

GULF OF MEXICO FISHERY MANAGEMENT COUNCIL
MEETING OF THE STANDING SCIENTIFIC AND STATISTICAL COMMITTEE
July 21-22, 2026

STANDING SSC VOTING MEMBERS

Trevor Moncrief.....
Harry Blanchet.....
Dave Chagaris.....
Tom Frazer.....
David Griffith.....
Tiffany Hopper.....
Jack Isaacs.....
John Mareska.....
Paul Mickle.....
Jim Nance.....
Daniel Petrolia.....
Andrew Ropicki.....
Steven Saul.....
Steven Scyphers.....
Ralph Townsend.....

SPECIAL SHRIMP SSC VOTING MEMBERS

Donald Behringer.....
Konner Lockfield.....
Jason Saucier.....

STAFF

Alyssa Clift.....Administrative Assistant
Matt Freeman.....Economist Analyst
John Froeschke.....Deputy Director
Lisa Hollensead.....Fishery Biologist
Jessica Matos.....Administrative Document Editor & IT Coordinator
Ryan Rindone.....Lead Fishery Biologist & SEDAR Liaison
Carrie Simmons.....Executive Director
Verena Wang.....Ecosystem Analyst

OTHER PARTICIPANTS

Mike Allen.....Gulf Council
Jie Cao.....
Francesca Forrestal.....SEFSC
Frank Helies.....NOAA
Tricia Kimball.....
Cheston Peterson.....CIMAS
Katie Siegfried.....SEFSC
Steven Smith.....CIMAS
Andy Strelcheck.....NOAA

1 Bob Zales.....
2
3 - - -
4

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INDEX OF MOTIONS

PAGE 70: Motion that the methodology using observer data that's been developed by the SEFSC and being used to estimate red snapper bycatch in the Gulf is acceptable for data input into the current red snapper assessment model. [The motion carried on page 74.](#)

PAGE 81: Motion that the SSC supports expanding the bycatch methodology to include additional finfish species that are presently in the observer program database. The SSC also recommends that the results of these additional efforts be presented to the shrimp bycatch working group and/or the appropriate SEDAR workshop or topical working group. [The motion carried on page 85.](#)

PAGE 85: Motion that the SSC found the proxy methodology, using SEAMAP and observer data that have been developed by the SEFSC to estimate gray triggerfish bycatch in the Gulf, as acceptable for consideration as a data input into SEDAR 100. The SSC also recommends future investigations into improving the estimation of shrimp trawl bycatch for species not characterized in the observer program. [The motion carried on page 98.](#)

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1 The Meeting of the Gulf of Mexico Fishery Management Council Standing
2 Scientific and Statistical Committee convened on Tuesday, July 21, 2026,
3 and was called to order by Mr. Trevor Moncrief.

4
5 **INTRODUCTIONS**

6 **ADOPTION OF AGENDA**

7 **REVIEW AND APPROVAL OF MINUTES AND SUMMARY FROM THE MAY 2026 SSC**
8 **MEETING**

9 **SCOPE OF WORK**

10
11 **MR. TREVOR MONCRIEF:** Good morning. My name is Trevor Moncrief,
12 and I am the chair of the Scientific and Statistical Committee of
13 the Gulf Council. We appreciate everyone's attendance and input
14 into this meeting.

15
16 Representing the Gulf Council is Mike Allen. Gulf Council staff
17 in attendance include Carrie Simmons, John Froeschke, Ryan
18 Rindone, Lisa Hollensead, Matt Freeman, Verena Wang, Jessica
19 Matos, and Alyssa Clift.

20
21 Notice of this meeting was provided to the Federal Register, sent
22 via email to subscribers of the Gulf Council's press release email
23 list, and posted on the council's website.

24
25 Topics to be covered during this modified meeting, starting at the
26 bottom, are: estimation of shrimp trawl bycatch methodology, gray
27 triggerfish bycatch estimation, reviewing the minimum threshold
28 number of federal Gulf shrimp permits, review of Fisheries
29 Integrated Modeling System for peer review, discussion on Gulf
30 king mackerel landings and length comps, and that's from Mexico,
31 and then a review of the Gulf tilefish data triage and stock
32 evaluation options, and we'll have public comment and other
33 business.

34
35 This webinar is open to the public. It is being streamed live and
36 recorded. A summary of the meeting and verbatim minutes will be
37 produced and made available to the public via the website. For
38 the purpose of voice identification, and to ensure you are able to
39 mute and unmute your line, please identify yourselves by stating
40 your full name when Jess calls your name for attendance. Once you
41 have identified yourself, please re-mute your line. We will be
42 using the raised-hand function to help me recognize you to speak.
43 Jess will type the names up on the memo pad on the screen. Take
44 it away.

45
46 **MS. JESSICA MATOS:** Jason Adriance.

47
48 **MR. JASON ADRIANCE:** Jason Adriance.

1 **MS. MATOS:** Luiz Barbieri. Harry Blanchet.
2
3 **MR. HARRY BLANCHET:** Harry Blanchet.
4
5 **MS. MATOS:** David Chagaris.
6
7 **DR. DAVID CHAGARIS:** David Chagaris.
8
9 **MS. MATOS:** Tom Frazer.
10
11 **DR. TOM FRAZER:** Tom Frazer.
12
13 **MS. MATOS:** David Griffith.
14
15 **DR. DAVID GRIFFITH:** David Griffith.
16
17 **MS. MATOS:** Tiffany Hopper.
18
19 **DR. TIFFANY HOPPER:** Tiffany Hopper.
20
21 **MS. MATOS:** Jack Isaacs.
22
23 **DR. JACK ISAACS:** Jack Isaacs.
24
25 **MS. MATOS:** John Mareska.
26
27 **MR. JOHN MARESKA:** John Mareska.
28
29 **MS. MATOS:** Paul Mickle.
30
31 **DR. PAUL MICKLE:** Paul Mickle.
32
33 **MS. MATOS:** Trevor Moncrief.
34
35 **CHAIRMAN MONCRIEF:** Trevor Moncrief.
36
37 **MS. MATOS:** Jim Nance.
38
39 **DR. JIM NANCE:** Jim Nance.
40
41 **MS. MATOS:** Will Patterson. Dan Petrolia.
42
43 **DR. DAN PETROLIA:** Dan Petrolia.
44
45 **MS. MATOS:** Sean Powers. Andrew Ropicki.
46
47 **DR. ANDREW ROPICKI:** Andrew Ropicki.
48

1 **MS. MATOS:** Steven Saul.

2
3 **DR. STEVEN SAUL:** Steven Saul.

4
5 **MS. MATOS:** Steven Scyphers.

6
7 **DR. STEVEN SCYPHERS:** Steven Scyphers.

8
9 **MS. MATOS:** Ralph Townsend.

10
11 **MR. RALPH TOWNSEND:** Ralph Townsend.

12
13 **MS. MATOS:** Don Behringer. Konner Lockfield.

14
15 **MR. KONNER LOCKFIELD:** Konner Lockfield.

16
17 **MS. MATOS:** Jason Saucier.

18
19 **MR. JASON SAUCIER:** Jason Saucier.

20
21 **MS. MATOS:** Mike Allen.

22
23 **DR. MIKE ALLEN:** Mike Allen.

24
25 **CHAIRMAN MONCRIEF:** All right. Attendance recorded, and we've got
26 some of our shrimp folks here, and we're going to start off with
27 Adoption of the Agenda. You all have had plenty of time to review
28 this agenda, look at it, and see what got taken off, and what got
29 added on. Anybody have any changes or alterations? Seeing none,
30 we need a motion to accept said agenda.

31
32 **DR. NANCE:** Move to accept the agenda.

33
34 **SSC MEMBER:** Second.

35
36 **CHAIRMAN MONCRIEF:** There we go. All right. We also had the
37 minutes and summary from the May 2026 webinar meeting. Does anyone
38 have any changes, or adjustments, or questions to those minutes or
39 summary? Seeing none, can we get a motion to adopt those two?

40
41 **DR. NANCE:** Move to adopt the minutes.

42
43 **SSC MEMBER:** Second.

44
45 **CHAIRMAN MONCRIEF:** There we go. Are you going to do the summary
46 as well? We adopted the minutes, and do we need to adopt the
47 summary formally?
48

1 **MR. RYAN RINDONE:** No. It's all the same thing, the minutes and
2 summary, and so all kind of lumped together.

3
4 **CHAIRMAN MONCRIEF:** All right. Same, same. Let's go ahead and
5 get into what we're going to be dealing with, the Scope of Work.

6
7 **ESTIMATION OF SHRIMP TRAWL BYCATCH METHODOLOGY**
8

9 **MR. RINDONE:** All right, and so, first off this morning, we have
10 some contractors from the Science Center that are going to present
11 on the shrimp trawl bycatch estimation methodology, and its
12 application to bycatch of red snapper, which is going to be
13 integrated into the current stock assessment.

14
15 You guys reviewed a Center for Independent Experts review of shrimp
16 bycatch estimation for finfish species, and this was touched on at
17 the SSC's May 2025 meeting, at which time you guys requested some
18 additional time for review at a future meeting. Now it's future
19 meeting.

20
21 The council staff will also brief you guys on recommendations from
22 the council's shrimp trawl bycatch methodology for finfish
23 workgroup. We need to be more creative with our names, I think,
24 which was convened in March and May of 2026, and so those
25 recommendations from that working group will be conveyed to you
26 all. You should consider the information presented, ask questions
27 of the contractors and council staff, and make recommendations for
28 use in the stock assessment for observer-characterized finfish
29 species in shrimp trawl bycatch, and so a motion, or a
30 recommendation, is expected here. Mr. Chair.

31
32 **CHAIRMAN MONCRIEF:** All right, and so you heard the man. We've
33 had this presented to us. We've had a bycatch working group that's
34 had two meetings, and there seems to be a lot of effort and time
35 put into this, and so let's do our due diligence and have a good
36 recommendation at the end of it. Take it away, Steve Smith, who
37 is in-person and at the podium.

38
39 **DR. STEVEN SMITH:** I'm Steve Smith. I'm at the University of
40 Miami's Cooperative Institute of Marine and Atmospheric Studies,
41 otherwise known as CIMAS. I work with scientists at the Fisheries
42 Science Center in Miami and the Southeast Center in general. We've
43 been doing work on estimating bycatch from the shrimp trawls for
44 a few years now, and so this will be sort of a culmination of kind
45 of that work and where we are. The research team is basically
46 both federal and university scientists that have been working on
47 this.

1 The general approach to estimating bycatch is basically a catch
2 per unit effort expansion via total effort. This hasn't changed
3 since they started doing this back in I think, the late 2000s or
4 so, and so, essentially, total catch is estimated by multiplying
5 catch per unit effort from observer sampling, onboard observer
6 sampling, times the total fleet effort.

7
8 Total catch is the landings. This is very general, and so that
9 could be the landings of a target species, or that could be
10 discards of a target species, or that could be bycatch of a non-
11 target species. That's what we're going to focus on today.

