this is great, tapping into those states that have made the investment in doing great data collection, but I think that at some point we have to look to the angler and apply a level of stewardship to those that are accessing the resource.

Chair Runnebaum: Thanks, Jim.

I think it was Tom next.

Mr. Fote: Yes, I had my hand raised for about a half an hour. So, not on this part of the program, but it was on the conversation before this.

So, can you hear me clearly? Or are you having a problem here --

Chair Runnebaum: It just turn it up really loud and we all jumped. So, we can mostly hear you.

Mr. Fote: Okay. I listened to Jim and I listened to Meredith talk about the praise for transparency in what they're doing.

The problem we've had is that you've only had MRIP for the last couple of years. Because in the Mid-Atlantic region we put ACLs in before anybody else

did in the 1990s, they did quota-based management, and they, basically, did it on what they decided a catch was. And because we underestimated that catch for years, when they set up the quotas based on those catch figures, we, basically, lost out on those quotas.

When you came in with the next iteration that was forced because of the 2006 Magnuson-Stevens Act, it, basically, was supposed to have corrected a lot of these problems we've been dealing with for years. It's now taken 13 years and we're still not (audio interference).

What happened is we've always had these mistakes. And Jim was talking about stewardship. The recreational angler was going to force regulations on each other, like your question. I mean, we've got 800,000 anglers just in New Jersey, and all on the East Coast within five states, which is only about 400 miles, we have millions of anglers.

And we've passed the regulation and we've implemented it, but there's never the law enforcement out there to do that. But when they lose trust in the system, which is what they have over the years -- because this is not the first time (audio interference) has said the information has been lost. And we've got to survive with the consequences.

We've lost tons of charter boats up and down the coast. We've got a whole bunch of party boats in New Jersey over the last 15-20 years because of mismanagement of data, and now we've got more restrictive quotas in place (audio interference). And yet, you know, it's just we used to do fisheries management on the recreational by peer pressure. When they don't trust the system, that's all falling apart.

And no matter how much you talk stewardship, if they have no trust in what you're doing, there's no reason they're going to follow the rules and regulations. And it's a shame.

And, you know, we talk about law enforcement along the Atlantic and what's going on. And it's more problems there is now and nobody cares. Even they can't enforce it.

I'm just going to say we need to correct the problem and you need to correct it and it's (audio interference). I mean, when we look at how much you're spending on gathering virtual figures in Alaska in one fishery, it's more than you spend on all the MRIP figures, all the states involved. You spend $18 to $20 million on all recreational anglers surveying them, when we need to be -- and as John Bowman said years ago, we need to be -- this is 2007, when he took over the program of MRIP and said we need to put $50 million in the program. Well, now we're here in 2024, and it's still at the same $18 million.

And I'll leave it at that because you're probably having a hard time hearing me.

Chair Runnebaum: Thanks, Tom.

Okay. We're going to go to Kellie, and then, Meredith, and then, we're going to call for it for this session.

Vice Chair Ralston: And I'll be brief.

First, I just wanted to thank Janet and Russ and Evan for making this a priority within the agency. I think it's a big deal. And so, appreciate that very much.

Russ, looking at your first question kind of about what does a successful program look like, I think, from the perspective of your average on-the-water angler, it would be that management actions match what the conditions are that they're seeing. And I know that's a high bar for the agency, given kind of some of the time lags that we have between data collection, assessments, and then, management decisions. But I think, ultimately, that is the gold standard and that is what we should be shooting for always.

Secondly, I think, as part of this process, as you're

having conversations with the states, with the Councils, I think really having a good sense of where the data gaps are -- and I realize that depends on species; it depends on region; it depends on who's been collecting data -- I think understanding data gaps, areas where you really could use better resolution and/or accuracy is important to strive for.

And so, as you're having those conversations to identify potential data streams from other sources that could help supplement that, obviously, you need to then make sure that they meet the data standards that are required to be incorporated for management decisions.

I completely agree with Jim about the issue of depredation and discards. Because we're looking for comprehensive solutions, making sure we have a good idea of what that looks like as far as impact to our fisheries is really important.

And then, Pat, this one is for you. To go back to the recreational data collection issue, there was this lovely report that we wrote -- how many years ago? -- out of the Recreational Subcommittee on electronic reporting that I think could get to much more timely information and more accurate information and targeted information for the agency.

