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NATIONAL MARINE FISHERIES SERVICE (NMFS)

ATLANTIC HIGHLY MIGRATORY SPECIES ADVISORY PANEL

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HMS RECREATIONAL ROUNDTABLE: LPS WORKSHOP
AND HMS LISTENING SESSION

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FRIDAY
MAY 28, 2021

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The Roundtable convened via webinar at 9:00 a.m. EDT, Bennett Brooks, facilitating.

PRESENT

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PETE COOPER, Branch Chief, Atlantic Highly Migratory Species Management Division
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BRAD MCHALE, Northeast Branch Chief, HMS Recreational Coordinator, Atlantic Highly Migratory Species Management Division
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JOHN WALTER, Deputy Director of Science and Council Services, Southeast Fisheries Science Center

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

9:01 a.m.

MR. BROOKS: Okay, it is 9:00. Randy, I think I'm going to hand it off to you to say a really fast hello and then I'll orient us to the day.

MR. BLANKINSHIP: Sure, thanks, Bennett. Good morning, everybody. Welcome to, for some of you it will be day four of a series of meetings.

We have had the HMS Advisory Panel Meeting over the last three days, and then today we're continuing with many of the 18 members, but also we're adding in the public meeting all day today for this workshop on the large pelagic survey and the recreational roundtable for, recreational fisheries roundtable for HMS fisheries this afternoon, and that's what we'll conclude with.

We're really happy that you're all here. Thank you, for those of you that have been in the long meetings thus far this week, I thank you for continuing on with us today and we're looking forward to a good discussion.

I'll have some other comments in a moment, but good morning and thanks for being here. I'll turn it back to you, Bennett.

MR. BROOKS: Great. Thanks, Randy. So just a quick orientation to the day and ground rules.

We have a full day. We will be going until 3:30 today, so settle in. But we will be getting a long lunch break from 11:30 to 1:00, again just because we know people have other work to attend to and also staring at a computer for six and half hours straight is not the healthiest thing in the world to do. So count on that.

This morning, we will hear from the large pelagic survey team. And we'll really be focusing on the large pelagic workshop this morning.

Warning, it is -- there's a lot of material to walk through and we'll spend about an hour or an hour and a quarter letting the LPS team kind of share all of their presentation with us.

And then we'll have about an hour or so, maybe a little bit less, maybe 45 minutes,

for questions.

We're really going to focus that first set of questions in the morning around clarifying questions, understanding what the team presented, making sure we're all sort of comfortable with it, and it makes sense.

So we'll really ask you all to focus on clarifying questions. After lunch, we'll come back -- we'll come back to the LPS conversation. That will be a much more open discussion.

If there are additional clarifying questions, great. If folks want to have, sort of think more broadly about the LPS, great. We'll sort of take that conversation where it goes.

And then at around 2:00 in the afternoon, we'll shift and we'll sort of set aside the LPS workshop and shift much more to an HMS listening session focused on recreational issues.

And this is an opportunity really for those of you on this call to share your thoughts, to share your perspectives, with the agency.

It's not designed to be a conversation where we focus in and sort of come up with answers. It's much more about what's on your mind, what are the issues you're thinking about, what are the issues you think that should be rolling forward that the agency should be thinking about?

And then we'll wrap up and adjourn around 3:30.

As far as ground rules, let me just reemphasize what Randy said. This is not HMS AP meeting.

This is not an advisory panel meeting. This is an open workshop. So whether you are a member of the advisory panel or a member of the public, everyone here is sort of with equal standing in this conversation.

And so there's no sort of group that is given sort of first bit at the apple, it's just -- it's just everybody.

And so I will manage the conversation that way.

My main guidance to everyone is just please contribute and share time. Particularly, I know with the LPS there's going to be a lot of questions.

I'm going to really ask people to not sort of come in with a list of eight questions, because that will just wind up cannibalizing everyone else's time.

So think about, what are the two questions that are most critical to you? Get them out there and then we'll work our way through the queue and I'll be happy to circle back to folks if we have time.

Stay focused on the topic today. It's about recreational fishing. The morning and the early afternoon about the LPS, then we go into the roundtable.

Please, please, please, keep your focus, keep your comments focused on that, and as I said, really today, in particular the late afternoon, it's more about raising issues and resolving them.

In terms of some ground rules for the virtual world, I know for the AP members, you've been in this for the last four days, but we do have people who haven't been, so bear with me

Everyone will be muted unless and until sort of you're invited into the conversation. When you want to contribute, again, just raise a virtual hand, which you will find if you open up the participant tab.

You'll see a little hand like this. Just click on it, and that will -- that will get you into the queue.

If you want to use -- if that -- if you can't find that, at the bottom of your screen on the right-hand side, you'll see a little chat button, which has a little quote bubble.

If you pop on that, you can also say, hey, I can't find my hand but I want to get into the conversation.

You can also put a message in there. And my general guidance is use the chat sparingly. It's a great -- it's a great tool to say, hey, I totally agree with what that person just said.

It's a wonderful way for the agency to see that kind of thing. Or there's some kind of thrill you want to share.

What I want to avoid is having a whole separate conversation in the chat as people are presenting.

It's just, it's hard to listen and stay focused if you're busy reading and writing in a chat. So please stay with me on that if you can.

Again, I'll run this queue as if I were in a room and people's hands are going up. I will deviate from that, sort of bring in new voices, just so we get a good diversity of folks who are in the mix.

I think that's all I want to say now. Unless there are any questions, I will hand it back to you, Randy, to do a more formal welcome and overview of our game plan for today.

MR. BLANKINSHIP: Sure. So once again, thanks for being with us, everybody. For those who have joined in the last few minutes, welcome.

We're glad that you're here for this large pelagic survey workshop and recreational roundtable.

I just have a few kind of intro comments to go through before I'll turn it over to Russ Dunn, who is our National Policy Advisor for Recreational Fisheries.

So to introduce myself, for those of you that don't know me, I'm Randy Blankinship, the Chief of Atlantic Highly Migratory Species Management Division, and working in NOAA Fisheries within the Department of Commerce.

And folks from HMS Management Division and from other offices are going to be quite involved in presenting today.

The first presentations are going to be from the Office of Science and Technology within NOAA Fisheries.

But later on today and through the day, we will be hearing from, and they have their videos on right now, Brad McHale and Cliff Hutt.

Many of you know them. They are our Recreational Coordinators. Both of them are kind of north in the area, and then also mid-Atlantic and south areas, and have a lot of expertise along those lines.

And they're very involved certainly in our HMS Management Regimes, not only on the recreational side but the commercial as well, as well as economics and social science.

They're very broad in their expertise

and really are assets.

At the outset here, I want to say what a lot of you know, which is Atlantic HMS fisheries, both recreational and commercial, are some of the most valuable, exciting, intriguing, and popular fisheries around.

They are extremely valuable from a commercial standpoint, with folks making a living off of them, often times very lucrative fisheries, and valuable to the United States in supplying food for our population and enjoyment for folks when they are to eat in some of the various restaurants and having excellent fish to be able to enjoy.

And on the recreational side of things, it is, in the United States, one of the -- one of the nicest things that we have going is the successful management of fisheries to allow for a vibrant recreational fishery that allows for people to not only enjoy recreation and the sport of fishing, but also to go out and fish for food themselves to supply a food supply that they get to bring home and then -- and then eat themselves.

This successful management of recreational fisheries is also attractive for folks from other places when they come in to the United States from other places and from international origins to come in and fish and enjoy our recreational fisheries as well, through charters and those kind of things.

Those are a big part of many of our communities, our coastal communities, is the vibrant fisheries that bring in and generate a lot of revenue in a lot of different ways.

So it's support our coastal communities both on the commercial side and from the recreational side by supporting the recreation itself.

Participation in our HMS Fisheries in the United States is broad, from Maine to Texas the U.S. Caribbean, as well as U.S.-flagged vessels on the high seas.

And that means that the stakeholders in these fisheries are diverse, as well, from recreational stakeholders, commercial stakeholders, environmental groups, and interests from that standpoint, as well as others, that can

include academia that plays a role in helping us to better understand those fisheries, and then the coastal communities that rely upon these fisheries as well.

Today we're going to be spending some time specifically discussing recreational fisheries data collection, and specifically within that the large pelagic survey and give some air time to discuss HMS recreational fisheries in general.

This initiative, well, this day that we're spending today, discussing these issues, is part of an overall national initiative of recreational roundtable discussions that are happening in the various regions around the country.

And so we're doing that for Atlantic HMS along with those others. It is not something really new.

We've done this in years past where we've had a round of recreational roundtable discussions over the past few years.

It is the case that even though we're talking about and discussing recreational fisheries, there's a lot of interest in the various stakeholders.

As you might note, for some of you that are familiar with the backgrounds of folks that are participating, that there is a broad interest, just like the diverse interests that I -- that I talked about just a moment ago.

And a big part of that is related to the data that is collected from recreational fisheries, and there's a lot of interest from commercial and environmental groups and academia in how that data, how those data are collected and then how they funnel into and are used by the agency and by other groups, including international work through ICCAT and through the ICCAT scientific body, SCRS, in conducting stock assessments for those species that are managed by ICCAT, as well as our domestic assessments.

And so this recreational data is very important for some of those assessments. And that's why there's great interest in this particular workshop for the large pelagic survey.

And I think that that will -- you'll see that in the nature of the questions that come

in and the discussion we have.

The large pelagic survey certainly has gotten a lot of attention over the last several months, particularly related to a couple of -- the management of a couple different species, western bluefin tuna stock as well as the North Atlantic stock of mako, and that interest we'll continue today.

We had a -- there was a workshop conducted several months ago on a large pelagic survey, and this discussion was requested again to continue to help inform people about the large pelagic survey, to answer questions, and then also to gain input and thoughts about it.

So we're looking forward to that discussion. We're glad that we're able to have it. We're glad that you all are able to join us today and participate in it.

With that, that concludes my opening comments. I want to take a moment to introduce Russ Dunn for his opening comments.

Russ Dunn, once again, is the National Policy Advisory for Recreational Fisheries. He's been with the agency for several years. I don't actually know how many.

But he started out his federal employment service with NOAA Fisheries actually in the Atlantic Highly Migratory Species Management Division.

So he has close ties to the species and the fisheries that we will be discussing today. We're really glad to have him with us. So, Russ, I'll turn it over to you.

MR. DUNN: Thanks, Randy. I am duly impressed but not surprised that we are exactly on time to the minute with you running the meetings.

So, yes, so, thanks, Randy. So as Randy said, I'm Russ Dunn. I started out my career, depending on how you look at it, either not long enough ago to retire or too long from other perspectives.

But, yes, 19 years I've been with NOAA now. So, thanks for the opportunity to join you all today.

It has been 11 years since I left HMS for the current position that I hold now, and it still feels sort of like coming home, so I

appreciate it.

There is a lot happening out there right now, whether it's HMS or other fisheries that we're looking at as we fortunately come out of COVID.

We've got a new administration with new priorities that will undoubtedly impact fisheries across the country, including HMS at some level, both rec and commercial.

I think an obvious one there for the new administration is climate. I'm sure you all have talked about that at this meeting to some depth.

Anglers, as you know better than most of us, are really on the frontlines of seeing climate change, the effects in the water each day.

We're seeing, you're seeing sea surface temps change, rain shift, changes in migration patterns, range expansion, increase.

Down south, we're seeing, well, I'm down in Sarasota, Florida, where we've seen increased harmful algal blooms.

And so climate is something that is going to remain with us, climate change as a focus for the agency throughout this administration.

I don't think any of us at this point really knows what the intersection with fisheries and climate, and in my case particularly, recreational fisheries, will be.

We're going to have to explore that really together to figure out what does that mean? How do we -- how do we build more climate-resilient fisheries? And what exactly does that phrase mean?

There are other emerging issues, emerging ocean uses, that I think we all need to pay attention to, in particular the rec community.

And those things are obvious to some of you. I know Mike Pierdinock and other are dealing with wind power already.

Clearly, that is going to spread across the country, or it is. There are lease blocks already in place up and down the east coast and projects in the wings waiting to move forward.

That is something that, from the rec perspective, I'm concerned about the strength of the rec voice at the table in that.

That's another one where, while we are working together, strength in the voice of the rec community in those discussions, you all, too, are going to have to be proactive in entering those discussions.

Aquaculture is another similar issue, which is advancing. As there's substantial interest in increasing marine aquaculture, it is another competing use for ocean space, and we've got to find a way to allow both activities, fishing as well, traditional fishing as well as aquaculture as that moves forward.

To that, and to try and sort of stay ahead of the curve on engagement with that, we, my team has partnered up with the Office of Aquaculture this winter, and we held two or three workshops or informational sessions with the Office of Aquaculture and opened up to the rec community, really just to begin to understand what are the priorities or the concerns of the rec community around that issue.

Not surprisingly, we immediately heard access, opportunity, water quality issues, concerns about disease spreading, how that impacts foraged fish, things like that.

So that is an issue that is really at the beginning of that, and we need to be able to stay engaged on that to make sure that we can coexist here.

Another issue broadly that I think is another emerging ocean use, if you will, is the 30x30 Initiative under the President's executive order.

I wouldn't normally put that under ocean uses, but it goes to the same concept, how do we coexist depending on how 30x30 is executed with now wind power, aquaculture, conservation.

We need to make sure that fishermen retain their opportunity and access to get out there on the water.

Looking a little more fine scale, I know that electronic reporting is an issue for anglers around the country, both private and for-hire sectors.

And I know that there's challenges

with duplicative or overlapping reporting requirements.

HMS is working on that with the other regions to try to minimize those challenges and ACCSP.

We've also got the MAFAC ER Task force. MAFAC, I'm sure most of you know, is the Marine Fisheries Advisory Committee.

It's NOAA's FACA committee. We just met with them for the past three days while you've been in this meeting. I've been in that meeting.

They have stood up an electronic reporting task force who is -- that is comprised of fishermen, app developers, statisticians, et cetera, to try and provide information that can really form the basis of a roadmap for advancing ER in a -- in a thoughtful and productive way.

Depredation I know is another issue out there for not just HMS but everybody. Really, it is across the country, whether it's sharks, porpoises, dolphins, sea lions, seals, killer whales, it is impacting fisheries across the country.

There are certainly laws in place that are making responding challenging and limiting the options of anglers and NOAA, the councils, about how we can respond.

So it's an issue that we need to look at sort of broadly. And unfortunately, with those various species involved, there will be no one-size-fits-all.

So I think it's going to be a difficult issue to tackle, but it's clearly one that's important to anglers and commercial fishermen to address.

And then, the last sort of fine scale issue for HMS, out of personal interest, the billfish 250 limit.

I know how close we came this year. There was a little hiccup with some QA/QC, but even regardless of that, my recollection is we're in the sort of upper 230s or mid-230s.

I have sort of a special interest in that because I was there in the -- at the meeting in Morocco when that was established. So I'm sort of following that.

And I've spoken with Randy and I think

he is well aware and on top of the concept of trying to maybe expand NOAA's ability to soften our response a little bit.

As this came up this year, I think it became apparent we have a pretty blunt stick to respond, and I think there's interest in trying to broaden out our options on that.

So I look forward to seeing how that works out.

Data is another big issue. I know, obviously, you're going to talk a lot about that with the LPS discussion today, so I'll leave that to the true experts.

And then shift a little bit towards this afternoon with -- part of the reason I am here is -- today is because we're coming up on the next summit, National Rec Fish Summit in 2022.

We're again partnering up with our previous partner, the Atlantic States Marine Fisheries Commission, to execute this.

Right now, it is planned, we just locked in the hotel for March 29 and 30 in 2022. Excuse me.

And we are, as Randy said, right now in the midst of conducting a series of virtual discussions like this one to solicit inputs from the public on what should we cover.

I'll go into that a little bit more this afternoon. There's dozens of issues that have been put in, but as we get there later, I'll give you sort of a quick preview of some of the topics that have floated to the top, if you will, in terms of most frequently mentioned.

But we are excited about the next summit. It's a -- it's a heavy lift, but we really enjoy doing it, and it gives us really guidance for about a four-year period of where should we focus as an agency.

So with that, I will turn it back over to Randy and Bennett, and say thank you in advance for being here.

MR. BROOKS: Great, thanks, Russ, so much for being here and those comments. At this point, I want to hand it off to John Foster and just really dive right into the large pelagic survey presentation.

I will just remind folks, John and his

team have a -- have a fairly good amount of material to run through.

So we'll just ask them to go straight until 10:30, and then we'll take a break and then we'll come back from that break and that will be when we'll open it back up to you all for clarifying questions.

So as we're going through this, please take note if there's a specific question you have on a slide, it would probably be really helpful if you just jot down the slide number so that we can sort of make sure we're hitting the -- hitting the questions that you all have.

But with that, John, let me hand it off to you to introduce your team and walk us through.

MR. FOSTER: Okay, great. Thanks, Bennett. Let me start sharing my screen and the presentation. Perfect. Okay, yes, looks like it's up.

All right. So, in the interest of time, I'll just say a very quick but sincere thanks to Randy and Atlantic HMS Management Division for coordinating today with the HMS Advisory Panel meeting.

And again, thanks to all the participants for either hanging in for another day at the end of the meeting, the AP meeting, or for joining us today for this topic.

So in terms of what we will be covering today, I'll run through a quick introduction of the LPS team and sort of where LPS lives in terms of NOAA Fisheries and HMS tasks.

I will then also cover the current survey design and estimation methods for the large pelagic survey, and then I will hand off to Daemian Schreiber for the third topic, Operations and Estimates, and then finally, Yong-Woo Lee will cover an ongoing redesign project that we have for the LPS.

So at NOAA Fisheries Office of Science Technology, the LPS team has four members, Dr. Yong-Woo Lee, Daemian Schreiber, Tony Kaufman, and myself.

Yong-Woo came to us from Northwest Pacific Fisheries Science Center where he handled a number of assessments and quantitative analytic

tasks.

Within the LPS team, he is the team lead, team leader. He also is our task manager for operations and the LPS statistician.

Daemian Schreiber, many of you may recognize that name. He comes to us from Quantech, who has been the primary contractor for both the LPS as well as the for-hire survey, the FHS, on the Atlantic coast.

He served as the program manager there for many years. Very familiar with the operations side of it, and he serves now with us as the Operations Coordinator for LPS as well as for the for-hire survey.

Tony Kaufman also came to us from Quantech. He is a data analyst and statistical programmer for us.

He is heavily involved in developing parts of our redesign project, which we'll talk more about later.

And then finally, I am on the team as the Chief for the Recreational Fisheries Statistics Branch in the Office of Science and Technology.

And when I first started, I was also the LPS statistician and have since moved on, but still stay involved with the team.

Okay, in terms of where the LPS lives within NOAA Fisheries, again it is within the Office of Science and Technology, within my branch.

We also do a few other HMS-related programs. We administer the Catch Card programs that exist in Maryland and North Carolina as well as participate in the quarterly billfish accounting, where we provide analytic and sort of tabulation support for that.

You're very familiar with the management and regulatory tasks within the agency all occurring within the Office of Sustainable Fisheries, Atlantic HMS Management Division.

And then the assessment and research tasks, generally housed within the Southeast Fisheries Science Center in their Highly Migratory Species Branch, among other units within the center.

And they, of course, handle the stock assessments, they calculate indices of abundance,

and do research related to population dynamics and life history.

Okay, so that now will -- that was the introduction. We'll now shift gears to cover survey design and estimation methods.

This will be fairly detailed but still at a somewhat high overview level.

So the primary role of the LPS is to provide estimates of catch and effort for highly migratory species and other large pelagics for the recreational fisheries that are occurring off of mid-Atlantic and North Atlantic regions in the U.S., and specifically covering June through October.

It is a complex design overall that uses complemented surveys, and essentially that just means there are separate surveys that provide estimates for different components that go into estimating overall catch and effort for these fisheries.

The overall design is specialized to cover Atlantic bluefin tuna, as well as other related uncommon or pulse HMS fisheries.

And of course the estimates and the data are used in stock assessments as well as management tasks.

Just a bit more. The surveys are actually performed in part under the authority from the Atlantic Tunas Convention Act.

It relies heavily on the HMS vessel permits from a couple of different categories that we'll speak to more in a few minutes which are required, and as part of the permit, reporting or compliance with the survey requests are mandatory.

And that's a huge quality feature for the survey. It helps keep our response rates, compliance rates high, ensuring that we don't have errors introduced from things like high nonresponse rates or high or noncompliance rates.

Of course, the estimates are used to report U.S., in part, U.S. landings to ICCAT. And as I mentioned earlier, this will be detailed but still at a fairly high level.

So we have very, very complete detailed technical documentation that will cover all aspects of the LPS.

And we have a link provided in the

presentation. And once that's posted, if the link is not working, we will certainly make that live URL link available as well.

Okay, so now getting into some of the details. In terms of the species covered by the large pelagic survey, of course Atlantic bluefin tuna, as I mentioned, is sort of a key priority species.

Not only do we cover that species, but we provide more detail on bluefin tuna in terms of estimates by size class.

We also cover the BAYS tunas, of course, billfish and swordfish species, the coastal migratory shark species are covered as well, as well as a few other large pelagics, such as dolphin, greater amberjack, and wahoo.

It's a seasonal survey and regional in that it doesn't cover all Atlantic states or the entire year.

The coverage includes both private and charter boats, ten states ranging from Maine through Virginia, so the mid-Atlantic and New England or North Atlantic regions, and the months of June through October.

And again, this is tailored to cover sort of the peak of the bluefin tuna as well as related HMS Fisheries in these two regions or in this broader region.

In terms of the survey, the individual components within the overall LPS, there is a telephone survey, the LPTS.