12
13 We carry these out separately for a variety of space-time strata,
14 and so, on the map there, you can see there's colored regions, and
15 so those are the four areas that are part of the stratification,
16 and then, within each of those, there are three depth intervals,
17 and there are also three seasons. The time component of this is
18 three seasons.

19
20 The stratum estimates then can be summed for the different target
21 regions, and you can do various comparisons. You could look at
22 east Gulf versus west Gulf, or you could do a look at east, central,
23 west, however you would like, or the whole Gulf.

24
25 The rationale for the stratification is that populations are
26 usually not distributed evenly through time and space, and so the
27 relative abundance, i.e., the CPUE, is generally higher in some
28 areas, depths, and seasons, and lower in others, depending on the
29 species, and so stratification generally produces more accurate
30 and precise estimates for patchily-distributed populations,
31 provided that the strata effectively delineate the CPUE into low,
32 moderate, and high space-time partitions, and so that's
33 essentially what these strata attempt to do.

34
35 I'm going to go through these background things rather quickly,
36 because we've covered this before. I think I gave a presentation
37 about a year ago online to this group.

38
39 Anyway, obviously, the Gulf shrimp trawl fishery is one of the
40 premier U.S. fisheries. It's been that way for many decades. In
41 the 1990s, and the early 2000s, the fleet was outfitted with turtle
42 and bycatch reduction devices.

43
44 In 2007, of course, coinciding with the IFQ that was put in place
45 for red snapper, that prompted kind of the full development of the
46 Shrimp Observer Program, and so the onboard observers collect catch
47 effort data on the target, the shrimp, and non-target species.

1 The initial research was basically -- I was approached by the then
2 director of the Sustainable Fisheries Division at the Center to
3 look into bycatch estimation from using the observer data.
4 Evidently, there had been some estimates produced that no one
5 believed, and they knew that there was some sort of problems with
6 this, and so I had previously straightened out a lot of problems
7 with estimating discards from the reef fish fishery using observer
8 data, and so they came to me and said, hey, can you look at this.

9
10 My first question to Shannon, Shannon Calay, was do you guys have
11 any ballpark cross-check for what you're producing to know whether,
12 you know, your estimates are somewhere close to reality, or off on
13 Mars, you know, and, basically, the answer was no, and so that was
14 the first thing we tried to develop, was some sort of a cross-
15 check.

16
17 We basically -- The cross-check was basically to use the procedure,
18 the bycatch estimation, on the actual target shrimp species, to
19 see if we could re-estimate the landings from trip ticket data,
20 and so this was our result of that initial exercise. We tried it
21 on brown shrimp.

22
23 The total trip ticket catch are the square, the red square, boxes
24 for that period of years, and then the bycatch estimates, or the
25 total catch estimates using the procedure, are the blue dots, and
26 so they were -- You know, we were estimating about half of the
27 landings, and so that was basically a red flag that there's
28 something going on here that we need to figure out.

29
30 We think that we -- At the time, we thought the bias was likely
31 due to problems with the input data and/or the processing
32 procedures, the input data being the most -- Like the most suspect,
33 and so the three main inputs to this procedure are the observer
34 catch per unit effort data, fleet effort, and fleet landings, and
35 so we were -- Our initial research following that exercise provided
36 some insight into these data sources.

37
38 Shrimp observer data, the program officially started in 2007. They
39 had done some pilot studies, sort of experimental, some volunteer
40 -- You know, with using volunteer shrimpers and things, dating
41 back into the 1990s, but the official start of the program was
42 2007.

43
44 The overall goal was to provide a general fishery bycatch
45 characterization and catch rates for finfish species by area and
46 target species. Two was to provide catch rates that can be used
47 to estimate protected species bycatch, turtles, et cetera, and, at
48 present, there's, you know, a general coverage of sea days within

1 each of the four-month seasons, periods, and those are allocated
2 proportionally across the Gulf based on effort, the effort pattern.

3
4 They attempt to obtain a one-and-a-half to 2 percent coverage rate,
5 which is -- Their effort metric is tow hours, and so they try to
6 at least cover about one-and-a-half to 2 percent of the total tow
7 hours of the fleet.

8
9 The way this works on deck is that the contents of a trawl net,
10 and that could -- There's two types, two basic kinds of trawl nets.
11 There's a two-net configuration and a four-net. The illustration
12 here shows the four-net configuration. Basically, the outer two
13 nets, one and four, are sampled, and, within each net, the contents
14 of the net are shoveled into a series of baskets, and then all the
15 baskets are weighed to get the total weight of the catch.

16
17 One of those baskets is selected for characterization, and then
18 that's where they document the individual species and get a count
19 and a weight. For red snapper, they actually sample the whole
20 net, and so they had special procedures for red snapper. They get
21 the full number and weight of the whole -- Of the net. All the
22 other species are subsampled via this basket method.

23
24 **CHAIRMAN MONCRIEF:** Let's go ahead and do it. This is a long
25 presentation, and so, if you got questions, go ahead, Saucier.

26
27 **MR. SAUCIER:** Just a quick one, Steve. You probably mentioned
28 this during the workgroup, but how did you determine to sample
29 only nets one and four for the four-net configuration?

30
31 **DR. SMITH:** That wasn't my decision. This is just what the observer
32 program put in place.

33
34 **MR. SAUCIER:** Do you know how that decision was made?

35
36 **DR. SMITH:** No.

37
38 **DR. NANCE:** I do.

39
40 **DR. SMITH:** Oh, good.

41
42 **DR. NANCE:** I mean, those are the outside nets, and so you have a
43 lot of prop wash in the two inside nets, and so the outside nets
44 provided a lot better sample of what was going on in the nets than
45 the two inside nets, and so the outside nets were the ones that
46 were sampled.

47
48 **MR. SAUCIER:** Okay, and that was on previous studies, Jim?

1
2 **DR. NANCE:** Yes.

3
4 **MR. SAUCIER:** Okay. Appreciate that.

5
6 **DR. NANCE:** We had -- We started looking at it in the 1980s and
7 1990s, and those were the nets that provided a lot better estimates
8 for -- To be able to extrapolate it with.

9
10 **MR. SAUCIER:** Got you. Thank you.

11
12 **DR. SMITH:** I'll add that, for the two-net configuration, they
13 sample -- There's just two nets, and so those are nets two and
14 three in the coding, and they usually sample one of those nets,
15 and it's the one that's not in front of the tri. They usually
16 have a trinet out there that they put out, and so it's the net
17 that's not in the path of the trinet. That's the one that they
18 sample for a two-net configuration.

19
20 **MR. SAUCIER:** Okay. Thank you, Steve.

21
22 **CHAIRMAN MONCRIEF:** Go ahead.

23
24 **DR. NANCE:** Steve, I just want to throw in one other thing, and
25 there are also things we called select species, that large sharks
26 and things like that, that you, obviously, don't want to put in a
27 basket and then extrapolate up, and so those were taken aside and
28 then individually counted?

29
30 **DR. SMITH:** Yes. Anything like that, like a very large fish, or
31 a large, you know, Chondrichthyes, or something like that, a shark,
32 they, they characterize the whole -- Basically the whole count.

33
34 **CHAIRMAN MONCRIEF:** All right. Let's, let's get another question
35 in with Harry. Jim, you don't have to ask permission. Given your
36 proximity to this fishery, and this work for a while, you just go
37 ahead and ask a question whenever you feel like you need to.
38 Harry, go ahead.

39
40 **MR. BLANCHET:** Thank you, Mr. Chairman. Very quickly, I understand
41 the logic behind sampling nets one and four, in terms of
42 characterizing what the undisturbed harvest is without respect to
43 the crop wash.

44
45 However, if there is a difference in CPUE between the inside and
46 the outside net for a given species -- Say a more mobile species
47 might be more concentrated in the outside nets, because they're
48 avoiding the crop wash, or something like that, and that could

1 have some impact in terms of the expansion from the four-net
2 configuration, and since that's a fairly -- At least I would
3 request that people take a look at the old information that was
4 used to make this selection and try to see if there are any
5 unintended consequences of using those two nets only. Thank you.
6

7 **DR. SMITH:** I'll address that in a few minutes. We're looking at
8 -- As an aside, we're revamping this whole program, to make it
9 more statistically sound and robust, and so one of the issues is
10 the subsampling issue of the baskets, and it's also the subsampling
11 of the nets, and so, basically, that's an active area of research
12 right now.
13

14 When they characterize species via the basket subsampling,
15 basically it was a select list, and this is it, and so the three
16 main species of shrimp, brown, pink, and white, some of the sharks,
17 and then some fish, and anything else was just recorded as fish,
18 other fish, or other sharks, or something like that, or another
19 other invertebrate, and so this is basically -- These are the
20 species we actually have actual species-specific data for, in
21 addition to red snapper, which was characterized completely for a
22 sampled net. Length measurements were only taken on red snapper,
23 and so we have no length data from the observer data on anything
24 else.
25

26 These field protocols, you know, they made sense at the time. They
27 were designed to keep the observers from being completely
28 overwhelmed by the sheer volume of the trawl catches and kind of
29 collect the key data for the principal target species, which was
30 really red snapper and penaeid shrimp. That's really what they
31 were kind of going for.
32

33 They also collected detailed information on the trawl gear, and
34 they record biological information on the captures of the protected
35 species, as I mentioned.
36

37 Fleet effort for many of the fleets out there, federally-permitted,
38 the reef fish and the pelagic longline, we get the effort from the
39 commercial logbooks mainly, where the captains submit a fish report
40 with the fishing location, effort by gear, catch by species, et
41 cetera, for every fishing trip during the year.
42

43 When we move to the shrimp fleet, we don't have a traditional
44 logbook program, and the trip ticket system for landings doesn't
45 really include detailed effort, and so there was another program
46 that was sort of parallel to the observer program, where a selected
47 subset of vessels was outfitted with what they called an ELB, which
48 is a GPS tracklog device that records the latitude and longitude

1 at ten-minute intervals while the vessel is out at sea.

2
3 That GPS data is used to estimate the vessel tow hours for a space-
4 time strata, and there's been a number of presentations on that
5 methodology from my colleague Kyle Detloff, if you're interested
6 in reading up on that.

7
8 Total fleet effort is then obtained with CPUE expansion procedure,
9 using the landings, and so the total effort is the total landings
10 divided by the catch per unit effort of the ELB vessels, and so
11 the bycatch estimates depend on the total fleet effort, and the
12 total fleet effort depends on the landings, and so that's why the
13 landings are also a very important dataset for this particular
14 methodology.

15
16 Anyway, long story short, there was a lot of legacy code, and
17 people that had left the program that had developed stuff back in
18 the 2000s, and so we just sort of went through and re-engineered
19 the whole thing, the coding and everything, and the data
20 processing.

21
22 The landings, they're also a little bit problematic in the later
23 years, primarily from the trip ticket system in place. Basically,
24 the whole trip ticket system finally was in place by around 2014
25 or 2015. Prior to that, each state kind of came online from like
26 the late 1990s up until that point.