And there's some really great recommendations in there. And I think that will help you kind of overcome not only the, for lack of a better word, distrust issue that many anglers feel, and to include them as part of the process. Obviously, though, you have to actually use it as part of the process to get there. But I think that is a simple tool that the agency is not using that I think could be really, really effective.

And I'll write more for you later.

Chair Runnebaum: Thanks, Kellie.

Meredith?

Ms. Moore: I will provide longer comments later, per

as usual.

I wanted to emphasize one thing as you are doing this, like, re-envisioning process, which is, I think, one of the really keywords here is partnership. And I'm really hopeful that the outcome of this is something that is, like, co-owned or co-presented from all of the data partners that are involved.

MRIP has always been a data partnership, obviously, but I think that we have entered a time where we're just fractious and fighting and don't like to embrace that. And I think that in the effort to demonstrate the sort of re-envisioning, trying to meet everyone's needs, bring all the data together, et cetera, a final product out of this that is like co-shared, and maybe not just like -- as much as you know I love your policy and procedure directive system -- but, like, one that feels like it's got everybody's logo on it, and that they are also supportive and owning the success of it, and owning their place in it, will be critical to addressing some of the issues that have gone around with data. So, I just wanted to really emphasize that that should be a goal of this process.

Thank you.

Recap, Overview, and Tour Details

Chair Runnebaum: Thank you, Russ, for your time with us.

I'm just going to apologize right now for going over our allotted meeting time. So, we're going to stick around for a few more minutes.

So, I want to, first, thank all of our presenters today. We've had some really great information, starting with Cisco and Bob and Emily on the Regional Science Initiatives that are happening.

That tour of the lab was phenomenal and it was a really great experience. So, thank you for that.

I want to thank the public for coming today and being

a part of this meeting and providing input to us. It's really nice to have people take interest in the work that we're doing.

So, thank you, Sam and Russ, for your updates as well. It's greatly appreciated that you all are -- I'm going to need some binoculars to read it next time or thicker glasses. Yes, I thank you.

So, I just want to give Natasha, and then, Brett like one minute each to provide just a summary of the sessions from yesterday, yes, just any reflections that you might have.

This is very -- I think I misinterpreted the agenda a little bit. So, I'm sorry, Katie.

We're all getting a little loose here.

(Laughter.)

Ms. Hayden: I'm a little confused about misinterpreting the agenda. Is there something that -- we're okay? We're all okay?

Chair Runnebaum: Well, I think the intention was an overview of the processing plan for tomorrow. But if you have anything to say about the situation that happened in the panels yesterday, please provide your comments, and then, I'm going to keep us moving.

Ms. Hayden: Okay. I don't think that I would be able to provide that in a minute.

I think I said grateful or gratitude probably a dozen times yesterday during the session. You know, really, I am deeply grateful for everybody's attentiveness and willingness to listen, to understand. And I think that is a home run, like knocking it out of the park, that the people from our community are able to speak to you in a way that really can be impactful, all of the stuff we've already talked about today, you know, communities -- small, medium, large -- you know, schools, or municipal fish taxes, grants to

purchase cranes, professional development, or workforce development.

I know I said I couldn't do it in a minute. So, I'm going to take five.

(Laughter.)

Chair Runnebaum: Sorry.

Ms. Hayden: Everything that Amy brought with her passion and her fire, as somebody who is a transplant from South Dakota and came to a tiny, tiny Alutiiq village on the south end of Kodiak Island, and has spent her entire adult life here, and is able to communicate things, you know, communicate the circumstances in a way that is meaningful.

You know, we have a very heavy responsibility to take that and turn it into policy recommendations. And that is an opportunity that we hadn't had 20 years ago or 30 years ago, I mean even 10 years ago.

And so, I am very grateful for the young man Jordan who got thrown into the deep end and did a great job.

And this is not about yesterday, but about today, just some of the reflections that I had this morning before I came here.

I realized this morning that I hadn't brought my parents and grandparents into the room by calling out their name. And the presentation this morning just -- you know, most of you got to meet my son last night and I have him on one side, and then, you guys brought my dad in on the other side. And my dad died 35 years ago. And so, that was very powerful.

And I could sense in the room that that wasn't really lost on most of you, and I really am deeply appreciative of that. Because having an opportunity to come here, and then, you got to see some

sunshine yesterday and you get to see some nice, moist, soft weather tonight, and then, tomorrow it is going to blow like hell and you're going to be like, wow. People have been here for thousands of years, I mean really legitimate.