That is the primary source of effort information for estimating the total number of vessel trips.

There are separate surveys administered to private boat anglers separate from the charter sector, and I'll speak more to that in a minute.

The other major component is an intercept survey, the LPIS. So that's a dockside survey with captains, vessel operators, at the end of their fishing trips, at the marina, boat ramp, whatever fishing access site they have returned to at the end of their trip.

That survey provides us the catch rate information, average catch per trip by species and different catch types, as well as very detailed trip characteristics.

And I'll speak to that more in a separate slide.

The third component of the LPS is a biological sampling component. This supports assessment and life history and population dynamic studies, but it's opportunistic in terms of how the data are collected, meaning that it doesn't have sort of a standardized design.

And so for that primary reason, we don't use that data in estimating catch or effort, but it is providing critical information that's used in assessments in terms of things like age and length keys as well as some of the life history and population dynamics studies you may be aware of that are, again, run out of the Southeast Fisheries Science Center, in terms of delineating stocks based on genetic information, things like that.

Okay, so moving now to starting with the telephone survey, again, which provides the effort information primarily, and I'll start with the private boat survey.

So again, it's estimating numbers of vessel trips for the private boat mode. It's a list frame telephone survey, and in this case, that means we use the HMS permit list for both the angling and general category permits.

That comprises the frame that we then sample from. Again, because of a requirement from the permit, reporting is mandatory.

And the sampling is stratified by state and month and a two-week reference period, which essentially means the captains are asked to report their trips for a specific two-week period of time.

Again, it covers Maine through Virginia and June through October. A little additional detail there, we don't actually start sampling in New Hampshire or Maine, the two northernmost states, until July, again, based on the timing of when the fisheries season really gets going there.

A key aspect is that we send advanced notification letters through the surveys, so captains are notified in advance of when they'll be asked to report for the selected vessel.

As well, in terms of the calling, the selected vessels, captains for the selected

vessels, are called in the week immediately prior, or, excuse me, immediately following the referenced, the two-week referenced period.

So while the trips are still fresh in their minds, we make those telephone calls and ask them for a report on those trips from the prior two weeks.

This is a telephone interview, so there's a live interviewer asking questions to captains.

They are entering the information directly into, recording it electronically into what's called a CATI.

That's just a computer assistant telephone interviewing. Basically just means they're using a computer to record the information as the interview progresses.

It's what's known as a trip profile format or questionnaire format, which essentially means that captains are asked about their most recent trip and then they work backwards through time, again, for the trips that occurred within the most recent two weeks.

And there's detailed information collected throughout each trip. These are just some examples.

So, what site did the trip return to? What were the target species for the trip? Was it a trip associated with a tournament or not?

And then there's catch information collected on a very limited number of species, again, which generally don't have high bag limits, so it's easier to remember the numbers of individual fish that were caught.

And again, these are just for the LPS trips. These are not for all types of fishing that they might be doing.

Okay, so shifting gears now to the phone survey for the charter boats to generate their effort estimates.

Again, it's still in terms of numbers of vessel trips, but here it's just for the charter boats.

It is separate from the private because it's conducted as an add-on or a component within the more general for-hire survey, which many of you may be familiar with.

This is a telephone survey that we

conduct to estimate for the general for-hire sector charter boats, as well as head boats.

So this is a subset within that overall general for-hire sampling. An again, that's a list frame telephone survey of known charter vessels.

And we're sampling specifically from the vessels that have an identified HMS charter boat permit within that larger group of vessels.

It's very similar to the private side in terms of how it's stratified with one key difference.

Instead of the two-week reference period, it is shortened down to a one-week reference period because charter captains are generally taking quite a bit more trips within any given time period, and so we cut that reporting period down to one week so there's not so many trips to try to recall.

Again, it's covering Maine through Virginia, June through October. We send advanced letters as well so captains know when their vessels have been selected, the week that we'll be asking about.

And again, all of the calls are done within the week following the reference period week.

So again, shortening down that window of time that folks have to remember the trips.

Many captains are recording these trips in a log anyway, so they have the information but this still just helps keep it fresh as possible in their minds.

So to give some sense of the scale of these fisheries, or the number of permits for the -- that the surveys are based on, these two figures give numbers of permits by states covered by the LPS for both the private and charter modes.

In general, the private side is somewhere between 10,000 to 15,000 permits a year across all of these.

On the charter side, it's closer to 2,000 total permits across these states, and that's typical in recent years.

Looking quickly at sample sizes and response rates for the telephone surveys, here we're using 2019.

We conducted just a bit over 5,000 completed interviews with private boat captains and a little over 3,300 interviews with charter captains, again for the LPS add on component of the for-hire survey.

And response rates, just under 65 percent for the private boat captains, and just almost 60 percent for the charter -- the charter captains.

And again, for telephone surveys, these response rates are still quite high and boosted by the fact that reporting is required as a condition of the permit.

Okay, so shifting gears now to the LPIS, that's the intercept survey, the dockside survey component.

Again, this is primarily conducted to collect detailed catch and trip characteristic information.

It gives us, allows us to estimate catch rates, average catch per trip, by species and size class, in the case of bluefin, as well as disposition or catch type.

So that's things like landed fish versus released alive fish or discarded at sea, dead fish. That's what we mean by catch type of disposition.

As I've said before, it's a dockside survey of captains right as they have completed their trip and returned to whatever site they've ended the trip at.

And again, it is specific for large pelagic trips. It does not cover all types of recreational fishing. It's just for the species of interest here.

Again, the design is complex. It's stratified. It involves clustering. Sites are clustered together for a given sampling assignment.

And unequal selection probabilities, really that just means that we want to target the sampling to sites that will be more productive.

So sites that have higher activity rates for this type of fishing, we will visit those sites more often than we will go to sites that have less of this type of fishing.

We still want to cover all of the sites so that we're not introducing potential

systematic errors into the data, but we do need to keep the sampling efficient, so we go again go to sites where there's a higher chance of encountering these types of trips more frequently.

And then again, on stratification, we're covering Maine through Virginia, June through October, and the two private and charter boat modes.

So just to give a sense of what information we are collecting for folks that may not be familiar with the survey, there's two primary pieces of information.

Of course, we want to generate catch rates, so we need the counts of fish per vessel trip by species and catch type or disposition, but we also collect information on the vessel itself, state registration number, U.S. Coast Guard documentation number, the HMS permit.

If the vessel has a permit, we collect the category of the permit as well as the permit number.

The samplers actually have permit reference lists with them that they take into the field that help accurately identify if the vessel is on the permit frame or not.

And I'll speak to why that's important in just a couple slides.

But beyond that, again, detailed trip information, characterizing the effort for the trip, numbers of fishing lines.

How many anglers were fishing? How long were they fishing? How long was the trip? What were the target species?

Where were they fishing? What were the general methods used? Trolling, chunking, things like that.

Some environmental characteristics if they were recorded, water temperature, depth.

Generally, for this fishery, captains have that information. It helps them target specific species.

And if they do and they'll share it with us, we record it. And then observations on individual fish.

Overall length recorded for individual fish, if that's available. For sharks, we can -- we can collect sex information as well.

And remember, the LPBS is a separate component for more detailed biological information.

Okay, so for sample sizes and response rates for the intercept survey, again, in 2019 we conducted a little over 2,300 individual sampling assignments.

That's a sampler, and interviewer going out in the field, visiting specific sites on a specific date.

That resulted in about 2,400 completed intercepts with private vessels, private angler vessel trips, and a little over 1,600 for the charter boat, with a very high response rate of just about 98 percent, again, because reporting is required as part of the permit.

That greatly incentivizes captains to participate in the survey.

Just a quick, a little bit more detail on the biological sampling. Again, this is to collect hard parts, otoliths, dorsal spines for age and growth work and age link key work, muscle tissues, gonad samples for, again, life history, population dynamic research.

It's opportunistic, as I mentioned earlier. We conduct about -- we target about 150 assignments per year.

Again, that's within the LPS range. So June through October and Virginia through Maine.

Its focus is bluefin tuna, but we do collect information on the other species, yellowfin tuna, the other BAYS as well.

And the samples are sent to the Panama City, Florida, lab within the science center for processing.

MR. BROOKS: And John, just a heads up here, you're about three, four minutes left in your 20.

MR. FOSTER: Okay, that's good. We're getting close. And let me just make sure I know exactly how close. Okay, I've got three slides left.

Okay, so quickly on the effort estimation, the way this works with the telephone survey data, again, it's done separately for private boats compared, and charter boats.

So you essentially, with the data that

we collect over the phone, we can calculate an average number of LPS trips taken per vessel.

We then multiply that by the total number of vessels on the frame, and that gives us the total number of trips, again, separately for private boat compared to charter boat.

That's just limited, though to boats that are on the frame, and so there can be boats off the frame and we have to account for that as well. And I'll speak to that in a separate slide here.

For the intercept survey, again, catch rates are one of the primary pieces of information that we calculate from the intercept survey data.

Again, this is done separately by state area, month, and fishing mode. State area is, in some cases we combine two states. For example, Connecticut, Rhode Island are combined.

In other cases, we end up splitting a state. So New Jersey is split into north and south and it aligns with some management zone delineations.

Again, separately by species, and then bluefin tuna, we do it separately by size class and again, the different dispositions, kept or landed fish, released live, discarded dead, within those separate dispositions.

We also, as I mentioned, we need to correct for any effort that's not covered by the phone survey frames.

So that would be vessels that either don't have the permit, they're targeting species that don't need a permit but are within the LPS grouping of species, or they may have gotten their permit so recently that it was after we did a pull from the permit database to create the frame.

You can buy it the same day you take your first trip. And we need to account for all of those types of trips.

So this information comes from the intercept survey, as well, again, with those detailed vessel identification fields that we collect.

All right. This is the last slide in this section. Just to sort of schematically put it, put the estimation all together.

So again, with the LPTS, that's the phone survey, that's our primary source of effort, vessel trip information.

We do use some of the information from the intercept survey to adjust for those off frame trips.

So again, for example, in the intercept survey, extreme example, if half the trips that we see on the intercept survey for a given state and month don't have the HMS permit, that's not realistic, but that just makes the math easy, if half of the trips didn't have the permit, then we would take our LPTS effort estimate and double it to account for the fact that half the trips that we saw on the intercept survey didn't have the permit.

That's just the flip of that fraction. The intercept survey, again, is the primary source for the catch rate.

That's for average catch per trip. We multiply those pieces together, total number of trips, average catch per trip, and that gives us our total catch estimates.

And again, the link is provided for much more detailed information that we included in a more general document.

Okay, and that is the end of the section. Again, I apologize I had to go through that so quickly.

And please, if you have questions, I hope that you were able to note them, and we'll have plenty of time to get to those, anything I didn't cover in detail, at the end of the presentation.

And with that, Bennett, I think I will, I can hand it back to you.

MR. BROOKS: Okay. Let's just hand it straight over to Daemian Schreiber to talk about operations and estimate production.

We'll just keep that going. And again, for everyone who's listening here, just jot down any questions you might have.

MR. SCHREIBER: Hi, everybody, I want to make sure you can hear me okay.

MR. BROOKS: We can hear you perfectly, Daemian.

MR. SCHREIBER: Great.

MR. BROOKS: If you could just bring

up your slides.
MR. SCHREIBER: That's the wrong one there, isn't it?
MR. BROOKS: It's right now on half the screen.
MR. SCHREIBER: Okay. Let's see. Is that better?
MR. BROOKS: Yep.
MR. SCHREIBER: Okay.
MR. BROOKS: Yep.
MR. SCHREIBER: So, yes, thank you, everyone, for joining us today and thanks again for the privilege to explain some of the intricacies of the large pelagic survey operations and the production of estimates from the survey.
I'll be showing you some examples of the public queries that can be done on the data to view the estimates in a -- in a graphical manner.
But there, I should point out, are also many tables of data available and raw data as well.
So first of all, a brief overview of the annual operations for the LPS. As John mentioned, a contractor conducts the intercept portion of the survey as well as the telephone portion for the private LPTS, the survey for angling and general category HMS permit holders.
And the ACCSB and state partners are conducting the for-hire survey and the add-on for the LPTS during June through October.
This slide really highlights more of the LPIS operations. Just so you know, at the end of each year the contractor goes back through the data and evaluates field interviewer performance and decides who they want to invite back in the coming year.
They also plan for their recruiting in that time period around April. And it's around that time when a comprehensive site register review is conducted to evaluate the pressures which are used in the draw.
John mentioned sampling locations with prior productivity, more fishing activity.
Essentially, it's the way that the assignments are drawn so that they can be productive.

And the survey materials are also reviewed. So we look at the questionnaires, the questions specifically, the layout, how quickly the interviewers are able to get through the interview to try to reduce the burden on respondents while still obtaining all of the information that we need for the survey.

And for planning purposes, essentially, there is a kickoff meeting with the contractor that takes place every year in April.

In May, the contractor conducts the training for the field interviewers. And that training takes course over a couple of days.

There's a fish identification test. They are shown pictures of species to identify.

And then they, if they pass the test, they are then trained to conduct the survey.

And that includes a full review of the procedures, manual, and the protocols for conducting the survey.

Now, when sampling actually begins, or is conducted, June through October, there are a lot of other moving parts.

I mentioned the site register at the -- at the beginning of the year, but each month of sampling is drawn separately.

And there are monthly site register updates. And to go along with those monthly sample draws and monthly assignment activities, they include scheduling, monitoring the results of those assignments, tallying the number of interviews, responding to or providing information on refusals, even though they are relatively few and compliance is high.

And with that, with those activities, there are other activities that we're doing at NOAA, reviewing the sample before the interviewers are scheduled, evaluating the draw to ensure temporal coverage throughout the month, that the clusters of sites are being drawn in proportion to the pressures that they have, and then reviewing the schedule that's delivered to us, and each week during the conduct of the survey, meeting with the contractor for updates and reviewing reports that cumulatively for the month put a good -- put the survey in perspective for us and allow us to plan and/or react if there are problems in the field, like if an interviewer

is not allowed at a site for a particular reason or an area of the site is what I'm getting at.

So also during those months, the contractor is conducting unannounced quality control field visits on the interviewers and following up on the telephone with respondents to ensure not only that they were interviewed that day but also that the -- that the interviewer asked to see any available catch, to measure that catch if it's available for measurement, and that the interviewer was courteous and professional.

So there is a preliminary data review that also takes place at the end of each month after the data is delivered.

So we get the June data at the end of July. So there's roughly a three-week period after the end of the month that the contractor is processing the data using error tracking programs provided by NOAA.

And then they deliver the data to NOAA and we check it again. And I should just point out that there's a lot of back and forth if there are any errors flagged between the contractor and the interviewers and then between NOAA and the contractor, who then sometimes have to go back to the interviewers again for those -- for those data processing or cleaning purposes.

And so we have very high confidence that the data has undergone a thorough QA/QC process.

I shared also that there's a mid-season data review meeting where the field supervisors attend with NOAA and the contractor to go over raw data, fish dumps, we call them.

They're essentially less fish by species and their length, frequencies, we also look at the preliminary estimates, monthly estimates.

So after the mid-season data review, there is also a final data review at the end of the year in December, and then final estimates are produced later on in April. Sorry.

MR. BROOKS: Daemian, I wanted -- this is Bennett. I just wanted to let you know, I'm not sure how you're planning to move through these, but you are about at the halfway mark for time.

MR. SCHREIBER: Okay, thanks.

MR. BROOKS: And I know you're on Slide 1, so --

MR. SCHREIBER: Yeah.

MR. BROOKS: Just flag it.

MR. SCHREIBER: There are a lot of activities that happen. So thanks, I'll move on. This slide just shows the location of the LPIS sites.

This slide shows a couple examples of boat ramp and a marina where the interviews are taking place.

The sites are clustered, as I mentioned, and most of the assignments take place in the late afternoon or early evening.

The graph on the right side of the slide shows the hour of the interview time. So you can see in general, these are mostly recreational trips or charter trips that are coming back in the late afternoon, starting around 3:00.

And the assignments last from two to eight hours.

Here we have a picture of an interviewer conducting a survey in Cape Anne Marina in Gloucester, Mass. That's a couple years ago.

And so they are dockside, interviewing the captain about their trips.

Again, here's another idea of -- or so you have an idea of the layout of insight of Rye, New Hampshire.

Not all sites offer this kind of visibility, but if the interviewer were to be at the dock, that's kind of blown up there, they can look out and see any boats coming into the harbor there and then watch where people go when they get off their boat to ask them about their fishing activity for the day.

And only the folks who are, who have returned from trips targeting the large pelagic species are interviewed for this survey. The rest are tallied.

As you know, there are several size classes of bluefin tuna. The majority of the -- of the fish that we see in the mid-Atlantic tend to be school to small medium, where in New England most fish are, with bluefin anyway, are commercial size class.

But not always. And in some years, there are runs of school size fish in that area in New England.

So again, the quality assurance activities that are in place involve interviewer training, making sure the interviewers know how to identify the species on site, that they are knowledgeable about the objectives of the survey, and understand on a basic level the design, and mostly, most importantly, that they follow procedures.

The telephone interviewers are experienced and trained on the survey, and they are supervised by remote screen viewing and listening in to calls periodically for quality control.

And as I mentioned, the dockside interviewers are surprised sometimes, but nevertheless, there's that follow-up, too, with the captains after the fact by phone.

So in data entry, the operator, there is an operator assistant or rather an optical character recognition assistant entry of forms.

That just means that there's a person who's viewing the screen and as a computer program captures the data, they're confirming or correcting what the computer program has read.

And I already mentioned the extensive data error checking programs and processes and data review meetings.

As a reviewer, the estimates are products for the telephone survey for effort by boat type, for each month, by each area, and the catch estimates are produced in a similar manner, including the catch type, fish that are kept, released dead, or released alive, or species, with bluefin, by size classes.

The query tools available online, so that the estimates that are produced can be viewed in tabular or graphical formats.

Quickly, I just want to go through some of the recent estimates. So you can see there was a big increase in 2020.

That's still in line with historical activity, the highest being most recent, I guess, year being back in 2007.

Both modes of activity effort were up in 2020. In August, you could query this

yourself, but charter activity was increased in Massachusetts and private was pretty stable in August year to year.

These are the annual bluefin tuna, all sizes, landings, for the last ten years. And you can see that they increased.

The colors correspond with the month of sampling. So you can see that fewer fish were harvested in October compared to the other months last year.

Again, this is another query by all size classes for all modes and all states. So the top one has large size class, followed my large medium, large school, school, small medium, and young school, excuse me, young school, being those fish that are under 27 inches curved fork length.

Occasionally, they are encountered by the survey.

These are the number of fish that were released alive in the same way. So you can see the young school are more often released alive.

In 2020, it was more than 1,500 young school fish. There are annual landings of yellowfin tuna available.

Again, these are estimates produced by combining the telephone and intercept survey data. And 2020 was a good year for yellowfin according to the data.

Dolphin go up and down in annual landings. And shortfin mako, you can see the act of regulation with the emergency rule being first placed in 2018.

And that is the end of my slides, so than you.

MR. BROOKS: Thank you, Daemian. And you stuck your landing on that, even finished a minute ahead of time for Yong-Woo. You get an extra minute.

Thanks. And again, to anyone who might have joined, we're walking through all the presentations.

We'll have one more, we'll then take a break, and we'll come back and get any of your clarifying questions.

So let's hand it off to Yong-Woo Lee who will talk to us about the LPS redesign project. Yong-Woo, are you there? There you

are.
MR. LEE: Okay.
MR. BROOKS: If you could just call up your presentation.
MR. LEE: Can you hear me okay?
MR. BROOKS: We can hear you just fine. A little bit closer, but it's pretty good. Yep.
MR. LEE: I'm too loud?
MR. BROOKS: No, you're good.
MR. LEE: Okay.
MR. BROOKS: But we just need to see your presentation, that's all.
MR. LEE: Okay, gosh, good morning and happy Friday. I'm trying to catch my breath.
There was a lawn care guy, my neighbor, and their lawnmower was so loud ran over there and ran after him to tell him to stop.
Anyway --
MR. BROOKS: Yong-Woo, we're not seeing your presentation yet.
MR. LEE: Oh, okay.
MR. BROOKS: You don't see it yet?
MR. LEE: I'm not seeing it yet. If anyone else is, jump in, but no.
MR. BROOKS: All right, and then if you can do -- there we go, perfect.
MR. LEE: Thank you. My name's Yong-Woo Lee. Good morning and happy Friday. I'm going to talk about the LPS redesign projects.
And throughout my presentation, you'll be able to hear this term, LPPS, a lot. This is an acronym for LPS Pilot Survey.
So this is different from LPIS, LPTS, those terms that you heard from previous presentations.
So what are the tasks that are involved in the redesign projects? I listed some of the tasks in the time sequence order.
So number one, baseline assessments of current LPS design data and estimates, and then based on the findings, we needed to develop new survey design.
And then we need to test that new survey design in the field. That's where this LPPS comes in.
And once it's confirmed that the new design is good, valid, and working well in the

field, then we should look at our survey design and estimation method, certified by MRIP.

And I'm going to explain to you in the later slides about the MRIP process. And then we need to calibrate the historical estimates relative to the estimates coming out from the new design.

Once everything is good, then we should be able to go ahead and fully implement the new design for the large pelagic survey.

And the redesign items, I'll point out that the redesign is focused on the intercept survey because that's where a lot of questions and concerns come up.

So I shared this table, because that table, about three years ago in the AP meeting back in 2018, so we laid out our plan about the redesign projects.

And it takes seven years. And we categorized the tasks into four different phases.

And you see the columns over here span from 2018 all the way to 2024. That's the year that we anticipate to complete the project and go with full implementation.