27
28 In the earlier years, before they switched to a trip ticket at a
29 state, basically it was a port agent interviewed dealers, and also
30 they interviewed captains, sort of a dealer-captain interview, to
31 get the landings, and so the procedures for combining these two
32 data sources were a bit convoluted, and unclear, because they had
33 mixed the two kinds of sampling modes in the data, and it wasn't
34 entirely clear how to separate that back out.

35
36 Basically, the more we peeked under the covers concerning the three
37 main elements, the observer CPUE, the fleet effort, and the fleet
38 landings, the more we suspected that factors involving all three
39 were likely contributing to the bias of the bycatch estimates, and
40 so then we basically delved into really focusing on those three
41 sources.

42
43 Concurrently, what happened was the responsibility for the Gulf
44 shrimp program shifted from the Galveston Lab to the Southeast
45 Center's Fisheries Statistics Division in 2021 and 2022, as part
46 of this big realignment that they did with the Center, and so there
47 was a parallel need by the Fisheries Statistics Division to gain
48 a better understanding of the data sources, the processing, and

1 the estimation for bycatch, and so that kind of prompted our next
2 big phase of work.

3
4 We basically delved into these sources. Our objectives were
5 basically a comprehensive understanding of the fundamental data
6 sources and refining and modernizing the data processing
7 procedures. We investigate potential additional stratification
8 variables, cross-check the refined methodology for penaeid
9 shrimps, and then there was a -- We have a review of the methodology
10 by the Council of Independent Experts.

11
12 Our research focused on a period of time, 2014 to 2020, that had
13 the most reliable input data sources, and so we had the full trip
14 ticket systems in place pretty much by that point. The observer
15 program was fully operational, and we had the ELB data basically
16 coming from the cellular devices being uploaded. As the boats
17 would approach port, it would automatically upload the data, and
18 so we had that.

19
20 With the research team, we sort of divided ourselves up a bit, and
21 went on parallel tracks, and so one of them was focused on the
22 observer and the landings data, and the estimation, and then the
23 effort data, and the estimation, was pretty much taken over by
24 Kyle, and he came up with a whole new algorithm for how to do that,
25 and I think he has presented that to you all.

26
27 The key findings for kind of improvements from that phase of work
28 were we basically refined and modernized the whole sort of data
29 and processing, all the -- You know, the data flow and processing
30 all the data files. We developed original code for processing
31 trip ticket data from the source, from the GulfFIN database. Kyle
32 did a complete redo of the GPS processing and effort estimation
33 procedures, and there's documentation on this, if you're
34 interested.

35
36 A quick -- This is just a quick one slide on Kyle's effort
37 methodology. On the left, he basically figured out how to
38 distinguish, from the GPS data, the speed of the vessel, and
39 there's a speed at which they're trawling, and there's a speed at
40 which they're cruising to like the next station, and then there's
41 a speed -- If it's below that threshold speed for trawling, that
42 means they were sort of sitting still.

43
44 Over on the right is the kind of an effort map, an example effort
45 map for the Gulf, and the areas in blue are kind of the general,
46 you know, main areas of effort, and the areas highlighted in red
47 are the more intense within there, and so, basically, that effort
48 was then scaled to the total fleet effort using the landings, as

1 I kind of mentioned before.

2

3 We did a cross-check. The observers actually collect the effort
4 as well, because they collect how long -- You know, the start and
5 end times of the tow, and so we took about -- I think it was about
6 200 or 300 trips, or tows, or trip -- No, and it was actual trips
7 that we were able to match between the observer, an observer sample
8 trip, and a vessel that had an ELB on it.

9

10 We looked at the ELB estimate for that trip versus the observer
11 estimate of that trip, and that's what is plotted here, and what
12 you'll note is two aspects. One is the main -- That main peak,
13 the sort of the median mode of the distribution over on the right
14 there, that matched up pretty well between the two, and then you
15 see this sort of interesting negative tail.

16

17 What that meant was the observer -- The ELB was underestimating
18 the effort compared to the observer, and what we found, when we
19 investigated that, was that those were actual tows and -- Partial
20 trips and trips where the ELB device was turned off, or wasn't
21 working, and so that was basically, obviously, producing a bit of
22 the bias that we were observing.

23

24 However, there's no real systematic difference between the two,
25 and so that sort of is our take on -- You know, we think the effort
26 data -- If the ELB device is working, at least the observers are
27 collecting the same thing that the devices are seeing, you know,
28 and so it's sort of a check on Kyle's methodology, but it looked
29 like it was a good match, for the most part.

30

31 To the point of -- You know, we were all a bit concerned with the
32 sampling one basket from a net, and then also just sampling two
33 nets, all of that subsampling, and so we did a cross-check on the
34 observer catch for a trip against the recorded catch in the trip
35 ticket, and so we matched trips that were observer sampled to a
36 trip ticket trip, and, again, it's about 200 to 300 trips, I
37 believe, during that 2014 to 2020 time period.

38

39 We did a cross-check between, you know, looking at the catch
40 difference between the observer and the trip ticket, and you can
41 see it's pretty much zero. The mode, the median of that, is zero,
42 and so we -- Interestingly, we don't pick up a systematic bias
43 coming from that, you know, all that subsampling.

44

45 However, you'll see it, and there's quite a spread there, you know,
46 and so it's definitely contributing to the uncertainty for sure,
47 but there's really no systematic bias, which is our -- Usually our
48 primary concern, and so we think the observer data was at least

1 pretty solid in terms of the CPUE that we were generating from
2 that.

3
4 Our conclusion was that the observer trip level catch and effort
5 were accurate. They're not biased, and so then next we evaluated
6 some of the potential bias of the stratum level estimates, and so
7 that's the area, the season, the depth, and so we looked into those
8 three strata, and those all panned out with respect to separating
9 out the CPUE of the three shrimp species, and also red snapper,
10 meaning those definitely partitioned CPUE into low, moderate, and
11 high kind of part -- You know, partitions of space and time.

12
13 Then we looked into some additional stratification, and so we
14 looked into the trawl characteristics, and also the day-night,
15 whether they were towing during the day or the night.

16
17 From that work, we sort of designated four what I would call gear
18 categories, which is a combination of the net configuration and
19 the diurnal period, and so, basically, we have a daytime two, a
20 daytime four, a nighttime two, and a nighttime four-net, and then
21 we analyzed this using a Fishing Power method, which is sort of a
22 classic fisheries science technique for understanding how the
23 relative like catchability, or CPUE, of the various gear types.

24
25 This stems from fundamental sort of fisheries theory going back to
26 the 19, basically, when they were looking at the fundamental catch
27 equation, which is catch equals the fishing mortality rate times
28 the average population size, and that can be -- That fishing
29 mortality can be further broken down to little f , which is nominal
30 effort, and this thing called Q , which is a catchability
31 coefficient.

32
33 If you plot that function on the graph, what you'll see is that
34 the catch per unit effort is on the Y-axis, and the average
35 population size is on the X-axis, and the line is the relationship
36 between that relative abundance metric and your total population,
37 and the slope of that line is what we call Q , or catchability.

38
39 An interesting property in fisheries is that, when you have a
40 different gear, generally, they have different catchabilities, and
41 so each gear sort of has its own what I would call internal
42 measurement scale for catch per unit effort, and it's different
43 from other gears.

44
45 This method basically is a way to -- Since they're both fishing on
46 the exact -- On the same stock, right, you're getting these two
47 different -- It's sort of like taking a Fahrenheit, you know,
48 thermometer reading and a Celsius reading, and it's that same kind

1 of concept. You're still measuring some sort of, you know,
2 temperature, but you have -- You're just doing it in different
3 units.

4
5 Relative fishing power is basically one of dividing one gear of
6 CPUE over the other, which is the Q of one over the other, is the
7 equivalent, and that gives you this thing we call Fishing Power,
8 and that's essentially a parameter that you can use to convert
9 effort from one gear to another.

10
11 When we did this estimation, we followed Robson's approach, which
12 is basically a two-way ANOVA, and so it has the variation in CPUE
13 is ascribed to two main things. One is that sort of the time and
14 the location of the sampling effort, and that's your time-space,
15 and then two is the gear type.

16
17 That basically isolates sort of the gear effect from the space-
18 time variation of abundance effect, and so, when we did this for
19 brown shrimp, this is what the estimates look like, and so what
20 we're showing here is the model-predicted catch rate, average catch
21 rate, for the four different gear types.

22
23 Here what you can see is the two-net -- This is per net, okay?
24 It's catch rate per net, I should say, and so the catch rate per
25 net is higher, generally, for brown shrimp, for the two-net
26 configuration, and lower for the four-net, and so that seems to be
27 the major kind of impact there.

28
29 The more minor impact is that nighttime is a little higher than
30 daytime, in both cases, and the maximum difference, from the lowest
31 to the highest -- You know, the catch rate is at 220 percent, and
32 so it's pretty substantial, you know, the CPUE difference you get.

33
34 When we look at white shrimp, we get a little different pattern,
35 but we still get some interesting differences between the gear
36 types, and so, in this case, the major component is the daytime
37 and nighttime, and so daytime is higher, and nighttime is lower,
38 and then the four-net -- The two-net is greater than the four-net,
39 you know, just like we saw before.

40
41 For red snapper, we get even a different pattern, and so there the
42 major is really nighttime-daytime. Well, it's actually both. It's
43 nighttime and daytime, and it's also the four-net has a higher per
44 net catch rate than the two-net.

45
46 There's all kinds of -- There's some really basic understanding
47 generally about why the shrimp species differ the way they do.
48 The two-net and four-net configurations, one of the key differences

1 is that the two-net vessels -- There's fewer nets, but they're a
2 larger -- Usually a larger net, and so the catch rate per net tends
3 to be higher.

4
5 However, when we look at catch per tow, which is the sum of all
6 the nets, then the four-net obviously is greater than the two-net,
7 because you've got four nets sampling, versus two. The daytime-
8 nighttime is really based on these species, how they -- You know,
9 their sort of diurnal behavior, and so brown and pink tend to be
10 more nighttime, come out at night, and the fishing is at night,
11 mostly, and white shrimp are primarily caught in the daytime.

12
13 Red snapper looks like it's typical for a lot of reef fishes,
14 meaning they sort of shelter on structure habitat, or reef, during
15 the day, and then they forage at night, in the soft bottom, and
16 that's how they're getting -- Interacting with the shrimp trawls.

17
18 When we uncovered these sort of fishing power sort of differences,
19 let's say between the different kinds of trawl nets and daytime-
20 nighttime, that immediately was a red flag to us about -- That's
21 a potential source of bias if we don't account for that, and so
22 this next couple of slides illustrate the point, and I don't know
23 if I want to go into it really in-depth here, but, basically, the
24 overall point is that the only way you get an unbiased estimate,
25 if this is going on, and so let's focus on one stratum.

26
27 It's an area, a depth, and a season. The only way you get an
28 unbiased stratum estimate is if the observer sampling is exactly
29 proportional to the fleet effort of those gears, meaning we sampled
30 -- If the effort is 20 percent nighttime four, and, you know, 80
31 percent daytime two, or something like that, the observer sampling
32 has to exactly match that, or you're going to get a bias one way
33 or the other.