The other thing about yesterday, the Mayor, he was like, oh, you know, I had to get out of the island and I had to go to Sitka for a meeting. And I'm thinking, I mean, you guys are globetrotters, right? You guys go all over the country, all over the world, and our Mayor was like, well, I had to go to Sitka and I had to go to these other places.

And it's because we love it here. We love it here. My mom came here from Ohio in 1965. She never left because she loved it here.

And so, you know, talking about resilience and community resilience and climate-ready fisheries -- climate-ready fisheries to me means making sure that people can fish here in 100 years; you know, that we're not just dependent on Safeway and Walmart and Seattle for our food -- like really.

So, yes, thank you so much. Thank you all for coming and your generosity in your hearts and your minds.

Chair Runnebaum: Yes, thank you, Natasha. And I really love how the panels turned into a family affair yesterday.

It was with Brett and your son, and then, the surprise visit of your dad in that presentation. So, thank you.

Brett's going to pass.

(Laughter.)

Chair Runnebaum: That's a pretty tough act to follow.

(Laughter.)

Chair Runnebaum: So, I think what I'm going to leave everybody with, and then, ask a favor of the Subcommittee Chairs, is, for the discussion

tomorrow, I would like us to think of, what do we do with what we have seen and heard, and how does it fit into our Subcommittee work plans or what our Subcommittee work plans need to turn into?

So, let's think about we're going to have a discussion tomorrow. I think it's going to be a little bit different type of discussion, and I'm going to ask the Subcommittee Chairs to please come chat with me and Katie and Heidi directly following this, so we can come up with a plan that we have a fluid and natural conversation, but not one that is out of control with all of us trying to do over each other.

So, thank you, Amy, for raising an idea to have -- oh, don't hide. No, don't hide. I think we're going to have to adjust your recommendation of going into Subcommittees because it is a public meeting, but we'll figure out a way to make this a more fluid conversation, so that we can step out of here feeling like we have some action and direction for the Subcommittees.

So, think about it. What actions can we take?

I just want to offer there's a few ideas that have really come up today, and even yesterday.

And the first one is data and information used in decision-making, and this sort of centers on the co-production of knowledge and cooperative research that Clay and Tom both mentioned.

There's this idea of best available science that seems to be really resonating with the recreational fishing members around this table.

And then, there's some survey and survey changes that Bob mentioned in detail -- in passing, actually, and he and I had a chance to have a conversation about.

And then, there's the idea of community well-being as another bucket of work or another topic. Excuse me. And that includes ideas of kind of access or

support to communities, like the Navigator Program that Natasha mentioned, for federal programs and funding.

Adaptation, strategies, and community planning is important under that, and workforce development and support and education kind of all seem to be falling under there as well.

And then, I think the Commerce Subcommittee fighting for seafood, and that includes things like interagency coordination in the seafood industry and promotion of U.S. seafood.

And I think, Jim, the idea of stewardship of the resources, I know that's not what you were really trying to get at with your federal permit, but stewardship seems to be something that's coming up a lot, too. And I don't know exactly how that all fits with all of this, but I can clearly see there's a lot of interest from this group. There's a lot of direction that I think we have started to build a foundation for. And so, let's think about how we can take action within the Subcommittees.

So, thank you.

So, Subcommittee Chairs, please come with me.

Katie is going to give us two updates.

Ms. Zanowicz: Two quick updates.

So, we have a social tonight from 5:30 to 7:00 at the Kodiak Island Brewing and Still, which is right next to Nuniaq. So, please join.

And then, tomorrow, we have the tour of the two processors. We have Kodiak Island Wild Source, and then, Ocean Beauty Seafoods. And so, just please wear closed-toed, comfortable shoes. They will provide any hairnets or other things that we may need.

And then, I will be sending you all an email with the Subcommittee work plans to help inform your

discussion tomorrow. If you have time tonight before the discussion, I would recommend just taking a look, at least for Subcommittee members, just to reacquaint yourselves with your work plan, because I think that will help the discussion tomorrow.

And I think that's it.

Adjourn

Chair Runnebaum: Okay. Thank you all for your patience and flexibility. We'll maybe see you later at the brewery.

Have a good evening. Thank you. See you tomorrow.

(Whereupon, the above-entitled matter adjourned at 4:54 p.m., to reconvene at 8:30 a.m., Thursday, September 12, 2024.)