And you will see some of the cells that overlap between the phases because some tasks needs to be done simultaneously to reduce the overall timeframe.

This is the table showing where we are. So we started the project in 2018 and we were able to finish the fairly comprehensive baseline assessment and then came up with a new design with the help of expert statistical consultants.

And also they did computer simulations to regulate the design. And once we have a good design in our hands, last year, in 2020, we did a pilot test in a subset of LPS states, and this year again, we will be doing a pilot study in other LPS states.

So last year, we did a pilot survey in Mass, Delaware, and Maryland. Those are completed.

And despite the pandemic, we were able to do a pretty good pilot survey in those areas.

This year, we will be conducting pilot survey in Mass, Rhode Island, Connecticut, and Virginia.

Next year, the rest of the LPS states will be subject to the pilot test, New Hampshire, New York, and New Jersey.

So why we try to cover different LPS states in different years, because we need benchmark data and benchmark estimates for calibration.

That's why we try to hit all of the LPS states with the new survey design.

Okay, so what is the motivation of for LPS redesign? Two main motivations. First one is MRIP certification for design, estimation method, and data standards.

Some of you already heard a lot about the MRIP program. It stands for Marine Recreational Information Program.

It is a data collection and analysis initiative by NOAA Fisheries. The program is trying to implement the national network of recreational fishing surveys based on the state-regional-federal partnership.

You can learn more about the MRIP program by visiting the MRIP website.

So the network is published, national network of recreational fishing surveys. MRIP sets up certain standards for any fishing survey to be certified.

So in order to join the national network as a standardized survey, we want to have our LPS design and estimation method to pass through the MRIP certification process.

Secondary motivation was that back in 2018, there was an HMS implementation plan published and out of 10 priorities, LPS redesign was listed, identified as a number one top priority.

So these are the major motivations for LPS redesign project.

What are the issues and concerns when it comes to LPS? We categorize into two major ones.

Number one is it that it departures from probability-based sampling. I will get into more detail about this.

Even so, there is a conservative on these matches between design and estimation.

So what are the departures from probability-based sampling in current LPIS? It

can be characterized by coverage gaps.

Some survey designs and survey operations create some concerns about coverage gaps.

First one, multisite clusters for the different sites within the cluster. Depending on the fishing activity, they may stay only five minutes or some in good fishing activity sites, they may stay more than three hours.

That type of variable sampling choice. So this graph shows the number of -- on the left side, it shows the number of clusters for each state.

And as you can see, of course, different LPS states have different numbers of axis sites.

And some sites are clustered together, and we call them multisite cluster. Some sites stand alone as a single-site cluster.

And you can see, as you can see the green bar indicates the multisite clusters, red bar is the single-site clusters.

And some states, it's like Maine and New York, Rhode Island, all those sites are clustered together to form the multisite clusters.

And the blue line is the average number of sites per cluster in each state. The point I'm trying to make here is that there is a bunch of sites that are grouped together to form multisite clusters.

And the samplers will spend, again, samplers spend different amount of time in each cluster, depending upon the fishing activities. It's non-probability sampling manner.

Number two issue that creates coverage gaps, variable sampling times. Depending on, again, depending on the fishing activity, samplers may stay a short amount of time or may stay a much longer time.

It varies between two and eight hours. So the box plot shows the assignment durations for the past five years from 2016.

One thing that you can notice is the operation is variable, as short as slightly less than two hours or up to nine hours.

It's fairly consistent, that's a good thing, between the years. The red line indicates

the five-year average. So it's right around three hours.

But again, sometimes some assignment is shorter, some assignments are longer. And that creates the different issue about probability sampling.

So number three coverage gap issue is missing morning and night sampling. And as Daemian pointed out, a survey has to be focused on afternoon sampling.

So this is the time distribution between telephone survey and the intercept survey data.

The green area is the time disposition of return trips based on the telephone survey. And the pink area is the intercept survey time.

And good thing is that the intercept tries to hit the hot spot or sweet spot of the return trips.

However, as you can see in the light green area, there are some areas like morning and the late evening, late hour -- late hour -- late hours.

Those trips didn't get captured by the intercept survey. So that's why our current intercept survey focused on -- focused on the afternoon sampling time.

So another major issue of current LPIS is a mismatch between design and estimation. As you learned from John and Daemian's presentation, current LPIS is fairly complex, multistage with site clustering, and also it utilized something called, we use this acronym, PPSWOR.

It's stands for probability proportional to size without replacement.

Anyway, the key thing is that for the sample draw, it tries to utilize the site pressure fishing activity of the past years for each access site for the sample draw.

And also, the current design has a variable assignment duration. For the estimation side, it moves these complex features of the design.

It assumes that every observation has equal probability, meaning that it has an equal sampling rate.

And because of that, the estimation has an unrated estimation procedure. And this

may lead to a higher precision than the actual. So those are the discrepancies between the design and estimation of current intercept survey.

I'm just trying to highlight that samples, number of samples drawn by the sampling process is aligned with relative fishing pressure by site groups or site clusters.

So this is the reason that if you use very low activity site consistently, you may not run into any interviews because those are low activity sites have much lesser chance of sending samplers.

So what we tried to improve with redesign, so the goal of redesign is to improve intercept survey to be more statistically valid and robust, but at the same time, trying to maintain sampling productivity is a simple statement but it is more like chasing two rabbits going opposite directions.

So we want to have a statistical design that is robust and valid, but at the same time, we want to have enough data coming from the intercept survey.

So with the new design, to address goals and issues that I already mentioned, we decided to go with a single-site approach rather than multi-site approach, and then also we fixed the time intervals.

So you already saw the maps of site locations. So we no longer group the sites into clusters. Every site is single-site sampling unit in the pilot study, pilot survey.

And also we fixed amount of the assignment time duration to three hours, and there are four different time intervals per day, starting from 10 a.m. all the way to 10 p.m.

And each time interval has different fishing pressure that we apply to the sample process.

A main feature of the new design is, I told you about maintaining productivity. So you can have a great statistically valid design, but if it doesn't incur enough data points, then it doesn't work for us.

So we want to have a design that is valid, statistically valid, but at the same time, incur, bring enough data to us.

So to do that, we used statistical consultants. We came up with this idea of adaptive sampling.

So adaptive sampling allows for the movement of a subset of already drawn assignments. And samplers can utilize some factors, like weather factors, fishing conditions, and regulations, to move from, to move assignments from low fishing pressure site or expect to the low productive to the site, move to the site that expected to be more productive.

So this is designed to keep the, keep and maintain the sampling productivity. One major issue with this adaptive sampling approach is that you can see adaptive sampling as kind of opportunistic sampling, meaning that it's difficult to provide a sampling rate to those opportunistic samples.

And we devised a way of estimating the inclusion property for those adaptive samples with the rest of the property samples.

As I mentioned, the computer simulations come from that estimate unbiased with a relatively high precision. So we are very hopeful with the new design.

And again, we want to give credit to our statistic expert consultants for coming up with a new design and conducting a computer simulation for confirmation.

So again, we are in 2021. We will be conducting another field survey. And then we will be looking into a MRIP certification process. And we will study more about what will it take to calibrate old estimates, historical estimates.

Anyway, we have this schedule, and luckily, so far, we have been marching along as scheduled.

Again, our target for the full implementation is 2024, but you can have a plan but there could be some obstacles to delay your project date, to meeting the target date.

So there are some valuable scenarios for delaying factors. Like what if pilot survey suggests that we need -- we need to tweak design to be more productive or for some -- to accommodate for some deficiency?

What if we need additional

benchmarking data for better calibration? Or if MRIP certification process is delayed?

What if there is enough desire to extend the survey to cover more months? For example, there are some indications that bluefin tuna tends to appear in the Northern area in arid season.

So to capture that, you may want to extend the sampling time period coverage. What if we want to expand our survey to the states in Southeast area, Gulf of Mexico, or Caribbean regions.

So this variable scenarios may delay the timing of the full implementation, but we are hopeful and we will try to work hard, do our best to meet the target date.

That was my last slide. Thank you very much.

MR. BROOKS: Great. Thank you, Yong-Woo, and thank you, Daemian and John, for I think sharing a tremendous amount of information in a really effective way. So thank you for those presentations.

What I want to do now is go to a break here. Let's have about 15 minutes. We'll reconvene at 10:45 sharp.

And then we'll spend the next 45 minutes taking clarifying questions. I see there's two folks already in the queue, David Schalit and Bob Hueter.

And again, I really ask folks to spend -- only post questions just understanding right now the information that was presented, a lot of information that I'm sure are questions.

You want to make sure you're understanding what was shared. And then we'll come back in the afternoon and open that conversation more broadly to build in more perspective.

So let's go to our break now. And John or Randy, anything you want to say real fast before we go to the break?

MR. BLANKINSHIP: No, I don't have anything.

MR. BROOKS: Okay.

MR. FOSTER: Yeah, Bennett, me, either. Thank you.

MR. BROOKS: Okay. Great. Then let's

go to break and we'll reconvene at a quarter of sharp. Thanks, everybody.

(Whereupon, the above-entitled matter went off the record at 10:34 a.m. and resumed at 10:47 a.m.)

MR. BROOKS: All right. Let's jump in here, and just to remind us, about 45 minutes now for clarifying questions.

I really want to make sure folks are understanding the information that was presented. Again, later in the afternoon you'll have a chance to have higher level discussion about the LPS.

But right now, I really want to make sure folks are tracking all the information that was just shared with us.

So I've got four people in the queue so far. To the folks who are asking questions, I ask you to be as succinct as you can in your question just so we can get to as many of them as possible.

And if you have multiple questions, let's just start with one or two per person and then we can double back.

I just want to make sure everyone has a chance to fold in here. And if you could lower your hand after you ask the question.

So let's start with David Schalit and then we'll go to Bob Hueter. So if we could open it.

So, David, you had a question before but maybe not anymore. All right, let's go to Bob Hueter. Okay, Bob, your line is open.

MR. HUETER: Hi, good morning. Good morning, everyone, can you hear me?

MR. BROOKS: Yes, we do. Thanks.

MR. HUETER: Great. Fantastic presentation on the LPS program. It's the best I've ever seen. I learned a lot. Really, I really appreciate it, to the three guys.

Before I ask my questions, I do want to say that the intercept surveys are fantastic educational tool and must remember that value to your LPS, not only for the fishers in their learning but also to the surveyors.

And I go back to when I was a grad student and I did some intercept survey to make a little money and I learned so much during those

experiences.

It's a great -- it's a great educational tool and something that students should be, and fisheries should be encouraged to try for a while.

I have three questions, but real quick. I think they're going to be pretty short to answer, at least the first two.

The first one is, I don't understand if reporting is mandatory for the telephone survey why the response rate is only about 60-64 percent.

I would have thought that permit removal would be, well, permits themselves, would be contingent upon compliance. So maybe somebody can explain that.

The second question is what is the annual cost of the LPS program? I'd like to know approximately what that is, including this redesign effort.

And then most importantly, in Daemian's presentation, he presented some graphs on landings, but instead of landings, can someone show us or tell us about the CPU e-trends?

That's the key because you guys are collecting effort, and landings is one thing but it's really catch per unit effort that's important here. Thank you.

MR. BROOKS: Great. Thanks, Bob. So first question, if reporting is mandatory, why is the rate so low?

MR. FOSTER: I'll take a shot at this first and then Daemian or Yong-Woo. So in the field, and answering it, I guess, from a field perspective first.

So in the intercept survey, it's sort of very clear, or much clearer, why someone may be refusing, or that not participating is an actual refusal.

On the phone, it could just be that they never answered the phone, and there could be a wide -- a wide array of reasons for that.

So it's much -- it's much less clear when someone is -- sometimes it is clear when someone is refusing to answer the phone and there's a hard refusal.

But that is typically a small fraction of the overall non-contacts, we could call it,

non-response.

Again, a much larger fraction of it is just unable to contact someone. Could be changed numbers or they're not answering their phone for any number of reasons.

So it's much harder to sort of pin that down and for that reason, it's something that we can't -- we can't ever fully address.

And we take up to ten call attempts within that week for each selected unit, but we can't, we don't want to just keep going indefinitely.

And that's kind of what we have seen as the sort of cost-effective point is ten call attempts.

So I'll stop there on that one. Thanks.

MR. BROOKS: Annual cost of the LPS program? And then I think that was including the survey redesign.

MR. FOSTER: Yeah, Daemian, perhaps you could handle that one?

MR. SCHREIBER: Thanks. So including the redesign, I'm going to estimate it's about $1 million or $1.25 million.

MR. BROOKS: Okay.

MR. SCHREIBER: With the pilot.

MR. BROOKS: And then the last question was around tracking CPUE trends as opposed to landings? Anyone want to jump in on that? Is there information on CPUE or any thoughts on that?

MR. FOSTER: Yeah, go ahead, Yong-Woo.

MR. LEE: Yeah. The recording tool doesn't have an option to produce a CPUE in the table form or a graphical form.

But, yes, we do have CPUE and we try to CPUE, but it's just not available at the moment in the web tool.

MR. BROOKS: Okay, so tracked but not available. Brad, I saw your camera turn on. Did you want to jump in on that? Or one of these questions?

MR. MCHALE: No, just standing by to support in case it was more of a program-centric -- need a program-centered person to say anything.

MR. BROOKS: Got it. Thanks. Okay,

thanks. Next, Rick Weber?

MR. WEBER: Good morning, Bennett.

MR. BROOKS: Morning.

MR. WEBER: I have not really been a fan of clusters, and it may be covered, Daemian, in the training.

I have fear that interceptors feel that their job is to find fish, and given the option of sitting and recording a zero versus going to a facility where they can air quote find fish, feel that they produced something, I feel, I fear that they will choose to do that.

I should say that I've worked with all of you through the years. I remember Yong-Woo's first presentation and I thought seven years was ridiculous, and here we are, halfway through it. Blows my mind.

But as we moved, I mean, I even heard Yong-Woo say that the survey would be more productive, that by switching to the adaptive process, the survey would be more productive.

My first question is, how is adaptive not just another word for clusters? I want to be a supporter, but I want to understand and I just don't. So this truly is a clarifying question.

How is adaptive not just another form of cluster?

MR. SCHREIBER: Yeah. Sorry, Yong-Woo, go ahead.

MR. LEE: You can view the adaptive sampling as a form of non-probability sampling, meaning that at the raw data level, you may not provide the actual inquiry of probability or sampling weight.

However, with statistical estimation procedure, with a single-site approach and fixed time interval, we are able to estimate the increase in probability with those adaptive samples.

So that's the difference between the site cluster approach versus the adapted sampling approach.

MR. SCHREIBER: And if I could, just to follow up on that, Rick. So interviewers are tasked with finding anyone who's eligible for the survey, regardless of whether or not they actually caught fish, right?

As you are correct to be concerned, if

we were only interviewing people who landed a fish, then that would not be correct.

They need to interview anybody who went out. And so then they are moving in between the sites and the cluster under the current design.

They're looking for anyone who's eligible for the survey by way of targeting a large pelagic species.

And as Yong-Woo pointed out, with the adaptive sampling, having that as an option to increase productivity doesn't mean the interviewer can just go to multiple sites and there's no -- with no more clustering in the pilot survey.

When they are doing an adaptive assignment, they're going not one of the primary sampling units, a single site, and it's a small proportion.

Currently, it's 25 percent of the assignments that are drawn are considered adaptive, if that helps.

MR. BROOKS: Great.

MR. WEBER: I think -- I think it does, Daemian, and I, as I say, there's no one speaking that I don't trust your hearts, but I just, I hear all the words and my brain does not always put it together.

You guys, this is what you live, and I -- and I, on some level, I just have to trust that you guys are doing it, because I will -- we don't have hope today of bringing us all along to your level.

But along -- but along those lines, the new fixed time windows are going to reintroduce this problem.

In a world where you get more opportunity in a three-hour window, more boats are backing in, that interceptor is going to have to prioritize which surveys they are taking.

And again, there is something in me that says I have some fear that they select those with more fish because at the end of the day, fish reports are the product that they are proudest to produce.

And if I have the option of interviewing somebody who has one fish or somebody that has 12 fish, I fear that the

interceptor will choose the person in that moment because they only have three hours. Will they cherry pick?

MR. BROOKS: Hey, Rick, I'm going to jump in here for a minute. I want to try to steer these kinds of comments to the afternoon.

I mean, they're totally in play and appropriate, but I want to make sure we get to the clarifying questions here. So I'm going to capture that --

MR. WEBER: That was clarifying because I thought there was -- there was -- I thought that they might be able to tell us that there are procedures in place to stop that.

And so along those lines, I don't need to -- I don't need to start a debate on it, but I was hoping that they could take the time.

And along those, the final comment, where I was going was, are the timeframes, since we know the return times and now we're going into three other sampling windows, will the expansions be done on those three-hour time windows?

That's the end. You can get me so I don't add any more on, Bennett.

MR. BROOKS: Thank you, Rick. So I guess we'll go back just to the comments, Daemian or whoever, on those fixed time windows and the concern that Rick is posing there. Anything you can share? Any approach?

MR. FOSTER: This is John Foster. I'd like to add -- sort of address that. So in terms of the way that the expansion works, we will not be generating estimates by the three-hour time windows.

That is just a part of the new pilot tested, being tested design, as a way to stratify the sampling.

So it allows us to ensure coverage across the day in a way that is accounted for in the estimation process so that we appropriately assign sample rates to the -- to the sample units that are defined now by the three-hour time windows.

But we still cover the full day. We just randomly select, in a way that's accounted for in the draw process, essentially ensuring, put most simply, that the math works, but two, to ensure that the windows of time within the day

are appropriately presented in the overall estimation process.

Because we're still going to be producing the catch rates at the state, state area, month, fishing mode, private or charter, level for each species and catch type.

We're not going to do that specifically within those three hours. They just wouldn't be precise if we did it that way.

We need to use all of the collective data, but we will be weighting, sample weighting, all of the data appropriately when we do estimation at the standard cell.

And just one quick point back to the -- to the -- are we targeting trips with fish? Again, there's nothing that -- I get the idea of, it's sort of like trophy, hunting, I suppose, if you can bag a trip with the most catch, that kind of idea.

But training for interviewers is very firm on not preferentially interviewing trips with catch over trips without catch.

And there are unannounced field visits by supervisors to check on samplers to make sure they're not doing something like that, as well as checks on the data that are done by interview to compare the data collected by one interview to another to another across all of them to try to look for those kinds of possible biases where one interviewer has a much higher proportion of intercepts with catch, for example.

MR. WEBER: Thank you.

MR. BROOKS: Thanks, John. That's helpful. Let's go back to David Schalit and then to Willy Goldsmith.

MR. SCHALIT: Good morning.

MR. BROOKS: Again, clarifying questions.

MR. SCHALIT: Thank you, John, Daemian, and Yong-Woo. Bennett, I have a request and I have, well, not a great many questions, but what I'll do is I'll just, I'll take, I'll ask a couple of questions and then I'll leave my hand up. Okay?

MR. BROOKS: Yeah. Yeah. Yes, that'd be fine.

MR. SCHALIT: Yes, John, you mentioned that, your slide 10 biological sampling and that

it is opportunistic.

My question is, could you give us a kind of ballpark number, let's say, for otolith sampling and genetic sampling.

I mean, would you say you collect less than 100, less than 1,000? That sort of thing. That would be my first question.

MR. FOSTER: Sure. Thanks, David. I'm actually going to hand that off to Daemian, who is more familiar with the sample sizes for that.

MR. SCHREIBER: Thanks. There are up to 150 assignments, but there are more than that many fish sampled because multiple fish can be finished on an assignment.

Last year, the last couple years, the number of bluefin sampled were in the several hundred, not over 1,000.

MR. SCHALIT: Okay, several hundred. That's good. Okay. Now, here's my request that I have.

I don't know which of you gentlemen would be involved in this, but I'm the president of the American Bluefin Tuna Association.

And we're looking at large pelagic survey from the perspective of the commercial sector, okay?

I'm wondering if one of you could send to me by email a list of the data fields or what you refer to as data elements, in a typical record for the dockside intercept.

And if you let me know which one of you can do that, I will send you via chat my email address. Would that be workable?

MR. FOSTER: Yes, we can -- we can certainly do that. Daemian, would you mind coordinating that?

And then, if it's okay, we actually -- there's a link to -- I mentioned the link that's in the presentation part that

I gave that was for, that's really for technical sort of design estimation, essentially covering all the sort of mathematics of it.

We have other reference information on the website that sort of goes through kind of the details, David, that you're asking about in terms of what the questionnaires looks like, the types of information that's collected, the field

procedures.

So if it's okay, I can put that link in the general chat as well.

MR. SCHALIT: Great. Sure. And then my final question for now would be -- would be, we were discussing the percentage of recreational permits contacted by telephone.

What is the targeted that you want to sample by that means? In other words, I've separated from the number of attempts you make.

In other words, a certain percentage of those -- of those calls are, I'm going to say a small percentage is unanswered, or for one reason or another doesn't result in your getting a good sample.

What is your -- what is your target sample percentage that you're looking for from the telephone survey?

MR. FOSTER: So on that, it's easiest to answer for charter because it is actually a rate or a percentage.

So we target 10 percent of vessels on the frame to be selected for any one-week reporting period.

On the private side, it's a fixed number of units, of vessels that are selected for reporting with the individual two-week reference period.

I believe the percentage works out to something around five percent, but because of the different sizes of the frames, it's actually a good bit larger number on the private side than it is on the charter side.

But maybe Daemian or Yong-Woo, you happen to remember just a ballpark private boat sample size?

MR. SCHREIBER: For the year, it's around 8,000 vessel selections.

MR. SCHALIT: For charter/headboats? Or for recreational, you mean?