34
35 When you include those as stratification variables, it then gets
36 rid of that potential bias. It may affect the uncertainty one way
37 or the other, but it will not affect the mean estimate, and so
38 you'll get the correct mean if you stratify, and you may not get
39 the correct mean if you don't, and it's likely that -- Even though
40 they attempt to allocate effort, observer effort, kind of according
41 to trawl effort, they didn't really account for -- They didn't
42 really take into account the gear type.

43
44 Basically, the observer trips disproportionately sampled nighttime
45 four gears, and the ELB data also disproportionately was put on
46 more vessels, and so it's basically more of the fleet that has got
47 an ELB is disproportionately nighttime four, rather than some of
48 the other gears, and so this is sort of what we're dealing with,

1 but, if we stratify, it actually alleviates those issues, and so
2 that's why we added those in as strata.

3
4 The result is we added an additional stratification variable, and
5 that eliminated why we consider a major potential source of bias
6 for the observer CPE estimates.

7
8 The ramifications of that are that now we needed to incorporate
9 the gear type into the landings and the effort, and so that's a
10 lot of the work was that we embarked on here, was to try to deal
11 with that, and so we found some other data sources that hadn't
12 quite used much before.

13
14 There's this annual landings and gear survey, which then gave us
15 kind of a characterization of the fleet, in terms of at least the
16 two-net and four-net, and then, again, now we've got all the area,
17 the depth, season strata, and now we've got four more strata for
18 each of those, which are the gear, and so it's a lot, and so, you
19 know, the data runs out if you just go at it for one year of
20 observer data.

21
22 One of our techniques was to pool -- Was to sort of analyze and
23 figure out time periods where it looked like the CPUE was more or
24 less stable for the three shrimp species, and for red snapper, and
25 so we divided the observer data into these time periods, pooled
26 the data by year, and then applied the strata.

27
28 In our investigations of that, what we found was that, when you
29 look across the interannual variation within a stratum, it kind of
30 -- It bounces around a little bit, but there's no systematic --
31 You know, by that group of years, no systematic trend going on,
32 and so, again, we don't think that introduced any bias. Obviously,
33 there's some -- You know, it's masking some of the variation of
34 it, and so, anyway, it's basically, you know, a practical kind of
35 a sample size issue.

36
37 That was one, our main technique for getting enough data for each
38 stratum to get an estimate, and then there were a few -- There was
39 about 11 percent, I think, of the strata that comprised about 11
40 percent of the effort fleet-wide, mostly the two-net gears, in
41 places where they don't use two-net gears much, you know, sort of
42 like the rarer kind of gear types by strata.

43
44 We used that Fishing Power technique to then impute data, like
45 convert data from a sampled gear to an unsampled gear, to account
46 for, you know, that sort of extra stuff.

47
48 The Fishing Power technique, what that really does is you apply it

1 to each observation, and so an observation here is a tow. It's
2 the sum of the catch and the effort for a tow, and so all the nets,
3 and then the tow time, right, and so, basically, we designated the
4 nighttime four as our standard gear, because that's the one that
5 was mostly sampled everywhere.

6
7 We converted that into -- Or kind of did this translation between
8 that gear and the other gears, and so, for the other gears, what
9 you do is you -- Basically, you set up your Fishing Power estimate
10 so it's relative to your standard, and then you apply that to shift
11 -- Essentially, it's a shift parameter. It just shifts the whole
12 distribution of observations so that the means line up between
13 your standard gear and your other gear.

14
15 It doesn't -- Basically, it converts the mean. You know,
16 basically, it sets it up so that the means are the same. It does
17 not affect the variance, and so, whatever the underlying variance
18 was of those observations, it does not get impacted by it.

19
20 After all that work, we re-verified our procedure, and so this is
21 showing the estimates of predicted penaeid catch versus our
22 estimated penaeid catch, and so the predicted is the -- I said
23 that wrong. The trip ticket landings catch is the squares, and
24 then our estimate of those landings from the observer data are the
25 dots, and so we're now off -- We're still a little low, okay, and
26 we're now off by 10 to 20 percent, depending on the year.

27
28 It's an improvement over what we started with, but we're still a
29 little bit there, okay, and this is basically what the -- This
30 phase of the work was -- This was what got reviewed by the Council
31 of Independent Experts, and there was a document that's provided.
32 I think you've all seen that, probably, or you have it.

33
34 **DR. NANCE:** On that one slide -- Go back one on that one, Jess,
35 please. This is -- I understand this fully. When we first started
36 to do estimates of effort, we tried to do it by each of the
37 different statistical zones, five-fathom intervals, and we had
38 over 2,000 cells we were trying to fill.

39
40 You just can't do it, and so you're running out of data, and so
41 that's why we collapsed those into larger cells, to be able to do
42 that, and so I understand what we're doing here now, but I just
43 can't wrap my head -- When you take the trip ticket data, and then
44 fill that in, you really don't have any idea, day or night, or
45 nets on that trip ticket data.

46
47 **DR. SMITH:** That all comes from the effort, and so the effort --
48 Basically, we do have that from the ELB data.

1
2 **DR. NANCE:** You have it -- You have it from the ELB data.
3
4 **DR. SMITH:** That's what I'm saying though. The whole -- The trick
5 here is getting the effort by stratum.
6
7 **DR. NANCE:** Yes.
8
9 **DR. SMITH:** That's what Kyle developed.
10
11 **DR. NANCE:** So is -- Are you saying that -- I guess Mike, I just
12 can't -- I'm trying to figure out how to get that pile of shrimp.
13
14 **DR. SMITH:** Yes, and so the landings data comes -- It's the general
15 landings, right?
16
17 **DR. NANCE:** It's general landings, and it's a pile of shrimp.
18
19 **DR. SMITH:** So you have to make the assumption that it's
20 proportional to the ELB landings.
21
22 **DR. NANCE:** Okay.
23
24 **DR. SMITH:** So this is the key part of this whole exercise, and
25 why -- I think why these are off.
26
27 **DR. NANCE:** Okay.
28
29 **DR. SMITH:** It's that the assumptions with the ELB effort and
30 landings, and the total landings, that is, to me, the problem here,
31 I think, like our key problem.
32
33 **DR. NANCE:** Yes, because, the ELB data -- We got a catch per unit
34 of effort from the ELB data.
35
36 **DR. SMITH:** Yes.
37
38 **DR. NANCE:** That then you use to extrapolate that whole pile up,
39 but there's only one -- You're saying that all the fleet in that
40 zone had that CPUE, basically is what you're saying.
41
42 **DR. SMITH:** Well, I think it takes -- I think it -- Basically, at
43 the stratum level, you take each trip.
44
45 **DR. NANCE:** Each trip, and you get an average.
46
47 **DR. SMITH:** Yes. Exactly. Then you get that CPUE, and then you
48 scale it up to the total landings.

1
2 **DR. NANCE:** Yes, and so I understand that, because you're able to
3 get that one catch per unit of effort. Here, we've got the --
4

5 **DR. SMITH:** So the daytime and nighttime, and all of that comes
6 from the ELB data, because you're looking at --
7

8 **DR. NANCE:** Yes, because now you've got four CPUEs that you're
9 taking this pile of shrimp and allocating that -- We allocated it
10 into one. You're allocating it into four, proportional to what --
11 -- So if 10 percent of the -- 10 percent of the effort was day,
12 two-net, then 10 percent of the catch also is.
13

14 **DR. SMITH:** Yes.
15

16 **DR. NANCE:** Okay.
17

18 **DR. SMITH:** Well, it's -- I think what we did is I think he figured
19 out that you can -- Because we can -- We know -- From other data,
20 we know what each vessel, whether they have a two-net or four-net,
21 and so then the issue was how do you separate that day-night, and
22 that's kind of -- You know, you're using the ELB proportions to
23 try to figure that out.
24

25 **DR. NANCE:** Okay. I understand, and so, basically, we were just
26 using one CPUE, and you're taking that four CPUEs now, and
27 proportionally in that whole catch, into that to get different
28 CPUEs.
29

30 **DR. SMITH:** Yes.
31

32 **DR. NANCE:** Then you extrapolate it out.
33

34 **DR. SMITH:** Then we expand by each stratum, and so each gear within
35 each. There's a CPUE for gear, season, depth, area, and that gets
36 multiplied through by the effort that goes with that.
37

38 **DR. NANCE:** Right.
39

40 **DR. SMITH:** So this is where we are.
41

42 **DR. NANCE:** Okay.
43

44 **DR. SMITH:** Or this is where we were at this point of the research.
45

46 **DR. NANCE:** Okay. Thank you.
47

48 **CHAIRMAN MONCRIEF:** John Boy, go ahead.

1
2 **MR. MARESKA:** Can you briefly explain what the ELB landings are,
3 how those are calculated?
4

5 **DR. SMITH:** Basically, there's -- We know the vessel that has an
6 ELB on it, and we can -- The trip ticket has vessel ID, and so we
7 know the landings from the trip ticket of the vessels that have
8 ELBs on them. That's how.
9

10 **CHAIRMAN MONCRIEF:** You match it by day, essentially, on the
11 ticket.
12

13 **SSC MEMBER:** Any guesses on what's going on in 2017 and 2018?
14

15 **DR. SMITH:** No, not really. I would say this is still -- We got
16 better, okay, and there's one more iteration of this. We got
17 better. All right. Continuing on, or do we have more questions?
18

19 **CHAIRMAN MONCRIEF:** Let's hear from Mr. Saucier real quick, and
20 then we'll continue on to the phase three. Go ahead, Jason.
21

22 **MR. SAUCIER:** Thank you, Mr. Chair. Can you go back a couple of
23 slides to the histogram that shows the white shrimp and red snapper
24 mean catch per net tow? I just had a quick question there,
25 something I was thinking about.
26

27 It's this one in the prior slide there. I was just -- I'm trying
28 to think about where these fisheries, or where these species are
29 caught, as far as depth strata, habitat preferences by species,
30 and I'm just wondering, and did you compare the number of reported
31 trips landing white shrimp with four-net configuration versus two-
32 net, and the same for browns, given the --
33

34 **DR. SMITH:** Yes, and that's how we -- That's how we developed the
35 space-time blocking for this, and so this is basically an ANOVA
36 kind of approach, and in that -- In this sort of like -- It comes
37 from experimental design lingo, or language, and so our blocks are
38 sort of like a stratum, right?
39

40 We basically -- This is controlling for all of the places where
41 those nets were sampled by observers, structured by, you know, the
42 space-time blocking, and the other caveat is that you have to have
43 at least two or more different nets in a block to then go forward
44 with the analysis, and so it tries to use all of the data possible,
45 but it definitely filters it down to where you have overlap of the
46 various gears, because it doesn't make sense to run this if you
47 don't have any space-time overlap.
48

1 I will show you, a little bit later where we -- I think there's,
2 a little bit later, and I'm not sure if it's in this presentation,
3 but we have some information, that I think we went through in the
4 workgroup, where we looked at the effort of the two-net and four-
5 net, and so what you'll see is that the area where you get mostly
6 pink shrimp, you know, this sort of west Florida and south Florida
7 area, and also the southern part of Texas, where you get mostly
8 brown shrimp, it's about 95 percent four net-vessels, the effort,
9 and very low effort for the two-net.

10
11 Then, when you get up to the two central, you know, kind of the
12 Louisiana and then The Panhandle kind of area of Florida, that
13 Gulf coast area, then it switches to about 30 or 35 percent two-
14 net, and, historically, that has changed over time.

15
16 Back in -- Because we actually -- You know, in later work, we
17 extended this way back to the 1980s, and, in the early days, it
18 was mostly two nets, and then there was a shift, and it happened
19 different times in the different regions, but it basically shifted
20 from two-net to four-net, for the most part.

21
22 **MR. SAUCIER:** Perfect. Thank you.

23
24 **DR. SMITH:** So we'll go back to where we were and keep going.
25 There we go. Our conclusions at that point of the work, and this
26 is what got reviewed by the CIE folks, is the analyses indicated
27 that we had unbiased observer trip catch and effort.

28
29 Incorporating the gear type is an additional stratification, and
30 it would improve the accuracy of the stratum level estimates. The
31 remaining bias is likely due to issues with the total fleet effort,
32 which is also impacted by issues with the total landings, and so
33 that's kind of where we kind of focused down.

34
35 The CIE reviewers thought our methodology was appropriate, and it
36 was sound, and it was practical. They agreed with our conclusions
37 about the remaining sources of bias, and they gave some
38 recommendations. One of them was to outfit the entire fleet with
39 an ELB device. The other one was to overhaul the whole shrimp
40 observer program, especially the statistical design and the
41 allocation of observer effort among strata.

42
43 They had a numerous additional suggestions about alleviating bias
44 in the fleet effort, improving the estimation of uncertainty, or
45 finding a stratification scheme, et cetera.

46
47 I would say our next phase of work took some of those
48 recommendations, the ones that we could, you know, tackle, you

1 know, immediately, and then we developed a longer-term program,
2 which we're in the middle of right now, to overhaul the observer
3 program.

4
5 **CHAIRMAN MONCRIEF:** A quick question, and so, obviously, major
6 recommendation number one, that seems to be a pretty easy default
7 conclusion to come to, like if the problem is that we don't have
8 enough coverage, then let's just make everybody do it, and it's
9 not really a reality, and so, in your time reviewing the data, and
10 looking at it, do you think there is a configuration, or a design,
11 of the ELB program, and you might get to it later on in your
12 presentation, that allows for more accurate, or take away a little
13 bit of uncertainty, without saying let's just make everybody do
14 it?

15
16 **DR. SMITH:** Well, obviously, these are -- You know, the CIE people
17 are generally academics, right, and so, hey, you know, that's what
18 they came up with. We're not saying that that's reality, or that
19 can actually be implemented, or, you know -- The politics, and the
20 economics of it, are -- They are what they are, okay?

21
22 However, a couple of things to think about there. I probably
23 should say this at the end, but I'm going to say it now. The
24 problem right now is that we have kind of incomplete data from the
25 ELB program right now, especially now, when the 3G devices went
26 out, and we're now trying to get chips, and it has just turned
27 into a mess, and then we have the landings, the trip ticket
28 landings, and, you know, the landings are never going to be, ever,
29 100 percent.

30
31 People don't sell everything to a dealer. Things happen, and, you
32 know, they don't -- All those trips don't -- You know, all their
33 actual catch does not get recorded through the trip ticket system.
34 We can see that, because we have observer trips that we can't
35 match, you know, and this vessel -- We know the vessel, and we
36 know the space-time, and we know the time period they fished, and
37 no matching trip in the trip ticket. It's just -- It's part of
38 the deal.

39
40 The effort thing, you can't -- It's controllable at least. You
41 know, you could -- You could eventually outfit the fleet with some
42 sort of device, like they do with the reef fish fleet. They do,
43 and the whole fleet is outfitted. You could do it, and that gives
44 you at least an absolute, because, right now, we're dealing with
45 two non-absolutes, and trying to rectify them, the effort in the
46 landings, and so that's really -- You know, we're going to be in
47 this conundrum until we get something that works better.

1 One solution is to get an absolute, you know, and then we would
2 know. We would know, you know, the effort, the true effort, and
3 we wouldn't need to use the landings. We wouldn't need to use the
4 trip ticket at all, in any of this, if we had that. Anyway, that's
5 basically the scientific -- That would be the scientific argument
6 for it. Now, we all realize the reality is very different, and,
7 well, you know, we have to deal with that.

8
9 **CHAIRMAN MONCRIEF:** I've got Ralph, and then Dave. Go ahead,
10 Ralph.

11
12 **MR. TOWNSEND:** So this is a sort of a basic question that goes
13 back to slide 3, where you assume that the observed trips are
14 representative of the broader fleet, and there's all kinds of
15 evidence, from the rest of the world, that boats that have
16 observers on them fish differently than boats that don't have
17 observers on them, particularly for protected species kinds of
18 things.

19
20 That is observers -- When there's an observer on, fishermen will
21 choose not to go places where they know they will encounter,
22 particularly if the species will -- If catching a species will
23 cause political problems, and I know this is a very difficult issue
24 to get at, but it seems, to me, that any kind of review like this
25 ought to be listing that as an issue and identifying what could or
26 could not be done to address it.

27
28 **DR. SMITH:** Yes, and that's a fair point. I would counter with
29 the shrimp, the Gulf shrimp, the way the fleet operates, the trips
30 -- The tows are really long, and the average tow is five-and-a-
31 half hours.

32
33 They usually do two tows a night, or a day, either a day or a
34 night, depending on what diurnal period they're fishing, and the
35 trips are generally long. They're two, three, four weeks for a
36 trip.

37
38 I think the issue with trying to fish differently when you have an
39 observer onboard, it's definitely more -- Like there's a higher
40 probability of that when you have a really short trip, like a day
41 trip or something, where they can just go, you know, but, when
42 you're out sampling, you know, a big swath of, you know, area of
43 the Gulf, and you're towing for five-and-a-half hours and stuff,
44 I find that less probable. The probability of that happening has
45 got to be smaller than the other situation, and that's what I'll
46 say on this.

47
48 We don't know. I mean, you know, like you said, you don't know.

1 The fact that you're observing, you know, it's just like the old
2 conundrum of, you know, the fact that you're observing it changes
3 the -- You know, it could change the behavior of the whole system,
4 right?

5
6 **MR. TOWNSEND:** Well, let me say two things. The first one is that,
7 you know, doing things like tampering with BRDs or TEDs, you know,
8 is -- You know, the obvious one would be, well, I just take the
9 TED out if there's no observer, and it's pretty straightforward,
10 but the second thing is, I mean, there's increasing --

11
12 Instead of us saying, oh, we don't think in this fishery it's an
13 issue, it seems, to me, that we ought to be looking at the rest of
14 the world, where cameras are in fact being installed in prawn
15 fisheries, and looking for evidence there about how cameras change
16 behavior, because cameras essentially become observers on every
17 trip, and I think that that's, you know, ignoring what's going on
18 in the rest of the world, and saying, well, you know, we can't
19 deal with it in the Gulf of Mexico, is not -- You know, obviously,
20 we bring fisheries science in from the rest of the world, and why
21 don't we bring evidence on fisher behavior in from the rest of the
22 world?

23
24 **DR. SMITH:** That question is way above my pay grade.

25
26 **CHAIRMAN MONCRIEF:** I appreciate that, Ralph, and that gives
27 something for everybody to think about. We'll go ahead and move
28 to Dave, and then it will be Jason, and we'll continue on.

29
30 **DR. CHAGARIS:** Steve, thanks for walking us through the
31 methodology. I'm really clear on what was done now, and so that's
32 super helpful. My question kind of goes back to the gear types,
33 and the stratification, and, you know, what you just said about,
34 you know, the average tow time, you know, being about five-and-a-
35 half hours, but I'm sure that varies a lot, right, and so like did
36 you -- Was there any attempt to try to standardize based on area
37 swept and compute that? Is that possible, and do you think it
38 would help? A stratification scheme attempts to account for all
39 that, but there's still probably a lot of variability amongst the
40 tows.

41
42 **DR. SMITH:** That was one of the first things we looked at, because
43 I thought that that was going to be the variable, and it turns out
44 it's not, for whatever reason. I think it's just because it's the
45 -- You have to think of it as the total of the four-net swept area,
46 you know, and not per -- I think we were looking at per net, and
47 it wasn't giving us anything different, you know, and so I think
48 having the four-net and two-net configuration as a variable

1 controls for a lot of that, because, within that, the nets that
2 the different fishers use, there's not a lot of variation there in
3 the sizes, okay, if a four-net vessel is kind of outfitted
4 similarly, and two-net is outfitted similarly, and so I think those
5 variables capture that issue, you know, the swept area.

6
7 I was thinking that that was going to be our magic, you know,
8 formula, and it wasn't all right. I mean, it's something we could
9 look into as we go further, but, you know, our initial
10 investigation of that was it just didn't pan out, you know?

11
12 **CHAIRMAN MONCRIEF:** All right. Jason, and then we'll go to David,
13 then we'll go to Mr. Adriance, and then we're going to get it back
14 on track and keep it on time. Go ahead, Mr. Saucier.

15
16 **MR. SAUCIER:** Thank you, Mr. Chair. Just to that point, going back
17 to the recommendation there, Number 1, to outfit the entire fleet,
18 I agree that that's not likely to be something that's feasible,
19 from a cost perspective for the program, considering that, more
20 than likely, we would have some sort of a subsidized program there
21 where the equipment would be cost-shared. Do we have any other
22 fleets, commercial fleets, where we have 100 percent coverage?
23 You know, has that precedent been set in other fisheries?

24
25 Then, also, just to kind of talk to Ralph's point there about
26 changes in fishing behavior, I agree that, for a thirty-day trip,
27 it's highly unlikely that somebody would change their methods,
28 because of -- The profit margin in this fishery is so low, to make
29 that trip cost feasible, to change the behavior to sort of
30 accommodate some perceived, you know, change in, you know, catch,
31 you know, bycatch composition, I just think that would be highly
32 unlikely.

33
34 Then, just from my interactions with our enforcement folks on the
35 state level, because we've had to look at compliance rates with
36 the sustainability certification that was received a couple of
37 years ago on this fishery Gulf-wide, and the surveillance audits
38 that have to happen pretty frequently, the compliance rate on the
39 TEDs is very high, and a lot of these boats get checked multiple
40 times throughout the fishing season, and so there's a pretty high
41 risk there for folks that would do something blatant like remove
42 a TED.

43
44 I just don't think that's occurring in this fishery. There may be
45 some minor things, where nets will stretch, and you've got a little
46 bit different angle, or there's some inadvertent change just with
47 that TED, and that usually gets handled on the spot, but I don't
48 think there's any folks out there that are removing equipment.