MR. SCHREIBER: Private. Yeah.

MR. FOSTER: Yeah, okay. I'm following you. And that charter/headboat, that approximate 10 percent --

MR. BROOKS: David, I'm going to -- I'm going to -- I'm going to push on and then come back to you, okay, just because --

MR. SCHALIT: Okay, that's fine.

MR. BROOKS: Okay. Great. Thank you. Let's go to Willy Goldsmith and then we'll go to Mike Pierdinock.

MR. GOLDSMITH: Thanks, Brian, can you hear me?

MR. BROOKS: Yes.

MR. GOLDSMITH: Great. First off, just wanted to echo Bob Hueter's question/concern about the reporting compliance, I guess, if you want to call it that, LPTS.

I think I just wonder if there are opportunities for the team to look at contacting those folks by email or mailer even and I guess also look at perhaps what some HMS folks have called compliance assistance, making sure that the whole frame is getting covered there and there isn't any bias in who's responding.

My couple of questions have do with the -- with the intercept survey and kind of thinking about ancillary uses as Bob again talked about in terms of education.

First off, Daemian, I believe you had mentioned that latitude and longitude are collected as part of the catch information and the -- and the fishing location.

And just wondering about the coarseness or resolution of that data. Certainly, a lot of our folks are aware that the socioeconomic impacts of offshore wind development on the -- for our community came out this week and the raw data are not particularly high resolution in terms of what the impact might be.

And I'm just wondering if there are other uses for that data outside the large pelagic survey.

The other question is about the degree of outreach that the folks who conduct the intercept surveys provide to permit holders around the need to self-report bluefish tuna landings in the fishery.

I know that's been a concern around compliance. I'm just wondering if that's something that folks do try to communicate.

And then also, for individuals who are intercepted who might not possess a permit, if there's information about obtaining an HMS permit as part of the protocol there. Thanks.

MR. BROOKS: Okay. Three questions there. Specificity on lat/long data collected.

MR. SCHREIBER: So one of the questions on the -- on the questionnaire is where were you fishing for large pelagic species?

And the area name is collected and then the degrees and minutes, but not the seconds, are collected.

Now those are -- those can be pretty big areas, right? Canyons offshore or hills or lumps or bumps.

So the idea is to get the general area from the response, and often, though, the respondent doesn't have, or they may not want to, go back to their plotter and give precise locations.

That's hard to do, right, if you're trolling, but if you're anchored up somewhere, you could -- you could do that.

And so in those cases, the area where they did most of their fishing is included in the data.

BOEM has made some use of the LPS data in relation to wind farm energy. And as far as outreach, if the interviewers are asked if they still need -- if they still need to report the fish online, or through the ALRS, Automated Landings Reporting System, then the interviewers say yes, you still have to report it.

I think just by way of being asked if they have an HMS permit, that alone is notice, I guess, for someone who doesn't have a permit that they need one.

But the interviewers are not enforcement. I just want to make that point.

MR. BROOKS: Thanks, David. Let's go to Mike Pierdinock, then Bob Humphrey, then Dewey Hemilright. Mike?

MIKE PIERDINOCK: Good morning. Thank you all for your presentation. A few questions. Slide 6 indicated the LPS stratified survey state by state.

As we're all familiar with, and it was noted, with increased water temperatures and the climatic shift of our stocks, bluefin or other species, for example, are moving farther north and east into cooler waters sooner in the year and that's consistent with our observations.

So with that, how do you take into consideration that you'll do these surveys and what state to consider that?

I'll note, like, almost one, two months ago that the fleet out of Montauk was reporting schoolie bluefin at the canyons.

We passed that information on and it was early, and the earliest they had seen it in years.

Three weeks ago we had giants south of Cuttyhunk, five, ten miles offshore. That was the earliest we'd seen it in years.

And with that, then how do you then make that determination of where you should go to capture those fish?

So with that, Daemian made a new point, made a point that north of the Cape, it's historically been different than south of the Cape.

North of the Cape up into New England, that's typically where we have the large giants and larger fish.

And as a result of that and the Wicked Tuna effect, everybody's general category fishermen or they're headboats with commercial endorsements.

As a result, there's fewer recreational anglers that then would target the recreational size fish.

So while we're out there, whether we're near shore or off shore, well off shore, we may not be equipped or permitted then to target the rec fish.

So then how can we capture that in the surveys to be representative of what's out there? Because we're not targeting it?

There are my two questions and I'll go from there. Thank you.

MR. BROOKS: Great. Thanks, Mike.

MR. FOSTER: So this is John.

MR. BROOKS: Yeah, go ahead, John.

MR. FOSTER: Okay. I'll start on that and then ask Daemian or Yong-Woo to add anything or clarify.

In terms of sort of seeking of fish showing up either outside of LPS coverage, within the LPS state, range of states, at different times, based on reports, we have been able to

either start the telephone calling in May or extend it, I believe in a few cases, into November, in cases where the arrival of fish or the departure was not within the normal range.

I will say, though, that there are limitations to how flexible we can be in that. It's the sort of thing where if it -- if the pattern is changing and it's becoming a consistent or rather, or even if it's just consistently inconsistent where there's a chance it's going to show up and the fish might show up in May any year, not just they always show up in May, that's the sort of thing that we can work to adjust the time.

But again, because of finite resources with the -- with the -- for the survey, in general, we have to maintain sort of a standard coverage that's identified ahead of time.

But again, we can -- we can extend the coverage as it's needed, and we have done that in the past.

And the question about if the fishery are targeting different size classes of tuna, for example, the survey will still directly characterize that.

And again, the primary purpose, at least for our uses of the data, Office of Science and Technology, are to produce the catch and effort estimates, to produce indices of abundance using the fishery-dependent data that we collect.

That's a -- that is a use of the data. It's done by the Science Center, and I know folks are on the call and I don't want to speak for them.

But that is partly why we collect all of the additional detailed information on the trip, characteristics and the intercept survey, as well as on the phone.

It allows for them to try to take into account those behavioral changes, targeting changes, things like that, within the models they use to calculate those indices.

But that is a separate task from catch and effort estimation, and that's what we focus on.

MR. BROOKS: Thanks. That's a good answer, John, thank you. Bob Humphrey, and then over to Dewey.

MR. HUMPHREY: Thank you. Thank you, Bennett, and thank you to the presenters. I actually have questions for each of the presenters, but I'll ask one and then leave my hand up so that you can circle back as you promised.

MR. BROOKS: Okay, thanks, Bob.

MR. HUMPHREY: And first question goes out to John. Does, and if so, how does, the survey distinguish between charter headboat vessels with and without a commercial endorsement?

For example, if someone with a commercial endorsement decides they're recreational fishing that day or somebody is targeting recreational fish but catches a lineal commercial fish, does that come out in the -- in the mix?

MR. FOSTER: Sure. So the one way that it's done is we record -- again, we're covering all of those vessels.

If they choose to fish sort of under the commercial endorsement and they're going to sell the fish or they have sold the fish, when we -- when we intercept them, we record that.

One of the catch dispositions that we record is sold fish. And those fish are separate from the non-commercial, the recreational catch, in the other categories, the landed not sold category.

So the sold fish are not used in calculating the catch rates for the recreational estimates.

I think that is the primary way to keep those separate and not create sort of duplicate. Yeah.

MR. BROOKS: Great. Hey, Bob if you want to jump in with your second question, please go for it.

MR. HUMPHREY: Sure. Second question, for Daemian. I realize that your presentation was more on methods and results, and this is sort of a follow-up to Bob's question.

You had a chart that showed a fairly sizable jump in bluefin landings last year. Can you tease out from the survey how much of that was an artifact effort versus availability of the resource?

MR. SCHREIBER: Yeah, of course, effort was higher, and that's a major component to the estimate.

The increase is estimated and I think that we can attribute the larger catch estimate to the larger effort estimate.

MR. BROOKS: Thanks. Okay, thanks, Daemian.

MR. HUMPHREY: What about the alternative? Can you also get some indication that it may related to availability of fish, more fish, more catch?

MR. FOSTER: So this is John, if I can jump in on that one.

MR. BROOKS: Yeah.

MR. FOSTER: Again, it's difficult, it's a challenge to try to get sort of a direct estimate of, say, availability or abundance directly from the fishery-dependent data, because there's many other factors in there that can affect what we see from the fishery data.

But one thing we can learn, and I don't have it right with us, that can give some indication of what you're getting at with increased availability, would be looking at sort of the targeting behavior or the success rate of those trips for bluefin tuna.

Did we see an increase in the proportion of our intercepts? An increase in the number of trips that were targeting bluefin tuna in 2020 compared to prior years?

Or the trips that were targeting bluefin tuna, said they were targeting bluefin tuna, was there a higher success rate with a higher proportion of those trips had catch, had landings?

A lot can contribute to that beyond just availability, but that is one thing that we can look at.

I just, I don't have that information on hand today.

MR. BROOKS: Great. Thanks. Let's go to Dewey and then Ray Bogan.

MR. HEMILRIGHT: Yeah, thank you. Can you hear me?

MR. BROOKS: Yes, we can, Dewey.

MR. HEMILRIGHT: Yeah. Thank you for the presentation. I had a couple questions. One

question is, you talked about calling the permit or the people that fished and having a 60 percent compliance rate, whether it was not answering the phone or for whatever reason, maybe particularly answering the phone.

What number comes up when you all call somebody? What number does it say on somebody else's phone when you're calling? And then I have one other question after that.

MR. BROOKS: So how are you identified to someone who is answering the phone.

MR. SCHREIBER: Yeah, real quick, it really depends on the local carrier. Some carriers aren't passing through caller ID information.

The upstate agent fees calling that might show up on your caller ID if Quantech is calling. That could show up on your caller ID as the name.

Or you may see a number, a different number, just a number, and not -- and it may be unknown. It depends.

MR. HEMILRIGHT: Do you think that could be maybe a problem, why somebody's not answering their phone?

MR. SCHREIBER: Yeah, it could be. I mean, you could, anyone can screen their calls. Usually, since there are multiple call attempts during the week, someone might actually, if they're screening their calls, they may answer and say, like, why are you calling me?

Or on the other hand, those advanced letters give notice to the respondents that they -- that they will be called.

So if it's a number they don't recognize, maybe they would think, oh, that's probably the survey.

MR. HEMILRIGHT: And my second -- thank you for that. And my second question, this redesign of the LPS survey, I believe that's my understanding of this, and the mentioning of MRIP recalibration.

Is there any way that this is going to be used to backdate prior catch history for the recreational industry?

MR. BROOKS: As in whether they'll try to correct past database and would learn this new design? Anybody want to jump on that?

MR. FOSTER: Yeah, I can start, and Yong-Woo, please feel free to jump in. So the short answer is, that is planned to look at the historic time series and develop a calibration as needed.

It's not clear yet how different estimates based on the new design would actually be from estimates produced using the current design.

We're running them side by side for this three-year period to try to get at that information.

There's a possibility that the differences are not, either not that large or not in one direction all the time.

So the new estimates aren't always higher or always lower. They're just -- they're just different but it varies how they differ.

Those are situations. The variable difference is not systematic, not always higher or lower.

That's a case where a calibration might not be needed, or if we do develop a calibration, it really wouldn't change the historic time series very much.

But again, we won't really know that, answers to that question until this design study is complete and we've had time to generate all of the estimates and compare them side by side.

MR. HEMILRIGHT: It sounds like --

MR. BROOKS: Thanks, John.

MR. HEMILRIGHT: It sounds like that this is -- I'm kind of asking, the reason I'm asking is because I look at the MRIP recalibration and the magnitude of what it produced, and I'm just curious, who's going to decide on -- it sounds like it's a very open-ended question and answer to a I guess you have to wait and see what the outcome is.

But thank you for answering, because that's one thing I'm very cautious on was the MRIP recalibration and what it produced.

And it appears like this is a possibility it could be used for similar types of things in the future. Thank you.

MR. BROOKS: It looks like Brad maybe wants to jump in on that. Oh, sorry, John, go ahead.

MR. FOSTER: I'll do one quick follow up. Sorry, Brad and Ray, thanks.

Just to give maybe a bit more sort of context for it, this is focused, this redesign is focused solely on the intercept survey component.

The big change in the more general surveys that have been done, redesigned recently for MRIP, was mostly coming from the effort survey piece for private boats and shore mode, in particular.

So that's a lot to unpack. We can't get into all that here. But this, the LPS redesign, is focused only on the intercept.

The effort survey components really would continue as they currently are being done. There's not redesign work going on there.

So that effort won't be -- there would be a rescaling of the effort, and that's really what drove most of the big changes in the more general survey.

So I wouldn't expect, even if we do see some changes with the LPS, I wouldn't expect them to be as large in magnitude as we saw in the more general estimates.

MR. BROOKS: Thanks, John. Brad, do you want to jump in on this?

MR. MCHALE: Yeah, on two quick points. One is we in the HMS Division share those same concerns that Dewey just voiced, and look forward to seeing how the numbers play out.

It's not only, too, they had domestic implications, but obviously, with ICCAT quotas and what have you, there was an additional layer that we're always cognizant of.

We look forward to that dialog continuing. And John, thank you very much for that clarification.

Where I really wanted to chime in was more of a question from Daemian, is following up on Dewey's question on what number pope up? And honestly, that's being dictated by local characters.

And as a permit holder, on my phone it shows up as Quantech. And I have answered those calls.

And I'm just curious, are voicemails left when those call attempts are made? Or is we're kind of calling and then we're just trying

to connect with a live individual?
I'm just curious if in addition to the notification letter, then in addition to the numerous times you're attempting to reach those individuals, is there a voicemail component being left, notifying the permit holder as well?
MR. SCHREIBER: Yeah, so, the voicemails are left on the for-hire survey LPTS add on. So with charter captains.
They can be harder to reach, especially during the season if they're out there making a lot of trips.
On the private survey, the interviewers are not leaving messages on voicemails.
But again, if they get a person on the phone, and the respondent or permit holder is not available, then they leave their name and number and ask for a call back, either to schedule a better time to do the interview or to conduct the interview at that later time.
MR. MCHALE: Thanks, Daemian.
MR. FOSTER: Can I jump in just for a second?
MR. BROOKS: Yeah.
MR. FOSTER: Daemian, would you mind just very quickly and briefly, I think it might be relevant to mention the other reporting modes for LPTS, private in particular?
I think it sort of gets back to Willy's comments or questions, too, about email and other ways that respondents could provide their information. Thanks.
MR. SCHREIBER: Yeah, the advanced letter includes the toll-free number for respondent to contact if they choose to reach out before they're called.
And there is an email address on the advanced letter as well where the respondent could reach out to Quantech to schedule a time to do the interview.
MR. BROOKS: Great. Thanks. Ray Bogan, you haven't had a chance to jump in with a question yet. Bring you in.
MR. BOGAN: Okay, I see I'm open. I thought I was closed out.
MR. BROOKS: You are. You are open.
MR. BOGAN: Yeah, just from a

prefatory standpoint, I want to point out what John Walter and Matt were involved in one of the two programs that were done in order to address certain challenges associated with MRIP and LPS and the numbers that were ultimately submitted to ICCAT.

So there has been some discussion of this. I just haven't heard it mentioned today. In addition to the Wicked Tuna phenomena, as we've all come to accept as a fact, there seems to be no question about that phenomena and its impact on things, there's another unexpected circumstance that we learned of during those two workshops.

And that was what was taking place in Maryland and Virginia in particular, because as you know, part of the conclusion with regard to the status of stock was that, look at the dearth of landings in Maryland and Virginia.

Therefore, we learn a lesson from that, when in fact the lesson wound up being once we explored it that there was certain avoidance of landing, particularly of certain size fish.

John Walter, in particular, was very -- found that to be a very compelling and interesting circumstance, as did, I believe, Matt, although I should not speak for either one of them.

So a question becomes, where I've heard some of the other things with the panel, I want to know whether or not that component can be addressed, and if so, how might it be addressed?

And that is that a dearth of landings, as we know, does not mean a reduction in the size of the stock.

And while I know that the MRIP and LPS folks don't determine size of stock, the conclusions they reach and the data they submit does impact it.

Therefore, is there anything that can and has been done to address not only the Wicked Tuna phenomena, but also the phenomena that we learned about in Maryland and Virginia, where we learned that there is no, there isn't this dearth of fish that we thought, but rather the dearth of landing and effort towards it.

Has that issue been addressed, or is it going to be?

MR. BROOKS: So I'm wondering if this is a question for John or Daemian or Yong-Woo, or whether there's someone else on who might be able to handle that.

MR. FOSTER: It looks like Matt has raised his hand. I defer to him.

MR. BROOKS: Yeah, let's bring Matt in.

DR. LAURETTA: Yes, hi, everyone. It's a great question, Ray. Essentially, that is where the catch created effort relative abundance indices come into play.

So there we would scale the catches divided by the amount of effort directed specifically towards a size group, for example, small or large schooled, so that it's really the relative rate of catching per effort that we use as an abundance trend to fit to the stock assessment to fit the stock assessment to that data.

So you're absolutely right. In that case, you can have low effort, relatively good catches per trips that are targeting them, and a higher catch rate, which would be a relative abundance trend, and that's how we would scale it.

So what it comes down to is the question on the survey form that is, what species were you targeting primarily?

And we switched to the primary target to really get at the core fishery for example, the smaller size classes of bluefin.

And that's how we're able to correct the data to account for shifting effort. So it goes back to the CPUE being an important metric that we might consider making available as part of the standard output of the survey so that stakeholders or anyone can understand how that relative abundance trend may be changing, which corrects for shifting efforts.

Now in the total landings, of course, will be dependent on effort, because as it gets scaled to that catch rate to the overall effort.

And so there's sort of two different pieces of information that would be used for assessing the stock.

As far as I know, bluefin tuna is the only HMS stock that uses the relative abundance

in the stock assessment, whereas all the reporting of HMS to ICCAT is done for each of them.

So if I can clarify further for you, Ray, let me know, but it's essentially as you say, that when we're looking at the trend in abundance from the survey, it is relative to the effort.

And so, for example, if the catches went from two fish being observed per trip to 10, that would show up as a large increase in the CPUE.

MR. BROOKS: Great.

MR. BOGAN: I appreciate that answer, Matt, and I appreciate that explanation.

And I think the broader message that must be given is that through the challenge of changing patterns, there's sometimes an inability to pick up on changing fishing patterns, and I think to the extent that that can be addressed through further questions, or as an example, and this would apply to not just the Maryland, Delaware, Virginia fishermen, but no doubt others, and that is that are there -- have you not targeted certain other species that are otherwise available as a result of some change in fishing practice?

I know that's a very awkward question but the nature of the question, folks like you who are far smarter than I am and more adept at coming up with questions on surveys would be able to figure that out.

But I think it would be a very, very important thing, because it's not, that is not a critique, I'm sorry, that's not a criticism of anything because it was a change in pattern that I think John and Matt, for example, would agree.

Certainly, I was surprised. I didn't expect to hear those answers. But the source of the answers was very reliable, and therefore it just shows the great challenge associated with finding this information, but begs, in my opinion, for another question or two to try to further hone in on those changing patterns.

And finally, as I get off and I'm sorry to take so long, a final thing I would mention, there is another phenomenon beyond Wicked Tuna, beyond the stuff that you've seen

with Maryland and Delaware and Virginia, and that is the fast boat phenomena.

That's a whole other issue that changes fishing patterns, and that's something that has developed in the last several years. So thank you very much for your explanation and thanks very much for taking time.

MR. BROOKS: Thanks, Ray. We're a little bit beyond break. I think John Walter wants to jump in on this last discussion, and then I'd like to get to Jeff Kneebone, who hasn't had a chance to ask a question, and then we'll probably go to break. John?

DR. WALTER: Good morning, everyone. I'll be really brief. There is this element of, like, when the fisheries change, we do need to know about for our assessment models is not alluded to for the CPUE as well as for the selectivity of the fishery.

If the fishery is changing how it fishes, we need a model to understand that. And that's where some of the intangibles that could be gleaned from the people who are in the field about how the fishery is changing, as well as the fishermen.

I don't know how to design a survey to add that into the survey about changing fishing practices, but I believe we do need to be cognizant of that.

I know that for me to be able to give good assessment advice, I need to know those kind of things that are happening.

So that was what I was really elucidating in the webinar we had I think in January, and something that, it's that value-added part of the survey that perhaps we could try to pass on to analysts such as ourselves. Thanks.

MR. BROOKS: Thanks, John. Jeff Kneebone, let's bring you into the mix here.

DR. KNEEBONE: Thank you, Bennett, can you hear me?

MR. BROOKS: Yes.

DR. KNEEBONE: Okay. Thanks, everyone. It's been great. I just have a couple -- one quick question. I'm not sure this is the right time for it but I'll ask anyway.

So for the count fish category in the

LPIS, I'm reading the document that the interviewers always ask to see the catch that's being reported by the fishermen, but I'd like to get some perspective on whether that happens more often than not.

So to put it another way, are most of the fish counts that I see in that LPS data reflecting both counts that were made by person doing the interview?

Or what percentage of the respondents are not allowing the interviewer to actually count the fish? Thank you.

MR. BROOKS: Yeah, this is just the right time to ask that question. So I don't know who wants to jump in on that from LPS.

MR. SCHREIBER: So in the data, in addition to the counts, there is, there are fields for the number observed by the -- and identified by the interviewer as well.

Offhand, I would say that most fish are observed, but I don't have the percent of landings that are observed.

A lot of times, they may be, if they're packed down on ice, then they wouldn't be available.

If they've already been fileted and obviously the carcass, if that's no longer available, that makes it difficult for the interviewer to say they observed the fish.