1
2 It's just not feasible to do that for one trip, to take a TED out,
3 or something like that, and it's just not -- It's not being seen
4 by our enforcement folks at this point. Thank you.
5

6 **CHAIRMAN MONCRIEF:** That was a good point, and that was kind of
7 one we were going down in our heads, I think, a little bit there,
8 Jason, and so let's go ahead and go to David, and then Mr. Adriance.
9

10 **DR. GRIFFITH:** Thank you, Mr. Chair. Steve, you addressed one of
11 my issues. I was wondering whether the net size was any different
12 between the two-net and the four-net, but you had mentioned that
13 they went from two-net to four-net some time ago, and I was
14 wondering whether or not the nets, the number of nets, is related
15 to things like vessel size, or whether they do go out for long
16 periods of time, or short periods of time, or control composition
17 or things like that, just as a social scientist.
18

19 **DR. SMITH:** Yes and so there's a lot more -- I think there's a lot
20 more going on here, and we had a lot of interest in this topic
21 from the workgroup, and so we have actually -- Well, I've put in
22 a proposal, and that didn't get funded, but I think we got some
23 funding to like investigate this more thoroughly this fall, and so
24 that's part of our research plan.
25

26 To your point, the -- Yes, there's differences in the vessel size,
27 a little bit smaller I think for the two-net, versus a four, but
28 the total catch per tow is higher for the four-net, and so I see
29 why they switched. You get more catch per tow.
30

31 The tow times, yes. The five-and-a-half hours is fleet-wide, but,
32 if you would proportion that out, the -- It's a little bit shorter
33 for the two-net, and the two-net is really focused on white shrimp,
34 I think, in the central kind of Louisiana, and then just the other
35 side of the Mississippi, that part of The Panhandle of Florida,
36 you know, that kind of region. There's something going on with
37 that, as to why that's maybe a better configuration for that
38 species up there.
39

40 **DR. NANCE:** Dave, you also, during that period, went from ice to
41 freezer for a lot of the vessels.
42

43 **CHAIRMAN MONCRIEF:** Yes, and I was hoping one of our shrimp experts
44 would be able to weigh-in on that one, and give some clarity as
45 well. Go ahead, Mr. Adriance.
46

47 **MR. ADRIANCE:** Thank you, Mr. Chair. Thanks for the presentation.
48 This kind of goes back to Harry's earlier question. I assume,

1 when you were comparing the four-net and two-net, it was still
2 those same nets worked up, the one and four for the four-net?

3
4 **DR. SMITH:** Yes.

5
6 **MR. ADRIANCE:** Okay. Is there any consideration, moving forward,
7 of looking within the four-net, looking at the difference between
8 the two and three and the one and four?

9
10 **DR. SMITH:** Oh, yes. That's a big part of our work right now, is
11 to get to that, and also about how many baskets you should be
12 subsampling per net, and how many nets, and does it matter if
13 you're sampling one and four or two and three? I think that's
14 part of our research at the moment, and so, hopefully in about a
15 year, I'll have a better answer on that. That's kind of where we
16 are. Okay. Why don't we move on?

17
18 **CHAIRMAN MONCRIEF:** Yes. Let's get back to it. We're pacing in
19 on time. Let's go ahead and get through this, and get through the
20 questions.

21
22 **DR. SMITH:** Okay, and so we did some follow-on work, and I alluded
23 to this before, but, really, you know, all that work was focused
24 on that one period of years, you know, where we had really good
25 data for -- You know, we thought the most complete data from all
26 the sources, and so we basically refined some of the technical,
27 very technical, suggestions, you know, based on that the CIE
28 reviewers gave us.

29
30 Mostly it was for improving -- Their issues were really talking
31 about how to improve the effort estimation and reducing some of
32 the potential bias issues with that.

33
34 Step one is we applied the approach to the full observer time
35 period, and so going back to 2007 up through to 2023 at the time,
36 through 2023, and then step two is we moved -- We went back in
37 time, and we applied to the pre-observer, pre-GPS tracklog time
38 period, and so that's 1984 to 2006, and so much of the focus was
39 estimating more accurate commercial fleet landings and effort, and
40 I have to say that was 95 percent of our time was spent on that.

41
42 Then extending the landings and effort back in time with respect
43 to -- This is part of that, was we had to extend the landings and
44 effort back in time with respect to the space-time strata and the
45 gear strata, and so the four gears.

46
47 This was leading up to the Gulf snapper work, SEDAR 98, and this
48 is sort of the background, that additional work that we did in

1 between the conclusion of the CIE review and then the red snapper
2 assessment workshop, or I mean the data workshop.

3
4 The shrimp landings was pretty -- A very key element here, because
5 that's a key element for estimating that total fleet effort, and
6 so the data sources are two, as I alluded, and so there was this
7 thing called the Gulf Shrimp System, the GSS. It was data
8 collected by port agents from dealers who purchased shrimp, where
9 shrimp were unloaded, and the last year of that program was 2014.

10
11 Then there was the state trip ticket programs that collected
12 commercial, you know, seafood landings, implemented by the states,
13 and that came on at different times for different states, and so
14 the data compilation, the commercial -- There's a commercial
15 workgroup that formed for SEDAR 87, which I believe was a Gulf
16 shrimp SEDAR.

17
18 It extensively examined the data sources, and the data gaps, and
19 kind of recommended years for each state to transition from the
20 one system to the other, because there was this whole period where
21 things were getting mixed, and we thought that was an issue, and
22 then we confirmed those years of transition with the various
23 states, and there's some detailed processing steps that are in a
24 working paper there.

25
26 These are the trip ticket start years that were sort of settled
27 upon, and so, with Florida, they started the trip ticket program
28 in 1984, but we transitioned over in from GSS to ST, to the trip
29 ticket system, in 2003, and that was confirmed by the state.

30
31 Alabama, they started in 2001, and we transitioned in 2001, you
32 know, and, basically, that was a good -- Right off the bat they
33 had it. Mississippi, they started the program in 2012, and they
34 thought that maybe by 2015 or 2016, and so we chose 2016 would be
35 the year of switching over.

36
37 That 2015 was an issue, because they had stopped the -- Well,
38 anyway, 2015 was an issue, because they had to -- They had to
39 basically use partial trip ticket data to try to correct for that,
40 because they didn't have -- The GSS thing stopped in 2014.

41
42 **CHAIRMAN MONCRIEF:** Yes, and there were different regulations
43 between dealers, processors, and everything else when it came to
44 getting the trip ticket system online, and so that's the reason
45 why 2016 could be used confidently.

46
47 **DR. SMITH:** Yes, and probably people in this room have way more
48 knowledge about all that than me. Louisiana switched in 2000. It

1 started in 1999, and they thought it was fairly intact and complete
2 by 2000, and Texas started in 2008, but they recommended us not
3 using that until 2014, because they had some areas that I guess
4 they weren't completely covering in the state.

5
6 This was our latest verification exercise, and so this now runs
7 from 2007 to 2023, and you can see that that middle period, from
8 about 2014 to, I don't know, 2021, is actually a lot closer match
9 between the actual landings, which are the black dots, and our
10 estimated landings for penaeid shrimp, and so we think that all of
11 the work done to try to strain out the landings, and then get the
12 total effort better, this was sort of the payoff for that.

13
14 What's interesting is the period from 2007 to about 2014, you can
15 see is still off a bit, and then, in the last couple of years,
16 it's off a bit, and these are -- They seem to be related to changes
17 in the way that they were collecting the ELB data, and so, in that
18 2007 to 2013, that was -- I believe they were getting it from
19 physically getting it from the chips, and then it switched over in
20 2014 to the cellular devices.

21
22 Then, when that system went belly up, basically at the end of, I
23 believe, 2021, then you see those last couple of years switched
24 back to trying to get chips, and there's just something going on
25 with that. The ELB data from the boxes is what I would consider
26 probably incomplete, okay, and so when you -- But we have the
27 complete landings for the box vessel.

28
29 That's where, when you get this mismatch between the sampled effort
30 from the ELB and the sampled -- The actual recorded catch, this is
31 where it throws things off, and so that's kind of where we are at
32 this point.

33
34 I would say that those middle years give me some confidence that
35 we're -- You know, we could be pretty right on the target here,
36 you know, if we could get everything lined up, the ELB stuff and
37 the landings lined up better.

38
39 It also speaks to the fact that the observer data is not
40 dramatically off from what you would -- You know, given that we're
41 re-estimating the catch pretty well in some of those years, it
42 gives me some evidence, I think, for not -- That, you know, they're
43 not changing their behavior radically when they take an observer
44 out onboard, because we are basically using that data and
45 generating a credible estimate, and not that that shouldn't be
46 something to consider, and I'm all for, you know, adding technology
47 to help with this, all this stuff, but, you know, again, that's
48 money and time, and, you know, maybe you want to pick your bath,

1 you know, on that stuff.

2
3 That's the observer period, and then we did a hindcasting, and
4 this is where Jim throws up red flags and things, and I would just
5 say, look, the hindcasting is something that stock assessment
6 scientists want, because they want to have a long time series of
7 this stuff, so they can run through their modeling, and so,
8 essentially, you're making up data where it doesn't exist, is
9 really what's happening here, and so you have to just understand
10 that upfront.

11
12 What the hindcasting procedure does is it relates the stratum catch
13 rates of red snapper and penaeid shrimp for the observer period,
14 and then we broke that up into the two -- There was two observer
15 time periods there, 2007, I believe, to 2013, or 2014, on, and so,
16 essentially, we then applied that CPUE relationship between red
17 snapper and penaeid shrimp back in time.

18
19 The huge assumption there is that those -- You know, the relative
20 abundance of those two species has been stable, you know, or it's
21 representative of the period that we hindcasted from, which was
22 2007 to 2013. All right, and it's a big stretch. I would agree.

23
24 However, then we also did some work on the, you know, correcting
25 for the BRD era and the pre-BRD era. It turns out the BRDs aren't
26 that dramatically reducing the bycatch of red snapper. Other
27 species, for sure. The red snapper, not so much, okay, and so
28 it's a little bit of an adjustment there.

29
30 This is applying this now to red snapper, and now we're on the
31 next part of the talk, if you want to -- This kind of runs together,
32 right, and so the reason we focused all on the penaeid shrimp was
33 to get the verification, and so then we're kind of confident that
34 our methodology is working, to some degree.

35
36 Then we apply that exact same methodology to red snapper, and so
37 this is what we got for the whole time series going back to 1984.
38 The blue is the west zone, which is Texas and Louisiana, west Gulf.
39 The red is the central, which is that Area 2 that I showed that is
40 kind of like the east-northeast Gulf, and then we have the pink
41 shrimp zone area, which is the green there, that southern West
42 Florida Shelf. What you can see is that the red snapper bycatch
43 is by far the highest in the west Gulf, and extremely low in the
44 other places.

45
46 If we compare that with the previous bycatch estimates that were
47 developed and provided in a previous SEDAR, SEDAR 52, the blue is
48 our total red snapper bycatch. That's all three zones of the Gulf

1 combined across those years, 1984 to 2003, and then the orange
2 dots are what was estimated previously.

3
4 You can see that actually the -- If you look at it closely, you
5 can see that the trending is actually quite similar between the
6 two, in terms of lows and highs and things like that, but the
7 volatility is extremely much more present in those earlier
8 estimates, and so you're getting this extremely high and extremely
9 low kind of estimates compared to what we generated, which seems
10 to be a bit more in line, and stable, over time.

11
12 Also, this -- Remember this is primarily being driven by effort,
13 right, and so like those periods in the middle of the late 1990s
14 there, where the bycatch was up, is really a high effort period
15 for the fleet, and then, as the fleet effort has been going down,
16 the bycatch has been going down in the latter part of that time
17 series.

18
19 The key differences between those previous estimates and our
20 earlier ones are, you know, we incorporated the gear strata. I
21 think that helps with the volatility issue.

22
23 We improved the shrimp landings in the effort that were the basis
24 for generating these, and so, for the SEDAR 52, prior to the
25 observer years, they basically substituted SEAMAP trawls for
26 commercial shrimp trawls to do the estimates, and so they basically
27 substituted those and used the data, and like it's kind of like if
28 they had -- That was like their observer data.

29
30 Given that, you know, we saw those commercial catch rates for the
31 different gear types differing by over 500 percent in some cases,
32 we thought that that was probably not a good idea, and so I still
33 believe -- I think the SEAMAP data could be useful, but we would
34 need to do a fishing power calibration of that gear with the
35 commercial, and there's various ways of going about that, but
36 that's sort of a future research topic here. I don't know if
37 that's -- Is that it, or are we --

38
39 **CHAIRMAN MONCRIEF:** That is it.

40
41 **DR. SMITH:** Okay. Good.

42
43 **CHAIRMAN MONCRIEF:** All right, and so we've been presented the
44 information. I mean, first off, what I'll remark is that this
45 looks like a much more stable time series, that might be a little
46 bit more reflective, and I'll leave it to my shrimp colleagues to
47 ask the first questions here. Go ahead, Jim.

1 **DR. NANCE:** A couple. Steve, thank you. I understand it from the
2 effort part very well. My one concern is we're saying that, I
3 think, if you go to an area, and you catch a lot of shrimp, you're
4 going to catch a lot of red snapper, and is that --

5
6 **DR. SMITH:** No, and it's actually done at the stratum level.

7
8 **DR. NANCE:** Well, those 36 -- Well, now we've got --

9
10 **DR. SMITH:** With the gear, and, basically, we estimated that ratio
11 for every stratum.

12
13 **DR. NANCE:** Okay.

14
15 **DR. SMITH:** For the two major time periods, and so that was --
16 Basically, what we hindcasted was the time period of 2007 to 2013,
17 and so, during that time period, every stratum got an estimate of
18 that ratio of CPUE from red snapper to shrimp, okay, and so it's
19 at the finely-detailed stratum level.

20
21 To me, that helps, because, if you're off -- You could be off in
22 a stratum, but, if you're off in one stratum, versus, you know,
23 the other fifty, or whatever it is, you know, then it's not going
24 to affect -- It's not going to overly blow out your estimate, and
25 so that's part of the beauty of that whole kind of very refined
26 stratification scheme, is it -- We can be off here and there, but,
27 overall, you know, I think it -- At least it doesn't get blown out
28 by, you know, having a really crazy year, or something like that,
29 you know, and it's also smoothed over those years. You know, the
30 intra-annual variability has been smoothed out.

31
32 **DR. NANCE:** So the ratio is done at the stratum level?

33
34 **DR. SMITH:** Yes.

35
36 **DR. NANCE:** Then hindcasted back, those ratios?

37
38 **DR. SMITH:** Yes.

39
40 **DR. NANCE:** From an assessment standpoint, did we only use effort
41 as our proxy for bycatch for snapper?

42
43 **DR. KATE SIEGFRIED:** We use the effort time series instead of the
44 annual, the year-to-year variability, because the large
45 fluctuations weren't trusted in the past yet.

46
47 **DR. NANCE:** Okay, and I still think I like that method, only
48 because it seems like, from an effort standpoint, we refined effort

1 to a very good -- I think our effort estimate is pretty precise,
2 and, by adding that now ratio of snapper to shrimp, we've added
3 now a nuance in this where if we say that -- I don't know. The
4 snapper always -- Have always been the same throughout this
5 timeframe, and I'm not sure, but --

6
7 **DR. SMITH:** I totally agree with like --

8
9 **DR. NANCE:** It seems like --

10
11 **DR. SMITH:** Your issues with the hindcasting, I totally agree with.

12
13 **DR. NANCE:** Yes, and we've gone down this path before, and I think
14 we came to a conclusion that using the effort by itself was a --
15 We had a better feeling for the catch of finfish, and those types
16 of things, with the effort, as opposed to trying to add finfish
17 ratios, which we were not really comfortable with developing.

18
19 **DR. SMITH:** Yes, and I would say that I think the data are solid,
20 as much as we can get at this point, from 2007 on, where we have
21 observers, and we have ELBs. Going back in time, the effort data
22 is actually okay, because we don't have ELBs, but the port agent
23 data collected day and night effort for a trip, like the tow hours
24 for a day, daytime towing and nighttime towing for every single
25 trip and the species-specific penaeid catch for those trips.

26
27 We also had a gear -- Kind of a gear database, you know, for their
28 permit, which told us whether it was a two and a four-net, and so
29 we were able to actually recreate all four gear types back in time
30 by stratum, you know the effort, from that port agent, you know,
31 that dealer canvass sort of program.

32
33 Interestingly, the ELB data doesn't -- You know, it isn't -- I
34 mean, it's like a little bit more refined effort, you know, in
35 terms of tow hours, but it's also not as complete as that older
36 data, in terms of daytime and nighttime and all that. I mean, we
37 can get that, obviously, from the ELB, but we had that for the
38 whole fleet, you know.

39
40 **DR. NANCE:** Thank you.

41
42 **CHAIRMAN MONCRIEF:** All right. Questions, or comments? Go ahead,
43 Dave.

44
45 **DR. CHAGARIS:** So these are uncertainty bars on those estimates?

46
47 **DR. SMITH:** Yes.

1 **DR. CHAGARIS:** Do you think those reflect the true uncertainty in
2 the estimates?

3
4 **CHAIRMAN MONCRIEF:** I do actually, because I didn't use the
5 uncertainty from the effort in there, and so, when you do this
6 ratio -- So it's a ratio estimator, and so you have the CPUE, you
7 know, or the catch, and then the effort, you know, is the ratio,
8 and, basically, when we're doing that expansion, it's still kind
9 of -- You know, you can use the two variance components.

10
11 The problem is, is that the fleet -- The effort estimate, the
12 uncertainty is just infinitesimal, and the ratio that you -- You
13 know, the expansion, basically the uncertainty, is a kind of an
14 average of the observer uncertainty and the effort uncertainty, if
15 you do it formally, and, so at this point, I decided not to include
16 -- I just used the straight observer CPUE uncertainty, which I
17 thought is probably more realistic.

18
19 **CHAIRMAN MONCRIEF:** Saucier, go ahead.

20
21 **MR. SAUCIER:** Thank you, Mr. Chair. Just to go back to the
22 hindcasting, I mean, I think I do have a little bit of concern
23 there. Just the effort. or the behavior of the fishery, has
24 probably changed a little bit over the last few decades.

25
26 Jim mentioned the transition from ice boats to freezer boats in
27 this fishery probably occurred during this, you know, the 1990s,
28 or early 2000s, and we saw some of that switchover, but, the fact
29 that we see a lot less volatility from year to year in the SEDAR
30 98 results than SEDAR 52, I feel better about that, and I think
31 that's the only comment I had.

32
33 **CHAIRMAN MONCRIEF:** All right. Harry.

34
35 **MR. BLANCHET:** This is going back a ways. We have had estimates
36 of red snapper bycatch in shrimp trawls going back to some of the
37 first Phil Goodyear assessments of red snapper, and those were
38 based upon some onboard observer information that was being
39 collected in the 1980s. Has there been any examination of that
40 older data, to see if there is something in that that is still
41 relevant to application today? Thank you.

42
43 **DR. SMITH:** We actually did uncover a lot of that, where we -- You
44 know, what was still existing. Some of that we're not sure. It
45 may not have gotten digitized or something back in those days, but
46 we did go back and find observer data from at least the 1990s, and
47 that's -- They were doing very directed things. They weren't just
48 trying to do a whole characterization, and so it was very kind of

1 -- They focused on, you know, a few boats in a couple of regions,
2 maybe, but a lot of the work was directed at the TED and the BRD.

3
4 The BRD, you know, we basically -- That's where we had most of the
5 data to do that sort of calibration for if you had a BRD or you
6 didn't. It was all pre -- You know, a lot of it was the pre, that
7 pre-era, you know, where they were kind of doing more experimental
8 observer programs, and so we did try to use that as much as we
9 could.

10
11 I see your point, though. We didn't really go back and see if we
12 could figure out the CPUE ratio, you know, for -- If we had enough
13 data for a specific stratum, maybe we could look at that for the
14 red snapper and the shrimp back in the day, just to see if it
15 matches up with our hindcasts, you know, but, basically, that's
16 basically what I think -- We tried to use some of that information
17 in correcting this hindcasting.

18
19 **MR. BLANCHET:** Yes, because some of that was being -- I mean, the
20 reason that we ended up with BRDs to begin with was because of
21 that observation about bycatch, and so that is based upon data
22 that was pre-BRD, and so that's -- I understand how some of that
23 gets missed in time, and all of that kind of stuff, but that is -
24 - Just trying to look in whatever historic records are available,
25 and, you know, if Jim knows of some bunker back in Galveston that
26 might have some of those paper records, it might be worth checking
27 out. Thank you.

28
29 **DR. NANCE:** The bunkers are still there, but, anyway, I know that
30 all the stuff we started to do in the 1990s is digitized.

31
32 **DR. SMITH:** Yes, and that's what we used. We found all of that.

33
34 **DR. NANCE:** I'm sure about Phil's, because that -- A lot of the
35 stuff that Phil used, Pascagoula was doing some of the early TED
36 work in the 1980s, in the late 1980s, and so I'm not sure where
37 that is, but, for Galveston, when Liz and I started doing that in
38 the early 1990s, it's all digitized.

39
40 You're right that it was -- We were specifically looking for catch
41 of different species out of the loss of species with TEDs, and we
42 typically were in Louisiana and Texas, a few vessels, and, when we
43 were doing the BRD development, it was still what's the loss of
44 shrimp, and what's the catch, those types of things with the BRD
45 on nets, with Texas and Louisiana for sure too, but I think that
46 data is there. It's just a matter of looking back and seeing if
47 you can glean any information for snapper out of that, because we
48 had control nets and BRD nets that we did all that work with.