But they are capturing. So that's another good reason it's important for the respondents to provide accurate information on the fish they kept, released still alive, released dead, or sold.

DR. KNEEBONE: Great. Thanks.

MR. BROOKS: All right. Well, thanks again to the LPS team for the presentations and all the -- all the responses to these questions and all the -- all the responses to these questions and for everyone's focused comments here.

What I'd like to do is just call people's attention in the chat. There are a couple of links that have been posted in response to the questions, one on CPUE trends, another on some of the operational details around the questions in the survey.

So if you haven't seen those, scroll

through the chat to find those. There was a question about how and when ideas, if folks have ideas for the -- for the rec summit, when and how to submit those.

And we'll double back and address that this afternoon. And then as Bob Humphrey just said, he put a couple of questions for Yong-Woo.

I know there were maybe one or two folks who had a few more questions that they didn't get to.

I would encourage you to maybe post those questions in the chat box now and to the extent that the LPS team can address that during the afternoon in the chat, that would be helpful.

Also, LPS team, you should get a break and lunch as well. So please, don't feel the need to be tethered to the chair.

So we will break now. We will come back at 1:00. We will come back to this conversation.

But again, I'll sort of just at that point invite people to weigh in more broadly with your comments, perspectives, any questions you have for the team.

And we'll have another 15 minutes or so for that. So come back at 1:00 sharp for LPS.

And then after that, we'll move into the more general HMS listening session.

Thanks everyone for a good conversation. See you in an hour and a quarter.

(Whereupon, the above-entitled matter went off the record at 11:43 a.m. and resumed at 1:01 p.m.)

MR. BROOKS: All right, well, it's 1:00. I want to get us moving. So just this afternoon, or a quick review of the plan.

We have about the next 45 minutes or so, 50 minutes, to continue the discussion on that LPS, both questions you might have that we didn't get to this morning, and also just more broadly open the conversation up for anybody who's in the workshop here to share thought you have on the LPS survey, sharing thoughts on the agency's use of LPS data.

We want to -- we want to -- throw that wider here. Again, we'll do that until about 1:50, maybe up until 2:00. And at 2:00, we'll hand it off to HMS folks to open up the listening

session for the recreational roundtable, which is really your chance to weigh in more broadly on issues of concern, issues of note, that you would like HMS to have to be thinking about.

So that's the game plan. Well wrap up by 3:30 this afternoon. I will note that we have no scheduled breaks for the next two and a half hours.

So that's a little harsh, but it's that or drag you farther into almost Memorial Day weekend.

We opted for the get us all out by 3:30, but obviously, you take whatever break you need between now and 3:30.

So with that, let me just see, anyone from the HMS team or LPS team want to say anything before we just open it back up for conversation?

All right, then if not, let's see if folks want to jump in with questions or comments, perspectives that you have that you would like either the LPS team or HMS to hear regarding large pelagic survey?

David Schalit, I see your hand up, so why don't you jump in?

MR. SCHALIT: Thank you. I'm not sure if this is -- I have a question and a comment. I'm not sure if this was in Daemian's presentation or John's.

It was stated that approximately 5,000 trips are surveyed annually, and I was wondering if you guys have an estimate of the total number of trips that take place annually.

MR. FOSTER: Sure, David. And all of our estimates, again, are available on that website at the -- at the link that Daemian provided in his presentation.

But essentially, for the private anglers, private boat anglers, the annual estimate, again, for the LPS range, it varies from about 50,000 to 70,000 trips.

Again, that's for private boat anglers. And then for charter, it's closer to about 10,000 trips, again, with some variation, 10 to 20.

So that's roughly the scale of the two -- the two sectors, in terms of the annual trips. So June through October.

MR. SCHALIT: So that gives me an idea of like the percentage of sampling that you're looking at. Okay.

That's really good. Okay, now my comment has to do actually relates to something that was brought up by Rick Weber, Ray Bogan, and Mike Pierdinock, and this has to do with what they touched on, what I'm -- what I'm talking about here now, has to do with CPUE.

And we've been reminded recently that CPUE does not -- is not looking at abundance, it's looking at density.

That's really what it's intended to do. And the problem we have with bluefin tuna is, as you know, bluefin doesn't do the same thing in two consecutive years.

Bluefin will inhabit areas this year that they're not going to inhabit next year.

That presents a realistic problem for the large pelagic survey to the extent that if we look at these dynamics, and bluefin, population dynamics, we are -- we are wondering, to what degree are you able to dynamically allocate your human resources in line with what the bluefin are doing? And how could we improve, how could we sharpen our pencil on that issue?

I mean, one issue that came up in these numerous conversations we had last winter regarding the small fish indices was that the observation by the fisherman was that there was high density of juvenile bluefin in offshore areas in the Gulf of Maine region, a bit out of the -- of the -- of the boats that typically fish for them, and then we had another situation, which was well documented, in which the region, this approximately 220 mile length of coastline from the Cape Islands all the way down to Long Island and all the way to southern New Jersey was an area of high density.

And so we're wondering, obviously, okay, I should step back and just say this. The gold standard, and my understanding is that the gold standard in terms of sampling is that every trip has an equal opportunity to be sampled.

So we're not only looking to just records successful trips. Because in order to have a success rate, you have to have unsuccessful data in there.

So that's what we're concerned about is the responsiveness of the large pelagic survey to shift in density to the extent that we are, we at least can say that these areas are being somehow represented that we are -- we are actually trying to achieve that gold standard, so to speak.

And I think that's the problem. One of the thoughts we have, one of the thoughts I have is that perhaps the -- perhaps the people who are -- who are managing the large pelagic survey could benefit from a conversation with the recreational leadership and who would know about these events, fairly up to date on these issues.

I am not, by the way, part of the recreational leadership. I'm involved in commercial fishing.

It seems to me that there is definite -- there is -- there is knowledge out there that we, that might be able to have a positive impact on the -- on the -- on allocation, on your resource allocation dynamics, to the extent that you have that capability. And I'm wondering if you could speak to that. Thanks.

MR. FOSTER: Sure. This is John. I'll start and invite others on the LPS team and even Matt Lauretta or John Walter to add on from a science perspective.

Sort of, I think there's several things here that are kind of intertwined. One is, can we use the information, the data, the estimates from the LPS, to generate some measure of absolute abundance, or an index of abundance that reflects just the population of tuna, not the fishery?

Ideally, we would have a fishery-independent survey to get at that. By definition, it's free of all of the effects of the fishery, regulations, angler preference, any economic conditions, any number of factors that could uncouple what the fishery is, the signal in the fishery and the actual true population.

LPS is a fishery-dependent survey. Now, that's not to say the data can't be used to try to model, to estimate an index of fishery independent abundance, but it is fishery-dependent.

And so it needs to reflect the changes

of things that are going on in the fishery. And the data will reflect those changes in the fishery.

And those changes, again, may not reflect only changes in abundance of the species or their availability, whether it's abundance that's changing or some special change in their migration patterns, or whatever the case might be.

The LPS is going to be tied to the fishery. Now, that said, if the fishery is changing in certain ways, it might impact the LPS ability to characterize the fishery.

So suddenly, both are returning to different sites that we don't cover. Or, as the question was raised earlier, I apologize, I don't, I apologize, I don't remember by who, but if the fishery is changing, it's temporal scale.

Fisheries are starting in May or April or they're ending in November, December, and we're not picking them up in other surveys or other HMS reporting programs, then that's an issue, that's a coverage issue of the survey, and we definitely want to address those, because we've been, not been able to characterize the fishery well.

But if it's something like anglers or captains are changing their targets but they're still returning the same sites and they're still returning at the usual times of day.

So they're being intercepted as they had been in previous years, even though their, some of their behaviors are changing, but we're still capturing all of that in the survey.

Well, those changes are impacting the catch and effort estimates, and they're not impacting fishery-dependent estimate of catch rate.

What they're impacting, potentially, is the ability to use the fishery-dependent data to estimate a fishery-independent indices of abundance, which is what we want to try to get to.

Now, we collect a lot of auxiliary information, additional information of surveys, and the folks at Southwest Center, or excuse me, Southeast Center are aware of all of this.

And so they're doing their best to try

to account for these changes in the fishery conditions that would, again, affect the relationship between the fishery-dependent data collected through the LPS and its use for estimating an abundance index.

So again, there's just a lot of sort of intertwined considerations here. And it's the sort of thing where we could add a question or two to the LPS, either the phone survey and/or the intercept survey, and that would help improve capture these sort of changes, then we're certainly supportive of looking into that.

We have added questions in the past for certain issues, like circle hook use or additional fishing methods, things like that.

So that's certainly well within the realm, but again, it depends on the nature of the changes in the fishery and what they do or don't impact in terms of information coming out of the LPS.

Is it catch estimates? Is it effort estimates? Is it a derived use of the data, like indices of abundance, things like that.

That's a lot of information. I'll stop there.

MR. BROOKS: Yeah, let's see if Matt or John Walter want to jump in on that at all. Mike Pierdinock?

DR. LAURETTA: This is Matt, I raised my hand, but no problem.

MR. BROOKS: Sorry, I didn't see it.

DR. LAURETTA: Yeah, exactly, just to build on what John said. So there's sort of two levels to this.

One is, is it capturing what the fishery is removing from the population, and that's its primary goal and we would say yes.

If you look at the removals, they do what it's designed to do, estimate how many fish are being removed.

Then there's an auxiliary use of it, which is the relative abundance. So that is the rate of fish being caught. No, the rate at which they're being caught.

And that is sort of a function of two things as we view it. It's the availability of fish to the fishery. As you mentioned, it can move inshore or offshore, and that can affect

your encounter rates, and then it's the catchability. How efficient is the gear type you're using?

And so this is where really the modeling aspect comes in, as John mentioned before.

It's essential to have that auxiliary information to know how to use that rate of catch.

If, for example, the gear types have doubled their efficiency, you want to -- you want to form the model that if you see a doubling of that catch rate, there's an effect in there that's separate from abundance.

And so this is a dynamic of what drove our three months or four months of weekly discussions is to improve an index to say, okay, an index has sort of been flat for the last years up to 2018, is that because the population is stable.

Well, we found out there were all these other factors that had been included, and it comes at two levels.

One is the standardization of that, how we treat that data to generate an index so you can account for it in the time series itself.

For example, the Wicked Tuna effect, we looked at the sea surface temperature, all these things that would drive that, and then there's putting that into the stock assessment model to tell it what auxiliary information do we have that we should inform the model?

And so there's two tiers, but those don't necessarily affect the actual estimates of fish being removed by the fisher, right?

That is sort of an absolute estimate of, here's what was caught. But then what you do with that catch information is another tier, and that's where those discussions we had in the back and forth of saying, tell us how the availability has changed, the shift northward.

We're making some assumptions about fixed area effects, so that if a fished moved away from Virginia, it looked as if the abundance went down.

No, the abundance shift northward, and when new expanded the survey, and took that effect out of the model, indeed we get a

different index.

So it's sort of tiers of information, but from its basic standpoint, the removals are the removals, regardless of what causes them, but then the index of abundance is sort of really where you have to truly understand how to use that time series in a model.

And so for me, the dialogue was really critically informative, and I think we produced a better index out of that.

And it showed. We saw some dynamics in the data that we hadn't seen before when we integrated stakeholder knowledge.

And I think that that is an extremely valuable exercise that we probably want to find a way to continue, but it's separate from the survey itself, okay, to be a little-winded but --

MR. BROOKS: Nope, that's super helpful. Thank you. Let's bring in Mike Pierdinock and then Jeff Kneebone. Mike?

MR. PIERDINOCK: Thank you. Thank you, Bennett. Thank you for the additional details.

Yeah, I had left a comment earlier there in the chat page. I believe that the recreational leadership and the different recreational organizations and for-hire organizations did a great job last year with outreach from Maine down to Maryland, Virginia, and so on.

And that's where we're part of the process. We're at the frontline and we were able to provide tremendous numbers of daily photographs of schoolies and other fish, landed from Maine down south.

And it just weren't photographs that, the photographs were tied into with the time of year, wherein this occurred.

So it provided additional lines of evidence of climatic shift. So that's what my comment was, to continue doing that, continue to reach out to us and we'll continue to reach out to our membership and provide those details.

In a sense, that was an aerial survey, which showed where the fish were, showed where they were up and down the coast in the timeline, and it appeared consistent with the observations of that climatic shift.

So I just wanted to note that. And we'll continue to do such. Now, with bluefin, just to know with bluefin, it's a different fishery north of Cape Cod or south of Cape Cod.

We typically have cycles. The bluefin cycle, how many or whether you're going to see schoolies that are north of Cape Cod and what numbers you will see depends upon a lot of variables, water temperature and foraged fish and so on, as it breaks off way out at the canyons at the Gulf Stream and what we normally see in the western Gulf of Maine.

But there used to be a cycle there that that cycle would be, maybe we'd see the schoolies every 5, 10, 15 years.

Past few years, you see them every year, and we're seeing them near shore. We're not seeing them 50-100 miles offshore.

And this is where the climatic shift comes in. It's consistent with this observation.

And as you know, if they're 50-100 miles offshore, that's in your typical distance beyond what your typical recreational angler is, or for-hire, is going to go out and target.

But who's always out there are harpooners and the commercial fleet, and their observations are consistent with ours if we're not there that there's tremendous numbers of schoolies there 50-100 miles offshore.

So what's changed now is it's closer and it's more accessible to recreational for-hire, or for the commercial size fish to the commercial fleet.

So these cycles, and I can provide multiple examples of other species that now we see annually in Massachusetts waters or farther north than we used to see every 5, 10, 20 years, but we see them every year now.

Another point or question that I'd like to make, because I know we have difficulty up here in Massachusetts with dockside intercepts and MRIP and so on, and it's more a result of the fact of where you need to go to get -- to get them done.

And I'll use Menemsha. Menemsha's on the Vineyard. That's where they filmed Jaws. Actually, it's a beautiful location, and that's typical, the hopping point for people north of

the Cape to come through to fuel up before they're going south, they're going to the canyons as well as coming back.

You can almost -- island the same way, the ports of Nantucket, as well as Chatham, maybe even Montauk, so I'm curious --

MR. BROOKS: Mike, you're breaking up just a tiny drop. I don't know if there's something different, but keep going. Just be aware.

MR. PIERDINOCK: All right, am I back?

MR. BROOKS: You are.

MR. PIERDINOCK: Did you lose a lot?

MR. BROOKS: No, just a -- no, just a little bit. Keep going.

MR. PIERDINOCK: Okay. So I'm almost done. So I'm curious whether you have those dockside intercepts, because for example, I would, you have to do Menemsha, you have to do Block, because in Menemsha, you're getting yellowfin, you're getting bigeye, you're getting bluefin, you're getting white marlin, you're getting them whether they go to the canyons or --

MR. BROOKS: You just cut out again, Mike.

MR. PIERDINOCK: -- shore and mahi, depending upon the --

MR. BROOKS: Mike, you're cutting out.

MR. PIERDINOCK: Am I back? Did you get -- did you get that?

MR. BROOKS: Not --

MR. PIERDINOCK: The point I was trying to make about -- well, the question.

MR. BROOKS: You were just saying basically the need to do dockside intercepts in Menemsha and Block Island because of the variety of what they're bringing back in.

MR. PIERDINOCK: Now, how then -- how then do they select, how does the LPS select whether they go there?

I know for Massachusetts, it's difficult to get dockside intercepts because it's so difficult to get over there and costs a fortune for somebody to be there.

So there's not as many that are done. But these are fruitful ports where you have a lot of data and information for what's been landing. Thanks.

MR. BROOKS: Let's let the LPS team jump in on that one. Thanks, Mike.
MR. SCHREIBER: Yes, there are sites in those locations on the vineyard and on Block Island, besides our selected using the probability proportional to size without replacement that Yong-Woo referred to earlier.
And, yeah, so, I hope that answers that question there, Mike.
MR. BROOKS: Okay. Thanks, Mike. Let's go to Jeff Kneebone and then Rick Weber.
DR. KNEEBONE: Hey, man, thanks again. You got me?
MR. BROOKS: Yep.
DR. KNEEBONE: Okay, so thanks for the opportunity to ask questions. I've always had this question and maybe this is the right time to ask it to the right people.
So I'm really interested in a catch and effort quantification in North Carolina.
Obviously, there's tons of recreational fishing effort there for HMS, and that's not a state that's part of the LPS.
But when I look at the presentations before, we see all these landings of something like yellowfin going up and I know that there's tons of yellowfin landed in North Carolina.
So I'd like to get a better idea of how those, how that effort is quantified. Is it through the Catch Card program?
Is it just through MRIP? And how that all comes together in what we see in the SAFE report and things like that when it comes to total recreational landings for species like yellowfin and bigeye that are caught a lot off North Carolina. Thank you.
MR. BROOKS: Okay, thanks. Who wants to jump in on that one?
MR. FOSTER: This is John Foster. So, I mean, I can speak to the programs we administer that cover North Carolina, but it might be better for one of the management division folks to speak to what we do or don't use.
MR. BROOKS: Sure. Anyone from HMS want to jump in first on this? I'm not seeing anybody jumping in here.
MR. MCHALE: Sorry, a little bit of lag on our end.

MR. BROOKS: Okay. Go ahead, Brad.
MR. MCHALE: So, I'm not sure I'm going to have a definitive answer when it comes to some of the other species that you just raised there, yellowfin, bigeye, because there aren't the same level of mandated reporting requirements for all of HMS across the board.
And so there are going to be some challenges where currently there are HMS requirements dominated by bluefin tuna at the individual vessel owner and operator level that they must report not only landings but also fish that are released and dispositioned and then approximate size classes.
We currently do not have the same requirements for yellowfin and bigeye. As it relates to the large pelagic survey, Jeff, I think what you're getting at is then there's that spatial/temporal coverage aspect, and then as you also noted is the state of North Carolina has implemented a census Catch Card program similar to the one implemented in Maryland that also has some of these species limitations of whether it's collecting billfish information, bluefin tuna information, and shark information, but it may not be mandated at the state level for all highly migratory species.
I think that's an arena that we're going to have to continue to look at, because luckily these programs have all -- what sources of information are at our disposal?
I'll just stop there.
MR. BROOKS: Thanks, Brad.
DR. KNEEBONE: If I could ask a follow-up --
MR. BROOKS: Yeah, go ahead, Jeff.
DR. KNEEBONE: So I guess my follow-up question, and this doesn't need to be answered now.
Maybe it's just a comment, is that as someone who uses these catch data for a lot of things, proposal writing analyses, is there any conversation about adding North Carolina to the LPS states?
Because it's obviously a state with a ton of recreational fishing effort for HMS. And most of the species that we're talking about here, all of the tunas, certain billfish, a lot

of different sharks, that's a haven for them and there's a lot of them down there.

So it seems like it might be good to add that state. Not sure if it's being considered, but I just wanted to make that point. Thank you.

MR. BROOKS: Thanks, Jeff. So we'll take that as a comment and then I don't know if there's anyone in HMS who wants to weigh in on whether or not that's at all something that has been considered or could be considered or will be considered.

MR. BLANKINSHIP: Well, I'll just mention that, yes, that is a very good idea, and it is something that has been thought about over the years and discussed.

And it's not outside the realm of possibility for continued discussion. Some of what also comes into play there is the availability of resources to be able to actually do that.

So it comes down to a lot of times the funding, the different sampling protocols of the large pelagic survey to be expanded and applied elsewhere and have a cost associated with them.

So that would have to be taken into consideration. And adding onto what Brad was saying, which was right on, is, I think, Jeff, you were talking about yellowfin in particular.

Of course, we don't have a requirement for reporting landings of yellowfin like we do bluefin and billfish.

And we do augment outside of the LPS area the imminent sampling that is other than the large pelagic protocol that applies to other states.

And that can be helpful for some more frequently landed species, but because of the design of that survey, it's not quite as reliable as the LPS for certain species.

And so we do utilize that information, however, and to the extent that we can.

And then also, there's the ability to utilize some of the state surveys once they're available and that information is available to add in there as well.

So it's a combination of things that go into, and you were specifically asking about a

catch estimation.

It's a combination of those surveys that get rolled into that catch estimate process.

MR. BROOKS: Great. And then let's bring in, let's take Dewey off mute. I think he was going to weigh in on this North Carolina question as well. Dewey?

MR. HEMILRIGHT: How about now?

MR. BROOKS: Yep, you're good. Yep.

MR. HEMILRIGHT: From my experience with North Carolina, predominantly when you look at North Carolina's catch, you have two inlets where majority of the yellowfin tuna would be caught at would be Hatteras or Oregon Inlet.

North Carolina is a state that, to my knowledge, has an enhanced MRIP reporting where it's, they have low PSEs and pretty good accounting of the catch during the times of the year, particularly to the charter boat.

But also a question to add on, given the new regulations in south Atlantic with charter boats having to report their catch, is eight -- I believe, and somebody maybe correct me, but I believe that they have to report all their catch.

If you possess a permit, any permit, that you have to report all your catch. And so I found North Carolina in some things, especially the MRIP, my frustration with mako sharks where a couple sharks landed in Wave 1 in 2019, produced 100 metric tons. I mean, stuff that's not believable.

Other things, North Carolina, the program that they have to use does a good job, but some rare event species, or whatever it's called like that, but my question, could somebody answer that?

Because I know with the reporting, I believe started January 1 of this year, charter boats have to report their catch in the south Atlantic, and I wonder is that everything that they catch.

It's my belief that it is. Maybe somebody can help me with that. Thank you.

MR. HUTT: Dewey, I can answer that. You are correct. Any charter boat with a council charter or headboat permit in the south Atlantic has to report all their catch now via their

council logbook.

That doesn't include necessarily captains with HMS permits.

However, most of the guys who are fishing for HMS out of North Carolina probably have the Atlantic dolphin/wahoo permit, which is one of the permits that triggers that logbook reporting requirement.

And you were correct about the MRIP estimate for yellowfin tuna out of North Carolina.

They are actually pretty good, and their PSEs are, typically range in the 20s, which for MRIP, particularly for an HMS species, is very, very good.

So at least for that species and all, MRIP is doing a fine job in North Carolina. But you're right, there are, yes, some of those rare event species like Mako.

Every once in a while we get a very large extrapolated estimated out of North Carolina that is a bit problematic.

MRIP is taking steps to deal with some of those estimates. We've got some new data standards coming out that are going to be addressing some of that, and I might turn it to John Foster to address some of that, because he works a lot more closely on those issues.

MR. FOSTER: Sure. Just to just add on quickly, a couple of things. So specifically for North Carolina, something that we have implemented in other states that have fairly robust offshore fisheries outside of the LPS range, Florida, one in particular, we've introduced, we've changed the stratification of the intercept design to include sort of an offshore stratum.

And essentially what that does is takes sites, individual fishing access sites, big boat ramp complexes, big marinas, where there are appreciable numbers of offshore trips that can be encountered and put those into a separate stratum so they can essentially be sampled at a higher rate to help improve the likelihood of encountering these more rare events, rare in the overall recreational sector, whether it's pull or charter, private angler or charter.

And so North Carolina is another

state. We've had discussions with our state agency partner to try to get that in place.

A lot of that was going on right before the pandemic hit and we will be working to get back to it as soon as we can.

That should improve things for the more -- for the less common things like shortfin mako, not yellowfin tuna.

It will also improve the yellowfin tuna estimates in terms of their precision. But for the things that are rare, with MRIP designed to be a general survey, it's just going to have a very hard time estimating those rare events very precisely.

So what you tend to see when you do encounter that rare event species, it's a -- it's a big estimate, relatively speaking, but most of the time, you don't see it all so you've just got a bunch of zeros.

You can average the big spikes with the zeros, you would have something that would be closer on average to a more accurate estimate.

But the issue is, how do you average and getting a trend that has some resolution in it and not just sort of flat lines that represent multiple years, things like that.

So there's work ongoing, but again, it will always be a bit of a challenge for the general survey to get real precise estimates on those very rare event species.

MR. BROOKS: Thanks, John. Let me go to Rick Weber, then Rusty, and then back to Mike Pierdinock. And then we'll go. Rick?

MR. WEBER: That was a really great discussion from Jeff over to Dewey, and it covered a lot of what I was going to at least ask.

I wanted to take advantage of having the LPS team here, being that we're in the middle of a seven-year project, and just kind of open the floor to you guys to, whether there should be changes.

Now, Randy brought up a great question of funding. That's a fact. It feels to me that a coast wide survey would be better.

I guess I'm going to leave that to you guys to discuss for us about what the strengths are about a single, homogenous survey.

And I also want, just from when we deal with ICCAT and even within the HMS, every now and then we hear this idea of moving towards a census because of those rare events.

And I wanted to give the LPS team a chance to remind us how much confidence they have in the survey model as opposed to the census model, because we always hear people going, well, it's easy, just count every one.

I don't have a clear question, so much as I'd like to be reminded of things and let the whole group hear some of the -- some of the thoughts that I've heard at times. Thank you.

MR. BROOKS: And it sounds like just sort of getting a sense from the LPS team as you ruminate on these kinds of things, what do you think and where does your -- where does your thinking go?

MR. FOSTER: I'll be happy to start this. In terms of expanding the LPFS, we are certainly supportive of that idea, again, working in conjunction with all of the HMS partners.

It is essentially a resource limitation issue. It would cost somewhere in the neighborhood of $3 million. That's essentially a floor, I think, conservative estimate.

Each year, if we were to expand LPS to cover the southeast, essentially, south Atlantic and Gulf, and perhaps a bit more to try to provide full temporal coverage, full annual, 12-month coverage or 10-month coverage in the existing LPS range.

So that's a -- that's an obstacle to overcome, to implement it everywhere. Clearly, we would support a standardized approach where it makes sense.

It helps ensure that the estimates are comparable from one state to another, one year to another, one species to another, potentially, depending on the use.

So whether the LPS is the right fit or not, that can be sort of an open question. It depends on the nature of the fishery.

If things are exceedingly rare, LPS does a good job, but for most of the species, I would say it covers maybe everything it's essentially managed.

But there can still be species that

are even rarer than that. And at some point, you do need sort of a very specialized program to try to get at those.

And then it's, well, you have to consider kind of reporting burden. So we're going to get a census on something.

What are the enforcement considerations? What is the outreach consideration to try to maintain compliance, participation, but we need specialized permits?

If we can cover it in sort of a survey approach, we're going to keep the burden down.

It's whether or not it can -- it's picking up the signal for those fisheries, particularly as they become more and more rare.

But just as sort of an example, the MRIP estimates in the LPS range on some of the more common tunas, for example, bluefin or the bays, in the LPS, the PSEs might be sort of 20 percent or less.

Pretty tight. Pretty precise. The MRIP estimates, you might be looking at a 50 percent PSE or higher.

It really is very different. So you're gaining, we're gaining a precision on those estimates with the LPS model.

And I think if we extended that, we'd see similar gains across the rest of the region.

But again, the fisheries still, same species but different geographies, different fleets.

There's no guarantee we would see the exact same gain without testing it and just seeing what we got. And I'll stop there.

MR. BROOKS: Thanks. Does anyone else from the LPS care to weigh in on that?

MR. LEE: May I share one graph?

MR. BROOKS: Yes.

MR. LEE: Comparability between the LPS elements and Catch Card record.

MR. BROOKS: Yep, please go ahead.

MR. LEE: I don't -- I don't have a share button highlighted.

MR. BROOKS: Oh. Can someone enable Yong-Woo so he can share his screen? There you go.

MR. LEE: Okay, this is the -- do you see the graph?

MR. BROOKS: No, we see a Word document.
MR. LEE: Yeah. Word document with the graph only?
MR. BROOKS: Now we see the graph. Okay.
MR. LEE: Oh, you don't see a graph? Sorry.
MR. BROOKS: No, we see the graph now, Yong-Woo.
MR. LEE: Yeah, so basically, I put -- this is a relative catch estimates, meaning I have relativized the catch and the catch estimate of LPS and also relativized based on the average across this 10-year LPFS estimates.
And also, red line is the relativized landing amount based on the relative catch card. Please remember the LPS estimate is a combined estimate for Maryland and Delaware.
That's how we estimate for the LPS area. And as you can see, they track very closely. And the correlation is above 85 percent.
So for the question of how reliable are LPS assessments relative to census data, this has been very, very good.
This is bluefin, tuna, by the way, across all size classes except giant.
MR. BROOKS: Thank you.
MR. WEBER: Thank you all very much. I really, pardon me, I really appreciate you going through that, and I don't believe there's a soul in the world outside of this country that would believe the effort that we actually put into recreational landings. I really don't. So thank you for what you do.
MR. BROOKS: Thanks, Rick. Let's go to Rusty Hudson. Rusty?
MR. HUDSON: Can you hear me, Bennett?
MR. BROOKS: We got you, Rusty.
MR. HUDSON: Fantastic. John Foster, Rusty here. In the past shark stock assessments, particularly sandbar and dusky, we had to review the LPS.
And one of the things that concerns me about getting down to North Carolina and is that sandbar and dusky for you all was not often encountered as much.

And so sometimes it wasn't a type of input we could always flesh some stuff out. But once you start getting around south part of Virginia and North Carolina you get into areas that will have a variety of different age classes of sandbars and duskies.

So how would you handle that if suddenly you had an uptick? And on upticks, have you seen an uptick in your LPS and sandbar and dusky, say, for the last five or ten years, like the Narragansett? That's it.

MR. BROOKS: Thanks, Rusty.

MR. FOSTER: I may need Daemian or Yong-Woo to jump in here, too. In terms of expanding, so let's just say expanded the LPS to North Carolina, we would almost certainly produce estimates -- the North Carolina data would just be used to produce estimates for North Carolina.

It wouldn't be sort of averaged in in some way to produce the overall LPS estimate. And we would, obviously, be careful about any sort of time series.

If North Carolina were added, that would clearly be noted that if you're using the sum of all the LPS estimates across all the states, you have to recognize that now North Carolina is part of it starting in this year and before it wasn't.

So that's one answer I guess I'd give. In terms of -- in terms of sharks being, say in North Carolina, sharks being more common in the overall mix of LPS species, really that should be a problem in terms of producing the estimates for North Carolina.

Again, because there's a statistical design in place. So we would expect to encounter trip with shark catch, let's say shark trips, in the right proportion to tuna trips, billfish trips, trips among the different species groups.

So that really shouldn't be an issue. If it were, then that would point to something that we need to fix with the design, specific to North Carolina.

Maybe there's some sites we're missing, maybe there's a different distribution of trips across the day or between weekends and weekends, things like that.

But in general, the design would

handle the fact that the fishery conditions in North Carolina that are aren't the same as they are in other states, just like within the LPS range, fishery conditions in Massachusetts aren't the same as they are in Maryland or Virginia, for example.

MR. BROOKS: Thanks, John.

MR. HUTT: I'd like that add something there, too.

MR. BROOKS: Okay. Go ahead.

MR. HUTT: Something I want to let folks know, ACCSP is currently actively doing, taking on an effort to increase sampling in the APAIS survey, the intercept survey for MRIP, in various states.

And they are targeting increased intercepts at offshore fishing sites in the south Atlantic because they want to improve some of these estimates for these various offshore fisheries, not just HMS but also the council offshore reef fish fisheries.

That effort kind of became last year and it's going to be ongoing for the next few years and we're excited to see how that might affect some of the PSEs.

Regarding Rusty's questions about sandbar sharks, we actually get fairly frequent reports of releases of those in MRIP, and the PSEs aren't bad for that particular species.

MR. BROOKS: Thanks, Cliff.

MR. FOSTER: Sorry, Bennett, could I just jump in on that real quick?

MR. BROOKS: Yeah.

MR. FOSTER: So, I'm glad Cliff mentioned the ACCSP project. I just wanted to maybe clarify, though, that trying to target sample to those offshore trips won't be introducing a bias.

It won't suddenly mean that now there's a lot more trips in the -- I mean, hopefully it will mean there are more trips in the data that we have that encountered those species, have catch of those species.

But again, because it's going to be done within the statistical design, there will be appropriate weighting on those trips.

So basically, as you see more of a certain type of trip in the data, the sample

weights on those trips tend to go down, so there's a compensation there.

So instead of it meaning now suddenly we're going to be over-representing those species and the estimates are going to go through the roof, that's not going to be the case.

We're actually just trying to get more precise estimates for those, and hopefully what it will mean is it will balance out that pattern of normal estimates and then suddenly a spike.

We will get to a more stable, usable trend in those estimates. And maybe everyone understood that. I just wanted to make sure that that was the case.

MR. BROOKS: Thanks, John. We're starting to get a little tight on time for this conversation. Willy Goldsmith, you have not had a chance to weigh in yet. So let me hand it off to you.

MR. GOLDSMITH: Thanks, Bennett. And, yeah, really appreciating this discussion on LPS and North Carolina in particular.

I guess, to follow up on what -- on what Jeff was saying and then what Dewey highlighted, certainly for those of us who rely on LPS for grant proposals and that sort of thing, it's helpful to know what information is being included and isn't being included, and just kind of a back of the envelope, looking at the -- at the data query online.

LPS yellowfin landings in 2019 were about 42,000 fish with a 15 percent standard error and then, Cliff, to your point, MRIP for North Carolina in 2019 was about 45,000 fish with a 20.4 percent standard error.

So certainly, it looks like there's obviously a big impact, which isn't a surprise to anybody.

My question in thinking about those two kind of parallel data sources with the LPS and the MRIP intercept survey, what's the appropriate way to integrate those results in order to really get a sense of the overall impact?

And how does HMS kind of consider that? So in the example that I just mentioned, for 2019, you were thinking of these as apples to apples, you end with about 25,000 fish.

I'm just wondering, is that something that the agency works to integrate and is that something that could be made available to folks?

MR. BROOKS: Not sure who's best to jump in on that question, so I'm just looking at all the different Zoom boxes and figuring one of you will.

MR. HUTT: So I just want to clarify with Willy, I guess what you're asking is how to we combine the MRIP and LPS data to get our --

MR. GOLDSMITH: From the outside looking in, if you're interested in learning what harvest would be, you would consider just going to the LPS data set.

Obviously, given the limitations and the range only going to Virginia, you only, you don't include that big North Carolina impact.

But as you alluded to, Cliff, the data are not only pretty large in terms of numbers of fish, but fairly for size, 20 percent standard error.

So how would you integrate those two data sources that are in the overall removal?

MR. HUTT: I guess when we're doing our reports for ICCAT or for stock assessments, generally, our primary data source is the LPS for most of these species.

And during the time period that it covers, the states it covers, those estimates take precedent.

For months and states where the LPS does not provide coverage, for most species, particularly like yellowfin, that don't have the catch reporting requirements, then we fall back to MRIP and use those estimates.

However, for the species that have their -- you have the mandatory catch reporting requirements like bluefin tuna, our secondary data source, primarily for those estimations, is the ALRS catch reporting and the state Catch Card report.

So we don't have to prep as much for bluefin tuna or billfish. But --

MR. GOLDSMITH: Sorry, Cliff, just a quick follow-up. I know we're short on time. So in other words, in the ICCAT reporting, these MRIP data are considered sort of a complementary data source in addition to the LPS, for example,

for yellowfin tuna, the total number of fish would incorporate that to some extent?

MR. HUTT: In a sense. It was definitely like the secondary complementary for the LPS region. Outside the LPS region, it becomes the primary data source.

MR. BROOKS: Makes sense.

MR. HUTT: Also now, from the Gulf of Mexico, we're also adding LA Creel and data reporting from Texas Parks and Wildlife.

And LA Creel actually produces some pretty good estimates for yellowfin tuna in terms of their local precision.

That's the Louisiana Creel, for people who don't recognize the abbreviation.

MR. BROOKS: Thanks, Cliff. I think at this point, everyone has had a chance to weigh in at least once here.

And I know we want to start turning toward the listening session.

If there's one hand left that just absolutely is convinced that your question and comment is something that everyone would really benefit from, leave your hand up.

Otherwise, if you could lower your hand, then I'll know who's got the little golden nugget that we want to close out on.

And you all don't. One of you does. All right. Well, you've left me in a horrible position here. All right, Mike Pierdinock, weigh in, and then we're going to move on. Quick comment.

MR. PIERDINOCK: Thank you, Bennett. You keep going in and out. It must be me. I want to just expand upon that Dewey had mentioned, because there is a problem with the data and how it's reported.

-- with the proposed wind turbine locations and if there's going to be also aquacultural areas, they're going to look at the same thing.

Do we fish these areas or don't? And how do we record them? Now, I'll give an example. I have a northeast federal groundfish permit, and I've had it for a long time, and as a result, I have to report everything.

And what is great now today is it's just one stop shopping. HMS gets reported

because I have the HMS permit and then I have a southeast permit for mahi and wahoo.

Push the button, everybody gets reported. But now what we found through addressing the wind turbine areas, which are the size of Rhode Island south of the vineyard, that if -- there's 684 Massachusetts state --

MR. BROOKS: Mike, we're losing you again.

MR. PIERDINOCK: -- fish for --

MR. BROOKS: Mike, we're not hearing you. You're going to have to put it in the chat. If you can hear me, Mike, we're going to have to have you put it in the chat.

MR. PIERDINOCK: You know what? I'll try another mechanism and I guess I can talk about it later.

MR. BROOKS: Okay. Yeah.

MR. PIERDINOCK: Let me call back and we'll talk later.

MR. HUTT: Sorry, Mike, when we can hear you, we can hear you, but when you're gone, you're just completely gone.

MR. BROOKS: You're just completely gone. We're missing too much of it. All right, well, I'm going to take -- I'm going to take that as a sign that it's time to transition.

So John, I want to just give you a chance if you want to, sort of, any closing remarks from your perspective on behalf of the team of this conversation and next steps or any questions you want to fold in here.

MR. FOSTER: Sure. Thanks, Bennett. And I'll just start again with saying thanks to Randy and the HMS management folks for coordinating this and organizing it, and again, all of -- all of the participants.

It's good that we did this. We're happy to get the information about the survey program out.

We're also equally happy to hear back, particularly on where the survey seems to be working, things that might be able to be improved, again, whether it's the direct products of the survey, the catch and effort estimates, or this information that could be provided, could be added to the program, collected for addition sort of derived uses, but still that are key for

assessment and management purposes.

So again, just a big thanks to everybody involved today. We're certainly available for continued dialog moving forward.

And as we keep making progress on the redesign project, obviously we'll continue to give updates to that through say maybe future AP meetings or other special meetings like this one as needed.

And in particular, if there's going to be a delay in implementation of the new -- the new program or if we're seeing sort of surprising things that might suggest there will be bigger changes with the redesign once its implemented, and it certain will, we'll work to get that information out as quickly as we can.

So again, I'll just finish with a big thanks and glad that we were able to make this happen today. Thank you.

MR. BROOKS: Thank you. Thanks John and to the whole team, and I'll just fold in, really good conversations and questions and comments.

A few of the sort of themes that jumped out at me were comments around compliance, sort of early on, wanting to understand are there biases in the sampling approach that we need to be mindful of and thinking about, a lot of questions swirling around shifts in fishing patterns, shifts in fishing movement, and how nimble is LPS in catching that and adapting to that, a lot of comments on the value of dialogue with recreational leaderships and stakeholders to be informing your work and then sort of toward the end here, conversation around scope and in particular, North Carolina.

So thanks, everyone, for the comments and contributions. At this point, I want to shift to the Rec Roundtable, but take 60 seconds, move your bodies, stand up, just stretch, move around, do whatever you need to do.

I'm going to turn off my video and move my body, and we will reconvene in one minute.

(Whereupon, the above-entitled matter went off the record at 2:01 p.m. and resumed at 2:02 p.m.)

MR. BROOKS: All right. So 2:00, I

want to jump into our last conversation then about the next hour and a quarter or so in a really open HMS listening session, what HMS refers to as a Recreational Roundtable.

The intent here really, this is a listening session. It's an opportunity for you all to share issues that you want the HMS program to be thinking about.

There's of areas you could go with and lots of issues that have come up over time in HMS conversations.

But this is really wide open. But I think I want to hand it off to Brad and Cliff just to say a few introductory words and then we'll really open it up to you all.

MR. MCHALE: Great. Yeah, yeah, thank you very much, Bennett, and thanks, everyone, for your time here.

We understand we're in the homestretch before a holiday weekend and I know that there's other places you can be spending your time, so we appreciate it.

So what we've really kind of set up this afternoon for was to really kind of move beyond what we discussed this morning in the first portion of this afternoon, survey-centric issues, and really just open it up.

Really, I'm here at the HMS Management Division. Know that there's a whole litany of different issues at play when it comes to managing these species recreationally or collectively, which is recreationally.

And we want to take this opportunity to make sure that there weren't issues that we do not have on our radar, so we're giving them the proper attention at our level.

But even if we need to go beyond to more of that action level of bringing in Russ and some of his thoughts of what he's hearing around the country, just to make sure that we're not having any blind spots.

And I know, for those of you that have had the pleasure of enduring the HMS Advisory Panel meeting throughout most of this week, I know shark depredation was a big issue that got some air time throughout the week, obviously, reporting, large pelagic surveys as well as electronic technologies, which we've touched on a

little it.

But what are the constrainers? We really want to open it up. We're not going to have answers to everything, honestly, but we do want to make sure that we have things on our radar.

Cliff, anything else you'd like to add before we kind of --

MR. HUTT: Yeah, I was just going to -- I was just going to throw out there, all kind of subjects related to the HMS Recreational Fishery are on the table.

And this isn't just a period for you to ask us questions. This is also a period for you to give us your thoughts on those issues and provide your comments.

Russ Dunn is on the line here with us as well, and he is interested in hearing any thoughts you might have on HMS-related topics that would be of interest to consider for the upcoming Recreational Summit as well.

So the table is yours. Just raise your hand in the chat box and we will take you one at a time.

MR. BROOKS: Great. Let's open it up. I'll take them in the order that the hands just went up. David Schalit, Rick Weber, and then Willy Goldsmith.

MR. SCHALIT: Okay. Cliff and Brad, I've got three items for you. Recently, the decision was taken to combine the two indices of abundance.

That would be fish from 66 to 144 centimeters, okay? That's fine. But are we aware that there is -- there is another group of fish from 145-177 centimeters, which would be nominally, let's say 60 inch to 73 inch fish, which are recreational sized fish, for which we have no index?

And I'm not necessarily proposing that we should have it, but what I'm worried about is that there seems to be an absolute dearth on that -- on that size of fish, when I know personally that there are many of those fish being caught.

So it's kind of awkward to consider that the data is suggesting that these fish, when they reach 60 inches disappear from our data and only reappear when they reach 73 inches.

So there's something that could be -- that could be a potential blind spot. That's item one.

The second item I wanted to mention is, has to do with ICCAT. Until now, bigeye and yellowfin have been managed by ICCAT under a single Atlantic-wide tack.

So that means one magic number, 110,000 tons for yellowfin for all the nations that harvest that fish, and something similar for bigeye.

More recently, bigeye has adopted a fixed quota for the largest harvesters, but not for everyone, just the largest harvesters, and we are headed towards an allocation key where it is, there is this certain probability that the U.S. will be looking at a hard quota.

And the same thing could be said of yellowfin as well. So in your seven-year planning, it might be worth, it might be worth considering the possibility that we're going to have to sharpen our pencil on these landings that are taking place on bigeye and yellowfin in a way that we haven't in the past, only because ICCAT is going to be looking for more precise information.

And then I want to -- I want to end my comments with what I consider to be the most vexing problem I have with regard to the recreational fishery, and that is, I believe that a lot of catch and release of fish that are caught and released, that data is falling between the cracks.

I believe that if, in any area where we have a high density of bluefin, and speaking of bluefin now, we have a high density of bluefin, we could have the reasonable expectation that we will have lots of catch and release going on, because the fishermen will catch the fish that they're allowed to keep, and then they will continue to fish for the rest of the day.

And I receive regular reports from the fishermen on this, in which I'm told that they interacted with 15 fish in one day, 20 fish, 25, even up to 30 fish in one day.

So when they come back to the dock and there's an intercept that takes place, maybe that guy has one fish on his boat but he's interacted

with 20.

But the only one that gets reported is the one that's on the boat. Or maybe it -- maybe if the guy's in the mood to say something to the -- to the -- to the interviewer, the interviewer will ask him, what else did you do out there besides catch this one fish?

If he's in the mood to be honest, he might tell you, or if he's -- or maybe he'll lowball and say, which I think is more typical.

I have not yet been able to find a way to address this problem, but this is a serious problem which will -- which will affect our estimates of recruitment for sure.

And the other aspect that -- just one thing, I want to bring is that -- is that I don't believe the survey captures catch and size data for releases.

It only asks if a release -- if anything else was done. And catch and size data is critical.

So that might be something which we want to add to an estimate of the actual length of the fish. We might want to add to that questionnaire. Thanks.

MR. BROOKS: Thanks. I'm going to leave it to the HMS Team whether or not you want to be responding to some of these or just listening, so your call.

MR. HUTT: I saw John Foster come back on and I think he's edging to answer some of those questions, the last point.

MR. BROOKS: John?

MR. FOSTER: I can hold --

MR. BROOKS: No, it's fine.

MR. FOSTER: Okay. Just quickly then. So specifically on the last point about the bluefins release, it is by size class.

We are relying on the captain's recall, but we do, again, we do record for bluefin the releases by size class.

And in terms of, again, it's self-reported information, we can't confirm it, but in terms of the relationship between landed fish and released fish, typically when we have landings, we also have releases that are to the same magnitude or sometimes two, three, or more times higher than the landing.

So it's in the queries and we can provide additional summaries if needed, but released information is reported as well as the landings information.

MR. MCHALE: To build off of that, David, in the self-reporting capabilities in the automated landing reporting, so whether through the HMS app or on the website, you can also have the ability to collect the release information by size class.

Just like John had mentioned, there's really no verification tool to then substantiate it's there, but I think the issue that you raised is paramount to everyone that's on the call.

And this was discussed throughout the week at the AP as well is how do we then take a concerted effort to inform the fishing community why certain data elements are being asked about and what importance they have to that individual.

All of a sudden, if somebody's asking how many yellowfin tuna did you release, that it becomes less of a mindset that that information is going to be used fishing opportunities for that individual, versus what are the downstream implications?

And this becomes paramount, especially when some of the bluefin tuna indices discussions is that if individuals think, well, if I report I caught ten fish, is the agency going to impose some sort of tally estimate on that, therefore I'm going to say zero, versus John Walter and Matts of the world want to know that you interacted with those ten fish because they aren't going to show up in any landing data.

So I think that's going to be this challenge, both the industry and publication and regulator, as well as the fishermen themselves, to try to shift that culture of how powerful this data can be versus threat.

MR. BROOKS: Thank you.

MR. SCHALIT: Thank you.

MR. BROOKS: Rick Weber, your hand went back down, is that because you are not in the queue anymore?

MR. WEBER: Yes, that is correct. I don't --

MR. BROOKS: Okay. You've run out of things to say, Rick. Okay. Willy Goldsmith?

MR. GOLDSMITH: Sure, thanks, Bennett, and everybody again. I guess somebody has to bring it up, so it might as well be me.

As everybody well knows, a few weeks ago Vineyard Wind 1 was approved, 16 lease areas up and down the east coast.

And there's obviously a whole lot of attention being given right now to collecting baseline information to inform offshore wind development as well as putting modern guidance in place and we're certainly supportive of what we've seen with NOAA's general involvement in informing that effort, and saw the report that was released earlier this week about potential socioeconomic impacts on the for-hire industry.

And my understanding is that most of the data that was used to inform that were from vessel trip reports, which the coarseness of that data, as well as what's in the large pelagic survey as described earlier, can make any real conclusion about the utilization of this wind areas not particularly precise.

I think, off the top of my head, I think it said the Vineyard Wind 1 area was visited off three trips for example in 2018, which I think anybody who fishes in that area is aware that's a pretty significant underestimate.

And so I guess I have kind of a comment and a question. The comment is that I really hope that the HMS division is going to be involved in the -- I the process when it comes to helping with baseline data.

Obviously, a lot of these areas are, and offshore areas might be frequented by HMS permit holders.

So on the recreational side, I would certainly hope for some engagement by the HMS folks and just wondering if there's a plan to be working with others at GARFO and elsewhere who are in the process of trying to get a good sense of what areas are frequented by permit holders and what they catch there to get a sense of how offshore wind development is going to impact them. Thank you.

MR. MCHALE: So, thank you for that, Willy. I can let you know that HMS staff are involved in those internal discussions and collaborating with other parts of the agency.

So from the management perspective, we are sharing what we have available. That comes with some challenges.

First and foremost, I think as everybody on the call is aware, that having precise geographical location information on for-hire fishing or recreational fishing is difficult to come by.

Folks don't want to necessarily want to share that data, and that history goes back for a number of years, and therefore, we don't necessarily have that level of precision in the data to forward onto the agencies that are kind of at the raids of the wind, BOEM.

And that does pose challenges. That posed challenges in the establishment of protected areas, monuments, and then in turn wind, if we don't have that level of precision.

And so that's something that collectively, I think we're going to need to overcome.

But to that effect, we are actively contributing what HMS data we have, at least from the agency side, to at least do our diligence in trying to inform BOEM and their analytical documents to the best of our ability with what we have on hand.

Obviously, it's then incumbent upon them to use that information, but I think we can also recognize that there are some challenges in the spatial resolution of the data to help really support what the industry is kind of looking for there as far as importance on particular grounds in their fishing activities historically.

MR. BROOKS: Thanks, Brad. Marty, I don't think we've heard from you today yet. Why don't you jump in?

MR. SCANLON: Yes, Brad, you just said something just now about these people should believe in you that you're using this information that they're voluntarily giving you to their benefit.

But how do you expect them to believe that when you see the way the agency has treated pelagic longline industry over the past 30 years that all the data that we produced for you?

We are the leaders in data collection. We had a research platforms for HMS in the

Atlantic and you've regulated out fishery to the point where we're just about out of business.

So why would any believe when you tell them that you're giving -- they're giving that data to you and you're going to extrapolate that data and use it on their behalf to better their fishing and better their fishing opportunities when you look and see what you've done to us.

MR. BROOKS: Thanks, Marty.

MR. MCHALE: I hear your concerns there, Marty. I don't think I used that exact verbiage. I pretty much just said to Willy's question there is that we're passing along the data that we do have, helping to inform the decisions, wind forms, or shall I say the wind farms, isn't necessarily in HMS.

But the data that we have to help inform decision making is being passed along.

I would say in the same context, I had discussed earlier in the week, Marty, and I know that your feelings have come through accurately and strongly, but the agency has done things with the data derived from the pelagic longline fishery in numerous ways, and I don't necessarily want to go over the ground like we did over the past week, but for at least one data point in particular, there is a number of gear restricted areas or previously closed areas of for bluefin tuna have been converted to monitoring with the potential of just having them open wide.

So those are steps in the right direction. I believe strongly about that. Also have heard you as well as others that the expediency that some of the shifts are taking place in the commercial fishery, in particular the spatial management as it relates to the longline gear type, aren't coming nearly as quickly as you desire.

And that hasn't fallen on deaf ears, either. But again, to get back to what Willy was raising is that we're passing information through to the regulatory agencies that are at the helm of wind and wind energy.

There's some challenges with that data around spatial resolution, and that's really what my response was hinging.

MR. BLANKINSHIP: If I could jump in to bolster support for Brad's response here, and

I also want to kind of -- while I appreciate Marty's comment, I want to put us back on track too of not get too sidetracked into the discussion of project longline fishery.

This is a Recreational Roundtable, so I'd like to try to refocus on the recreational aspects.

MR. BROOKS: Thanks, Randy, that's just what I was about to say. Thanks for jumping in on that. Ray Bogan, jump on in.

MR. BOGAN: Thanks very much. I want to add a couple of things in this regard from a perspective standpoint, and that is the concern over the use of data.

There has long been a tendency on the part of fishermen to try to guess what may be done with data, as a result of which there have been some challenges that have arisen.

And part of that is a trust issue that, to state it otherwise would be disingenuous on my part.

So certainly, it's there. Having said that, however, the attempt here is improvement in data.

It must be stated here, and it must be stated often that we have a data system that can always be improved, but we have a data system.

When I hear folks refer to the international community, having been involved in the process on behalf of the United States for a good long time and having had an opportunity to speak to representatives of many, many entities, international entities, whether it be the EU, Japan, Canada, whatever entity we've dealt with at the time, we have a strong track record that folks are trying to make stronger.

I do want to make that editorial comment because walking out of here, I don't want there to be this thought that, oh, gosh, we are all broken.

No, we are in a quest to improve. What we have is considerably better than the rest of the international community has.

So I think that needs to be stated in light of the public comments that have been previously made.

Take it a step further, there is no doubt, there is no question that improvement is

sought both by the fishing community as well as by NOAA.

So again, I think that's a perspective that I just felt as a result of that which had been stated so far had to be raised.

I want to raise an experience that many of us have had in the past with regard to data.

This is not something that is restricted to highly migratory species, and that is the reluctance of fisherman to turn over data with regard to geographical location of catches.

It applies in almost all fisheries. And one of the -- I'm sorry -- cut -- more than one side had the experience, both meaning the Army Corps of Engineers and various governmental entities to provide additional data so that when certain plans were done, primarily on bottom related areas, an example would be the mud dump site and the proposed expansion within the New York Bight, we were able to provide essential data to the governmental entity, which was checked, worked on as a result of which, plans were changed.

With all that NOAA has on its plate right now, this would be very difficult, but it might be worth looking into as it relates to wind farms, which some of us think will be very, very deleterious to the fishing communities.

There are those that take a different position, but it's relevant because of how it was raised both by Willy and others, who I think has a very different position than many of us fisherman, full-time fishermen in particular, and that is the ability to go to folks that have been long involved in highly migratory species to give areas of concern, fishing areas of concern, whether it be bringing log books or whatever.

I've done it. We've been successful. It's with governmental entities and it went into the decision making process.

So I would suggest that that kind of thing be considered to the extent that highly migratory species, or rather the data -- the data group that deals with highly migratory species, both through LPS and MRIP, consider getting some of that additional data.

I think it would be very, very

helpful, and we can provide it and I've seen it historically successful.

And it can be done here in that same regard. Getting back to it, I have been critical and I've tried to make recommendations and worked very hard last year, for example, with regard to bluefin reporting.

I've done it with yellowfin, I've done it with bigeye, I've done it with every species of the course of however many years, far too many decades to recall.

However, I get the frustration that was expressed by a number of these folks and the concern, and it is a real concern.

How will the data be used? Will it be used against us? And whether that perception is accurate or not, doesn't make as much a different as whether it is the perceive reality.

So just a thought and I can sure relate to the idea that the longline industry has been beaten down enough, despite their sacrifices and promises to feel very, very weary.

You get beaten up that much, you get beaten down that much, you're going to feel it, in the data context or any other.

So thank you for your time, but just consider that perspective.

MR. BROOKS: Thanks. Thanks, Ray. And I know from working I've done on the west coast, there's definitely been issues with green protected areas out there where industry has been able to share information and it's been really helpful in informing managers if they're drawing lines in the water.

MR. BROOKS: Russ, you wanted to jump in for a second here?

MR. DUNN: Yeah, just a comment on this, if I could. And to step it back to just a larger context, with, one of my concerns for the recreation community, whether it's for hire or private, and I guess it's a little heavier on the private side because of the systems that are either in place or emerging in the for hire with electronic reporting is this data issue with the expanding interest in those ocean uses that we're talking about with wind, with aquaculture, with contamination of areas for conservation under 30x30.

I don't see a good mechanism of use right now for particularly in private rec communities --

MR. BROOKS: You're breaking up a little bit. If you just cut off your video, we might get a better sound quality.

MR. DUNN: All right, sorry.

MR. BROOKS: That's okay. Go ahead.

MR. DUNN: So what I'm concerned about is how do we ensure that the recreational communities, fishing grounds, locations, are factored into all these different interests, wind, aquaculture, conservation, and other emerging ocean uses.

I understand people are reluctant to hand over the data. We don't frankly even have a mechanism to capture it right now, particularly from the -- from the private rec side, but if we can't figure out some way to inform these deliberations, the rec community is likely to find itself in a difficult spot.

NOAA's not in charge of, for example, wind. We aren't leading that effort. We are simply a consulting agency providing information.

And so we've got to make sure these other agencies are informed about where location is occurring for a whole range of reasons.

So it's something that we all need to think about. How do we resolve, how do we get past our fears of the data is going to be used against me, because I can assure you, if we can't figure it out, you're going to see things popping up in the areas where you fish because you didn't have any data to show.

MR. BROOKS: Thanks, Russ. Mike Pierdinock, let's see if we can try you again. And if you do have your video on -- well, you don't have your video on. Never mind. Go ahead.

MR. PIERDINOCK: No, I changed. I'm on the phone. Does this work?

MR. BROOKS: Yes, if you can -- it's a tiny bit faint, but go at it. Speak up.

MR. PIERDINOCK: Well, thank you. When I got disconnected I was in the midst of going down the road to expand upon the issues with wind turbines, the proposed wind turbines.

And Willy did a good job of explaining the issues. Both me and Willy are the

recreational representatives on ROSA for the mid-Atlantic and New England, so we've been intimately involved in this.

One thing that I wanted to point out is the inconsistency with data is that, for instance, there's 680-some state permitted, Massachusetts state permitted charter boats.

They don't have Northeast Multi-Species permits because they don't groundfish in federal waters.

They only have HMS permits. So if they go out into federal waters, they go out to pelagics, the only thing they have to report if they catch them is for bluefin.

So there's a whole major data gap with that state, with Massachusetts.

And I have to suspect other states up and down the coast are catching fish and they never get recorded.

Now, maybe I'm getting old and been doing this for too long, but there was a designed habitat research away proposed at Stellwagen Bank National Marine Sanctuary close to 10 years ago.

And I kind of chuckle because this whole process is consistent today with what we went with back then to identify the data gaps and show the errors in what you rely upon for VTRs because it's the center point of where you fish for the day, it's not exactly where you may fish.

Unfortunately, well, fortunately or unfortunately, the way we had to address that, and we're addressing it right now for the Massachusetts for-hire fleet, is that I have to assemble all the charter boat captains.

And we assembled -- and we assembled through the sanctuary and showed up in tremendous numbers and showed them in detail, we do fish these areas, no doubt.

Now, fortunately, we're doing the same now for Cox's Ledge and those other areas, because, for instance, there's a $42,000 compensation number for Cox's Ledge.

And as Willy said, he mentioned what was outlined just for Gordon's Gully location, which is just ridiculously low.

So ultimately, the only way we're able to fight it is to spend a tremendous amount of time, assemble the forces, and get them there.

But now for us to do that for every single wind turbine company, it's just not feasible.

So I don't know what the answer is, but one of the things to throw out there is that it's always been my understanding that for fishery management purposes, the transiting details remain confidential.

And there seems to be a lack of understand of that by others that want to site wind turbines, want to site oil platforms or aquaculture or so on, because that's different. That is not for fishery management. That's for siting location.

So that's where we get into confidentiality. That's where we get into concerns with all ultimately was attempted with the DHRA at Stellwagen and we ultimately won.

And now we're up against the fact that, let me use Vineyard Wind as a perfect example.

We've been fighting this up here in Massachusetts for five years while a lot of people on this call or beyond this call didn't even know what was going on.

Yet we fought and we tried to prevent. First started with something as simple as Captain Seagull's Fishing Charts to show where we fish.

And then the fish, then us in the fishing community showed up and showed them exactly where we fish.

Now the thing to point out is, Russ is right, the National Marine Fisheries Service agrees with us. The state regulatory agencies agree with us. It's BOEM that does not.

They don't care to hear what we're saying, and then they put the proposed wind turbine right where our fruitful fishing area is, not only for the rec where I am, but also for the commercial fleet.

Why don't move, I might not understand. Now, we've been able to demonstrate to them, and I'll give you an example.

If I go sharking, I'm going to have a chumsman. I'm going to power chum for a mile, then I may drift two to three miles.

And I may hook up to a ballistic mako, and now with the grid pattern with these wind

turbines, I'm not going in there.
Or if I catch a monster bluefin, I'm not going in there, either. There's too many safety factors.
So we're going to have an access issue and they're already aware of that (audio interference) gear types or approach, because you have to break it into whether you're ground fishing, where there's still safety factors going in there, or whether you're targeting pelagic.
So we have a lot of grounds that it's understood. These are artificial reef, they're fish aggregating devices, and they're going to have a benefit for certain species, and it's going to be a mystery of whether it's -- there's a problem with others.
Now, for Cox's Ledge, for example where we go after pelagics, we go there for cod.
If the wind turbine's now change that to a black sea bass area, we can get that near shore. It needs to remain that way for cod.
These are the kind of questions that those that want to do nothing but say it's a good thing but not recognize the issues with it don't care to discuss.
Now, what we've all, what I or we have all simply tried to do, and I believe Jeff Kneebone's on this call, is that I think, and I've been pushing it, that what Jeff Kneebone did for Vineyard Wind to identify baseline sampling for the recreational for-hire fleets be done for every single wind turbine area.
Because if he was able to, through the data search that he did, of tag and release, tournaments, you name it, yeah, there's, no doubt we fish there.
Now that deals with that, then you have to get the baseline conditions of what are there.
Then to get who's fishing there for potential damages, the fishery changes for the for-`hire fleet. That's another problem.
And as I said, the only way we're dealing with that right now is to assemble the masses and have them show up and basically indicate they're fishing these areas, but it doesn't reflect that in the VTR because it says I'm fishing at the Claw for today, where I may

have left Menemsha, went to the Claw, went to Cox's, went to Vineyard Sound and then went home, and it provides the center point.

And I think you all know the difficulty with that. And lastly, I agree, the purpose of this webinar is to provide recommendations of how to improve it.

We have a system in place. We're trying to improve it. It can be frustrating, and hopefully there's going to be ways down the road to fix it, because we're dealing with it now up here and they're coming.

The wind turbines are on their way. They're going in. And hopefully they're not going to be the detriment for us or the resource. Thank you.

MR. BROOKS: Excellent. Thanks, Mike. And just to your point, Jeff was on the call earlier.

I don't think he's on anymore, so just as an FYI. Dewey, I think you've been waiting to jump in here.

MR. HEMILRIGHT: Yeah, thank you. And I also thank Mike for giving us some of his secrets, how he fishes for large makos.

I appreciate your presentation today with the LPS. It's interesting to me where I'm in North Carolina and the use of the MRIP survey here.

I think that before any furthering of transporting the LPS further south, I think there's a wealth of information that can be gathered from environment conditions or water temperatures, the catch of the charter boat industry, what particular species they're catching, the times of the year.

You don't catch bigeye tuna in Morehead City. And there's only two inlets, three, one used very little, north of Cape Lookout, which would be Oregon Inlet and Cape Hatteras, similar to Ocean City, Maryland.

So you have most of the fishing predominantly for a few species here that's in a certain area.

And there was a -- there was a dolphin/wahoo roundtable that was done by Mandy Karnauskas, might have pronounced that wrong, and Matthew McPherson.

And it looked at the catches of mahi in North Carolina and Florida and it gave a presentation where they met with stakeholders and they showed the difference between the two.

But not only that, they went on social media and they looked at, they had a student look at 1,900 pictures over the couple areas that they picked out, and they counted 35,000 fish.

And it also showed the different time, what was being caught during that period of time.

So there's a wealth of -- and I don't mean this disrespect, but there's a wealth of common sense knowledge on social media that's out there that might could be used to be incorporated or somehow looked at with the science knowledge that has to be done.

Because boats in the -- in the -- they want to take pictures and they're going to tell about what they caught and show what they caught.

And it might be some way to gauge to help these surveys that have these PSEs that ridiculous, crazy, and managers haven't been able through time constraints or financial dollars in three or four to fix -- to fix the spikes.

So there's a wealth of knowledge that's out there that could be done in the future, probably from participants that would help influence or get a better understanding of what's caught and the makeup through the seasons and all that.

So thanks for the discussion and thanks for letting me participate.

MR. BROOKS: Thanks, Dewey. David Schalit, is that a new hand or is that left over? Will you take David Schalit off?

MR. SCHALIT: No, I'm here.

MR. BROOKS: You're there. Okay, go ahead.

MR. SCHALIT: Hi. I hope John Walter and Matt Lauretta are still on this call. The SCRS is planning on moving to a management strategy evaluation in 2023, as compared with a conventional assessment.

The promise that MSE presents is this possibility of quantifying the mixing of the two stocks, the Mediterranean and the Gulf stocks.

One of the -- one of the issues we've had in the past in estimating spawning stock

biomass has been, in the past, using the conventional methods, is that the resultants are somewhat clouded by the fact that we're counting eastern migrants as well as western spawns.

Okay, so there is this terrific new toy called CKMR, close-kin mark-recapture, and we also have otolith data, and you guys are all familiar with because you're doing some sampling of these.

And what I'm suggesting is that we have a singled out opportunity because of this upcoming MSE to actually do something with this data.

And so what I'm suggesting is that maybe you guys would look with a view toward perhaps ratcheting up your sampling of these otoliths.

Otoliths is providing age and natal origin, and CKMR is providing absolute biomass and also natal origin.

And I remember having a conversation with Matt at one point, in which Matt suggested that there could be a problem.

I'm not sure exactly how that went, but that there might be an issue with regard to sampling juveniles, and I just don't recall what it was. So maybe he could comment on that. Thanks very much.

MR. BROOKS: Yep, and Matt is indeed on. Matt, you want to jump in on any of that?

DR. LAURETTA: Sure, David. You're absolutely right that for me, we should be looking to the future to understand stock mixing through the genetic sampling, which this LPS program is getting a pretty good spatial coverage, but not high numbers.

And then there's the Gulf of Maine program that's been funded through BTRP, which is pulling in about 1,000 to 1,200 fish from the -- from the commercial industry.

And that's giving us a very good snapshot of the composition in our fisheries, and we have that now going back to 2016.

So the genetics are going to be a game changer and we should look to the future for that data when we hopefully roll out a population estimate and then we also get the composition.

The problem we're having from the

close-king standpoint as it was sort of traditionally defined from the Australian CSIRO and for southern bluefin is that they're able to get high numbers of ages, especially two and three that they're using as their recapture of adults.

And so we attempted to put a sort of a call to fishers to see if they could go get young of the year or small juveniles with some exempted permits for collection, and so far we've come up with I think two to five fish over four years.

So on one end it's a good thing we don't have a fishery that harvests juveniles like in the Pacific. We see where that's gone with the large scale purse seine.

We saw what happened to the Mediterranean when they harvested a ton of juveniles, and especially what happened to our fisheries in the mid-2000s or so.

And so it's a good thing but it's also a double edged sword for these estimates. So where we've gone to is the larval sampling where we can get Gulf of Mexico juveniles.

By definition, if you collect a larvae floating in the Gulf of Mexico, it is a -- it is a western born fish without a doubt, but what we don't know is the composition of juveniles before they hit the fishery.

There would be a lot of value to having these stock composition estimates of two- to three-year-olds where we still have about a five-year lag period.

And it really comes down to the conservation of the western stock, is that we want to know if the juvenile pool is moving up to 100 percent western origin.

That means the supplement from the eastern or potentially either a high western cohort or a low eastern cohort, we'll know that when w couple it with the stock assessment.

But right now we're getting the composition as they are in the fishery, and we would have better predictive power if we could define these compositions when they were smaller, before they really hit what is our core fishery, is eight to twelve years and then Canada is probably eight to -- out there, the oldest fish

out there.

So what we really want to move to in our modeling is the ability to project forward these cohorts to say, okay, like, right now, the LPS has detected a ton of small fish in 2020, and we want to know, is that a western recruitment event, which would be amazing?

Is it half-west, half-east, which would still be a strong indication? Or is this purely eastern migrants feeding into our system? And we should expect those to be around later.

There's a lot of power in knowing them before they hit the fishery. And so that's what, I think an area where we could really build on our stock assessment is to get some sort of sampling of those to know where the cohorts are coming, so when the stock assessment either has a large cohort, we have some sense of what stock of origin they came from.

Right now we don't have that, and I have to say, I have to go to an appointment and I'll try and jump on my phone, but I'm going to have to log off my computer.

MR. BROOKS: No worries. Thanks.

MR. SCHALIT: Before we say goodbye, I just wanted to -- is it possible I can add a little something here?

MR. BROOKS: Sure.

MR. SCHALIT: Just very briefly?

MR. BROOKS: Very briefly.

MR. SCHALIT: I think we have an opportunity with the recreational sector that we don't have to the same degree with the commercial sector.

In the commercial sector, generally, fishermen tend to remove the head of the fish while they're in the -- while they're on the boat and they throw the head overboard.

In the case of recreational fishing, fishermen tend to leave that work until they get to the dock. Not always, but generally.

And that might be an opportunity for these, for large pelagic survey interviews to suggest if they see a fish that still has its head on, well, why not give that, turn that had over for otolith microchemistry, and at the same time, there's plenty of genetic data to get in the -- in the -- in the fish's head.

So you're effectively killing two birds with one stone. The question that then arises is how do you collect those samples? But the samples are coming, for the most part, to the dock, unlike in the commercial sector where they're being thrown overboard. Thanks.

MR. BROOKS: Thanks. Let me bring Ray Bogan back in and Walt Golet and then Mike Pierdinock. Ray? Or is your hand left over? Maybe that was left over from Ray. Walt, why don't you jump in?

MR. GOLET: Great. Thanks, Bennett. Appreciate it. And I just wanted to say thank you to everybody involved today.

Preparing and presenting all of the material was great and I though the overviews were wonderful. So just a big thanks to everybody.

And I guess my point will sort of segue quite well with David and Matt's. We've been very successful up here, thanks almost entirely to NOAA-supported BTRP funding.

But as much as I'd like to take credit for that, I think where the credit really lies, in addition to our lab efforts, is really the sort of relationships that we've developed with the commercial industry and the commercial dealers.

And in that case, they act as sort of these perfect funnels, if you will, where we can target our resources and basically get the most bang for our buck.

And so that's why we're able to collect 1,000 or 1,500 otoliths from these commercial fish over here.

And sort of where we are this year and what we're trying to launch is the next step in taking those types of partnerships, and this is where I'll come in with a comment for Russ, is to the recreational community.

And I'm with U Maine but I'm also located at a non-profit here who relies a lot on citizen science.

And I think based on the relationships that we've established with the commercial fishery, we could have sort of a copycat program that could work very well with the commercial, excuse me, very well with the recreational

industry.

And something that I might propose for this next summit is, and I see in the 2018 agenda, there was Angler Engagement in Data Collection and Reporting.

And as the biologist, I don't think of data collection and reporting of where were you, how many fish you collect, it's more how can I get my hands dirty and get the samples from you?

And so, maybe something that I would think of that would be a -- be a high priority or something that we might be able to include is because of the disparate nature of the rec fleet, how do we get these individuals involved and train them to do these approaches for us?

Matt mentioned the genetics. This is simple. Actually, we already are doing this with some of our boats in the mid-Atlantic now.

We are basically sending them these kits. And some of these boats have the ability to catch 80, 100, 200, 300 small bluefin a year.

So that can add up exceptionally fast, and maybe a talking point for that summit might be how we get these recreational individuals involved in doing that.

Data collection's really simple. It might seem a little bit in depth, but our boats up here, they're taking otoliths out, they're taking otoliths out, they're sexing the fish, they're fixing gonads, they're collecting stomachs, they're labeling.

I mean, they do it better than some of the people in my lab. So anyway, as a point of discussion, Russ, I'll send you some details, but I'm happy to chat about that a little bit later on, and I'd even be happy if it's something that is of interest and is a focus, I'd be happy to even help lead that portion.

So thank you, everybody, for your time and, Bennett, thank you for the chance to comment. I appreciate it.

MR. BROOKS: Thanks, Walt. Russ, you want to jump in on that at all or --

MR. DUNN: No, no, I was just going to say, great, that's great. I look forward to it. Please, yeah, feel free to email or call me any time. Happy to talk.

MR. GOLET: Thanks.

MR. BROOKS: Thanks. And Brad, did you want to jump in on that?

MR. MCHALE: No, but one thing, no, because all that was good so I didn't even really have anything to go off of what Walter shared.

But one thing I wanted to do is I was looking down the attendee list. There's a number of these who aren't our usual suspects who attend either our advisory panel meetings or something else.

And I wanted to make sure that we were giving those members of the public that may not have some other direct connection to Russ and Cliff and Randy and myself, an opportunity to chime in.

This is kind of a public meeting, so just to make sure we're giving equal billing, and just to see if any of them had any thoughts based upon the discussion we've had today that may have triggered them to want to weigh in on any particular thing.

MR. BROOKS: Great. Thanks. Thanks, Brad. Just going to pause here. And again, I think Brad's ask is a good one.

We'd love to hear whether there's folks who haven't had a chance to weigh in, who aren't part of these groups that meet more regularly and have access to regular communications with folks on this call.

If you'd just raise your hand. Yeah, who's that?

MR. HUTT: I was just going to say about the raise the hand feature in the webinar, for folks who haven't been in the AP meeting all week, there's a little raise hands button in the participants list, down at the bottom of that next to what looks like a megaphone.

Just click on that raised hand one and we'll call you and you can chime in on the conversation.

MR. BROOKS: And if you can't find that, again, at the bottom of your screen, you'll see a chat, something that says chat in blue with a little bubble.

You can just throw in there that you want to be recognized and come into the conversation.

I'm going to linger for a couple of

seconds here just to give anyone a chance.

MR. BLANKINSHIP: Sure. And just also remember that this is, while it's a recreational fishery roundtable for highly migratory species, we're not limited on the recreational topics we can talk about.

So if there's something else that somebody has in mind that we haven't talked about already, feel free to bring it up.

MR. BROOKS: All right. I am not seeing anyone leaping at that invitation. But I do see two other hands still up. Let's go to Mike Pierdinock and then Bob Humphrey.

MR. PIERDINOCK: Thanks, Bob. Can you hear me?

MR. BROOKS: Yeah.

MR. PIERDINOCK: Thank you, and I'm happy you reached out. I know that for us up here, May 18 was opening for black sea bass and that has a lot of people on the water.

I'm only, well, I'm here because I need to be here, but my boat's still not in. But the weather was pretty nasty today, and I know someone people called in, but I don't know if they're still on, but I appreciate that outreach.

Thinking about what I was going to respond to. Since we have the time, I just want to expand upon a little bit more with the proposed wind turbine.

And it's almost like it's a Jeff Kneebone commercial because I think his work's been great.

His step one was to do those baseline conditions that demonstrate that, yes, we fish in those areas.

I really recommend that that's the baseline up and down the coast. That's step one. But then also, and Jeff and Enspire and that entity, were able to get research dollars in order to tag pelagics, the Claw, Gordon's Gully and Saw.

And they did that last year and they did it for sharks. I think he got -- I know he got bluefin and I believe he also may have got the yellowfin or white marlin, I'm not sure.

But the biggest, one of the biggest problems we do have, what is the baseline? What is out there in these areas? Because of a lack

of data, it's not clear.

So those are the two hurdles that we need to overcome, and there's two different ways to do it.

Now maybe you can all help me with this, because it's my understanding, now let's say if tomorrow, a recreational and for-hire fleet provided all transiting details but it would remain confidential. You did it for three years.

I would think because of just the nature of the fishery, fish move, they got tails, where they are is based on temperature and foraged fish.

That's going to be different from year to year. And with the whole issue with climatic shift, our stocks now are not where they were 3, 5, 10, 15 years ago.

But with that then, I'm -- from what I understand, you need 10 plus years of data you want to look at.

So we have this data gap and we don't have that good data going way back. And even if you did do this, you need a 5-year study.

But unfortunately, I know for up here, Vineyard Wind's going in. It's going to be the pilot test for the whole east coast.

And we're still involved and we're providing additional recommendations on what they can do to monitor the baseline conditions, to monitor conditions during and after construction.

But I wanted to throw that out there because there's some that say let's give all transiting details, which as I mentioned earlier, fishery management, that remains confidential, and for siting platforms and so on, that's a different story.

But even if you didn't, three years of data, you need five, and I expect the timeline for most of these proposed projects are, it's not going to work for that.

So I throw that out there.

MR. BROOKS: Thanks, Mike.

MR. PIERDINOCK: Last thing, and as far as recreational or for-hire participation with otoliths and fish heads and science, I guess I can only go by what we're doing here in Massachusetts and we've been doing for a long

time, whether you're in Green Harbor, Scituate, P-town, Chatham, Gloucester, to name a few.

They come in whether it's rec, for-hire, or commercial, if they provide the head. But Dewey said it, I want to keep the head for going after sharks.

So I don't want to even bring the head in if I caught one. So I'm going to freeze it and keep it later for sharking.

But there already is some of that going on. It's been going on for a long time. But I'd be happy for Walt to reach out to the Stellwagen Bank Charter Boat Association, the RFA, and other organizations that are active and everybody get the word out to get participation.

But there is some participation we need more, and we'd be happy to participate and help in the science to get better data to move forward. Thank you.

MR. BROOKS: Thanks, Mike. Bob Humphrey, you want to jump in?

MR. HUMPHREY: Yes, thank you. I wasn't sure if I was going to do this or not, but since Randy provided me with a perfect segue and then Mike added some relevant details, here goes, I'm going to step on a limb a little bit, and since there's time.

Normally it's pretty easy to distinguish between the commercial and recreational categories in the western Atlantic fishery, based on whether people sell fish or not, but philosophically, not so much.

This fishery is evolving and the general categories become very much a hybrid fishery, wherein an increasing number of participants do not make all or most of their annual income from catching bluefin tuna.

Essentially, we're seeing a growth in what you might call recreational anglers who sell their catch.

Given our current status, abundant stocks, I believe growing. We've seen the trends in boat sales, on the water activity participation, and maybe even to some extent falling prices, and I'm not going to get into cause and effect.

I think if the agency is not already doing so, I would request and maybe challenge you

folks to track this a little bit more closely because I suspect this trend will continue, and rather than react to it, if we can watch it, we could maybe take some more precise numbers.

I don't have too many specifics other than maybe looking at number of days, number of hours at sea, per individual boat, and see what percentage of the General category is comprised of the smaller, whatever you want to call them, weekend warriors, part-timers, hobbyists.

It could present a stronger case for one side or the other when quibbling over quota, or it could provide some common ground for both sides to come together and maybe bring something to ICCAT.

Just some thoughts I wanted to share with the group.

MR. BROOKS: Thanks, Bob. I think we either have just one person left in the queue or none. David Schalit, is your hand still raised or is that left over?

MR. SCHALIT: Yeah, my hand's up.

MR. BROOKS: Okay, okay, maybe we'll --

MR. SCHALIT: I'm the last one, huh? Okay. I want to build on what Mike Pierdinock and some others have mentioned, the connection with offshore wind.

About a year or so ago, I took a long look at the peer-reviewed literature to see what was, what work had been done in Europe of a comprehensive nature that's looking at how offshore wind affects fisheries.

And what I found was that there were actually very few comprehensive studies that had been done on this.

It seems that most of the wind farms just got put in place and then they checked to see what the damage was later.

But in a couple of instances, the scientists basically took this piece of aquatic real estate and turned into a grid and examined the marine life in that grid.

And then at a certain -- at a certain point later on, the turbines were put in place, and then the scientists came back a couple of years, some years later, to see what the status was, comparing before and after.

And the punch line is that the damage that's done to the marine life in the area where the turbines are placed occurs at commissioning and decommissioning. So there it is. Thanks very much.

MR. BROOKS: Thanks, David. All right. I think we do have someone who wants to come in.

I don't know your name other than Bounty Hunter Charter, so I'm going to invite you into the conversation, please.

MR. MORROW: All right, how are you doing? Yeah, Eric Morrow is the name. My concern is reiterating about my concern with the wind farms.

I'm up here in the northeast and that's my backyard where I fish. Primarily, ground fishing but I do have pelagic trips. I also have a shark cage diving business so I spend a lot of time out there.

And I just don't believe there's enough science been done, and the effect, I see what it's doing already as they're doing their work out there, what it's doing to the ground fishing for me.

And I just don't believe there's been enough science behind it to see where we're going to be once it's constructed and different parts affected, feed fish, forage fish, which lead to pelagics.

So that's pretty much my main concern is that I definitely want to see a little more science behind it, a little more research, and not just it's built and then we're going to go deal with the after effects. That's my say.

MR. BROOKS: Thank you, sir. I appreciate it. I don't know if Russ or Randy or anyone else from HMS wants to weigh in at all in terms of how you all are thinking about offshore wind and it's intersection and if there's -- if there's anything that would be helpful to fold into the conversation at this point, I just want to give you that opportunity before we sort of move towards wrapping up.

MR. BLANKINSHIP: Sure. So I think much of it's been said. Russ gave a really good perspective I think with the laying out the situation, of course, with BOEM having the lead,

NOAA being a contributor of the information.

And then Brad also describing accurately that HMS staff are actively engaged in supplying information and helping out with that effort through the channels that we have internally.

And that way, the information that we have can be effectively shared and considered by the folks that need to consider it.

And in some cases, that sometimes includes the perspective that while we have information that shows a lot of things, and a lot of that including in the area that in some cases just because we may not have exactly the information that somebody might want to have as far as geographic area and amount of fishing activity in some particular cases, that doesn't mean that the activity's not happening there and that there's not an impact, and that is being shared up through channels.

And so we will continue to do that. We have staff dedicated to that effort and it's an important one.

So I really appreciate all the comments here. They're not falling on deaf ears. We are all hearing it and we'll continue to be aware of it and work on that issue.

MR. BROOKS: Thanks, Randy. I think at this point we have worked out way through all of the various commenters.

And I know it's been a long week, so we could keep talking until 3:30 but I'm assuming people are maybe okay if we adjourn a few minutes early, but I just don't want to do that if there's anyone waiting to jump in here.

All right, if not, Brad, Cliff, I don't know if you want to offer any closing thoughts based on what you just heard here in this conversation.

MR. MCHALE: Yeah, I mean, knowing that I'm between you folks and cold frosty beverages to kick off holiday weekend, I'll keep this very concise.

Thank you for your time. Thank you for your input. We don't need to cover the ground and that Randy and Russ and others have.

And just so you all know, these are ongoing conversations. And so as always, feel

free to reach out to Cliff, myself, Russ, and then in turn, Randy, if folks want to continue the dialogue.

But as Cliff and I are the HMS recreational coordinators, we're here to kind of continue the dialogue because there aren't easy answers to it, but I think as Mike Pierdinock had mentioned as well as Ray Bogan, we do have certain systems in place. They can always be improved and we're striving to implement policy.

MR. BROOKS: Thanks, Brad. Cliff, you want to weigh in with anything?

MR. HUTT: Just go broad. Thanks to everyone for joining us today. We really appreciate it.

And we're hearing lots of concerns about offshore wind, as we expected, concerns about the data, and there are other issues we were expecting to hear that we really didn't get to hear today, and I guess that's just kind of part of who was in attendance this afternoon.

But, yeah, we know offshore wind's going to be a big topic of discussion. I mean, next summit, yeah.

So we are going to be continuing to follow that, as Brad and Randy both said. And I know we're talking a lot about Vineyard Wind because that's the one that's up now because there are definitely many more leases out.

So this is going to be an ongoing area of concern for some time and we are well aware of that.

MR. BROOKS: Thanks, Cliff. Yeah, I'll just fold in, I think sort of, a level up from that offshore wind conversation is how do you get people, how do you improve the data, share the data in a way that is mindful of some of the trust issues that might be out there, some of the cost issues, and there's so many needs, as Rusty said.

Offshore wind, aquaculture, conservation, right? So it's a -- it's a -- it's a big issue.

Offshore wind is kind of what's right in the face right now, but there's plenty of other challenges waiting in the wings that will benefit from better -- from better data.

A couple other things that just came

up are citizen science came up in a couple different ways, from social media to partnerships between researchers and rec industry.

So I think there's just a number of things to be pushing at as we go forward.

Is there anyone else from the HMS team or the LPS team that wants to weigh in with any final comments or observations?

MR. BLANKINSHIP: I'll have some final comments, but I'll pause to see if anybody else has anything.

MR. BROOKS: Okay, Randy, I think it's -- I think it's -- I think it's over to you.

MR. BLANKINSHIP: All right. Well, I just want to say once again a big thank you to everybody for plugging away to make it through to the end of today, especially those of you that have been on the long meetings all week.

And I just really appreciate everyone's time. I want to say a special thank you to folks that worked on LPS and the Office of Sustainable -- I'm sorry, in the Office of Science and Technology that were with us and for the presentations and discussion this morning.

That was excellent. Very useful. Glad to hear the positive feedback that we got about that.

So thank you John, Yong-Woo, and Daemian. Thank you to the folks from Southeast Fisheries Science Center that joined us, John Walter, Matt Lauretta.

And a big thank you, Bennett, to you, for leading us through the last few days and doing such a great job facilitating this meeting.

And I want to thank Russ Dunn for joining us and being a part of our discussion today, as always.

And big thanks to Cliff and to Brad for organizing our discussions today and just really great job. I appreciate your continued work.

And to Pete and everybody behind the scenes, Matt and others that are working behind the scenes, and Nic as well.

MR. BROOKS: All right. Thanks, Randy. Just a big thank you from me to everyone that Randy just named. I won't name them again. And to everyone who's made time join in.

To the 18 members who have given up four days, thank you. For those of you who joined today, I appreciate that, too.

I think we're all aware of how busy we are, how many other things that are sort of tugging at our attention and very much appreciate you making all the time.

So I think with that we'll let you go 19 minutes early, maybe start your Memorial Day Weekend a little bit early, and enjoy yourself. Thanks, everybody.

(Whereupon, the above-entitled matter went off the record at 3:12 p.m.)

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C E R T I F I C A T E

This is to certify that the foregoing transcript

In the matter of: Recreational Roundtable

Before: US DOC/NOAA

Date: 05-28-21

Place: teleconference

was duly recorded and accurately transcribed under my direction; further, that said transcript is a true and accurate record of the proceedings.

Neal R. Gross

Court Reporter