1
2 **DR. SMITH:** Yes, and so data is -- That data is intact from the
3 1990s, for sure, because that's what we use to do the BRD
4 correction, and what was nice is they did -- You know, they
5 outfitted one net of the four nets, and they added one net with a
6 BRD, and the other one where they shut it, you know, closed it
7 off, and so we had, you know, a classic paired sample design data
8 for that, which is very powerful data.
9

10 Like I said, we analyzed that for the red snapper. It showed
11 about, you know, an 8 percent reduction, but, when we looked at
12 some other species, definitely much, much bigger, you know, and so
13 it's much more effective for some of these finfishes other than
14 red snapper, for sure.
15

16 **CHAIRMAN MONCRIEF:** Go ahead.
17

18 **DR. NANCE:** Thank you, Mr. Chair, and so I think where we're at is
19 we've got an effort estimate for each of the different years, and
20 a very -- I think a very good effort estimate going back, and
21 that's utilizing this newer methodology of having day-night.
22

23 **DR. SMITH:** Yes.
24

25 **DR. NANCE:** Day-night and two and four.
26

27 **DR. SMITH:** Yes.
28

29 **DR. NANCE:** So I think that the effort itself is estimated -- It's
30 getting this bycatch variable into that, and so, right now, we're
31 saying that shrimp catch is the variable we would use to estimate
32 bycatch of red snapper.
33

34 **DR. SMITH:** Yes.
35

36 **DR. NANCE:** The ratio of shrimp to red snapper in Texas, in May,
37 June, July, that type of thing, with four-net at night, this is
38 the ratio of snapper to shrimp. We know what the shrimp catch is,
39 and so the snapper catch would be this.
40

41 **DR. SMITH:** Yes, and, as you point out, that -- It's done very
42 small, what I would call small pieces of space-time, right, but
43 it's only for the -- It's for the observer, you know, the first
44 years of the observer program, right, and so we don't have any
45 information on red snapper catch in the trawl nets prior to 2007,
46 and so that's the issue.
47

48 **DR. NANCE:** In theory, if we were -- If snapper was totally

1 overfished back in that early 1990s, the ratio would be, in theory,
2 very different. Instead of getting forty snapper with the shrimp,
3 you're getting two.

4
5 **DR. SMITH:** Those bycatch estimates in the early years would -- If
6 that's true, those should be a lot lower, right, and, you know,
7 that -- Essentially, that's the kind of argument you're making.

8
9 **DR. NANCE:** Yes.

10
11 **DR. SMITH:** You know, if it was overfished in those earlier
12 decades, we should probably be getting lower recruitment, and that
13 would reflect -- Because mostly, you know, all the fish here that
14 are caught are juveniles, you know, are small, small juveniles.

15
16 99.7 percent of all of the red snapper observed, which is 100,000
17 fish, you know, at least, in the observer program, are below legal
18 size, and, basically, we're talking small fish, and so that's what
19 gets into this, you know, and, obviously, we all know that
20 recruitment -- You know, trying to believe that recruitment is
21 stable for, you know, a long time, a long time period, that's
22 tricky.

23
24 A lot of tricky things here, and I agree, from a fisheries science
25 point of view, but this is the best we could come up with, given
26 that that was sort of what the stock assessment scientists said,
27 that, hey, we got to have something back in time, you know.

28
29 The other way they usually do it is they'll just take the average
30 CPUE, or the bycatch rate from 2007, and then just pretend that
31 that's it going back. I think we did a little bit more
32 sophisticated version of that, but anyway.

33
34 **DR. NANCE:** Yes, and, Steve, you're right in the fact that, going
35 back, we're saying that, by using just effort, we're saying that
36 it was stable through time, and so okay.

37
38 **DR. SMITH:** Yes. In either method, you have to make that
39 assumption. Like I said, I think there is empirical data on red
40 snapper catch in trawls from the SEAMAP program, but that needs to
41 get calibrated, you know, like to the commercial, and then we could
42 potentially replace this hindcasting method with converting, you
43 know, the CPUE from trawl net to trawl net kind of idea, you know,
44 and I think that would be a much more scientifically-sound way to
45 go, but that's going to involve a big field effort to actually --
46 I think it needs a field experiment to do that, and we would have
47 to get the industry onboard, a lot of people at NOAA Headquarters,
48 you know, and like the center doesn't have the kind of money to

1 pay for something like that, but anyway.

2
3 **DR. NANCE:** Just to that point, can I throw in one thing, if that's
4 okay, Mr. Chair? So, Katie, you're very familiar with this, and,
5 in SEDAR 7, when we came up with these methodologies for snapper,
6 it was a mix of observer and SEAMAP. Is that still valid? I mean,
7 is it still -- I know we used the GLMs back then, but then we went
8 to the WinDbg stuff.

9
10 **DR. SIEGFRIED:** Yes, and so this is replacing those models, and
11 we're not using SEAMAP back in time, because of the reasons that
12 Steven and the rest of the team have identified, that it's not
13 directly, I guess, reflecting the way that the shrimpers fish, and
14 so this methodology, we think, is better.

15
16 One of the things that I was going to say, although you both have
17 recapped it very well, and I think Jason brought it up too, is
18 some of the earlier SEAMAP data is probably what caused all of
19 this high variability, and the pink dots that are there, and then,
20 when we went to his team, and apparently annoyingly said please
21 give us estimates back in time, so that the model didn't break,
22 because we know that there was red snapper bycatch, and other
23 species bycatch, prior to 2007, and we needed some approximation
24 of that magnitude that we would then pair with the effort data,
25 which is much more trusted.

26
27 We took heed of Steve and others' comments that please don't --
28 Still don't use the year-to-year variability in this data, and
29 trust the effort more, and so, right now, what we're doing is
30 trusting the effort data, and the observer program, and using the
31 CIE review to justify that and say this is better than the previous
32 model that used SEAMAP.

33
34 **CHAIRMAN MONCRIEF:** Did you have another comment to that, or is
35 that your comment?

36
37 **DR. SIEGFRIED:** I suppose I just wanted to make sure that what I
38 just said is accurate, from Steve and the rest of the group, that
39 this SEAMAP is no longer recommended to go back in time, and so
40 the way the assessment folks are approaching this is correct, in
41 your view.

42
43 **DR. SMITH:** Yes, and not until we can calibrate that with
44 commercial trials.

45
46 **CHAIRMAN MONCRIEF:** All right. Then, to that other point, and
47 then we'll get to Harry and David, but we talked about potentially
48 should it be less in the past. I would say there's two sides to

1 that coin, right? You could have some density-dependent function,
2 where you have a large amount of those small individuals still in
3 there, and so the catch could be -- To me, I think we made a lot
4 of -- You made a lot of reasonable assumptions here. I think that
5 it reflects some level of stability, which I think is probably an
6 improvement. Let's go ahead and get through the rest of these
7 questions, and we'll come up with a recommendation, and so, Harry,
8 go ahead.

9
10 **MR. BLANCHET:** Thank you. Thank you, Mr. Chair. Not to re-plow
11 the SEAMAP data too much, but, rather than assuming a constant
12 relationship between shrimp and red snapper prior to a given year
13 -- We have been using SEAMAP as an index of recruitment in the red
14 snapper assessment all along. Has there been some consideration
15 of using that as a relative, you know, and so, in 2015 to 2020,
16 red snapper, on the average, was a one.

17
18 In the years from 1995 to 2000, average red snapper in SEAMAP
19 trawls was 0.7. Is there some way of using that type of an index
20 to index, rather than considering red snapper as consistent
21 relative to shrimp going further back? It would be more complex
22 than what I just described, obviously. There's more variables
23 involved, but that was just my thought.

24
25 **DR. SMITH:** Yes, and that's an interesting way to go at it. We
26 haven't tried that yet. I'll have to bring that to the team and
27 see what we think about of what we could do with that. I'm not so
28 sure we can do anything immediately, but, you know, that's
29 something to consider.

30
31 Anyway, I'll think about how we might be able to deal with that,
32 but that might at least be a check on our -- That could be a check
33 on our correction, you know, our ratio, because what we have found
34 is, when we compared the SEAMAP, and I think Cheston will talk
35 about this, but, basically, we compared the SEAMAP sort of, you
36 know, shrimp to species ratios and things like that.

37
38 They're similar, okay? They are similar to the commercial.
39 They're not like way -- Like radically different, okay, and the
40 fact that we do that by small slices of space-time, you know --
41 I'm not sure if it would affect this much, to tell you the truth,
42 but we could see, you know, and that might be an idea.

43
44 I consider all these interim measures. I think the real
45 appropriate way to do it is we need to do a formal experiment, and
46 calibrate the SEAMAP data, and then we could use empirical data
47 going all the way back to 1984, but that's the science of speed.

1 **CHAIRMAN MONCRIEF:** Absolutely. Yes, and I think as many
2 groundtruths as possible, and that's always welcome. You know
3 what I mean? Those commonsense checks, and so I think, as a group,
4 and so I'll bring Ryan into the conversation again, and so we're
5 looking for a motion, or a recommendation, to the council.

6
7 This is across, you know, general finfish species, and so I think,
8 before we go down the route of having a pointed discussion on a
9 recommendation, I had the list pulled up of the characterized
10 species that was originally selected, and so, obviously, we've got
11 one for red snapper here, which we can assume is probably the
12 highest tier of the entire group.

13
14 **DR. SMITH:** Yes.

15
16 **CHAIRMAN MONCRIEF:** At least from the general looks of the data,
17 for those that are familiar with it, are there other species on
18 that list that meet that tier, or are near that tier, that could
19 have this similar kind of treatment, or detail?

20
21 **DR. SMITH:** I think I think most of the fishery species, for sure.
22 They're all -- You know, they all have decent catch numbers.
23 Similar, you know, like a decent proportion of zero, you know,
24 and, I mean, all these things have high amounts of zeros in them,
25 but that's to be expected. I would say it's -- I think it could
26 be applied to most of them.

27
28 The shrimp, by the way, were not characterized for the full net,
29 and so we did a species-specific -- You know, basically, what we
30 would do on any of those other fish, we did on the shrimp, and
31 that's how we got the verification we got, and so I'm kind of
32 confident in that sort of stuff, and so I think it should work.

33
34 You know, the stratification, and the effort, and all that, that's
35 not going to change. It's just a matter of getting the right--
36 Working up the CPUEs for those other species.

37
38 **CHAIRMAN MONCRIEF:** Having something that's got a fair amount of
39 observation to it, at least, because I think a couple of these
40 things on the list, cobia, black drum, red drum, spotted seatrout,
41 those aren't really going to be --

42
43 **DR. SMITH:** Well, like I said -- What I'm saying is the federally-
44 managed species.

45
46 **CHAIRMAN MONCRIEF:** Federally-managed reef fish species.

47
48 **DR. SMITH:** Yes. I think it will work for most of them. I haven't

1 really investigated a whole lot of those others. I suspect, you
2 know, in the strata where those are being caught, it's going to be
3 a fine estimate. It's just that you have to realize that this is
4 going to work, even if there's no -- If there's zero bycatch in a
5 stratum, that's fine. There's all the effort applied by zero,
6 right?

7
8 There's no bycatch there, and so the method is going to work, and
9 it will kind of highlight the places where those are being -- Where
10 the bycatch issue is an issue, is a problem, a potential problem.

11
12 **CHAIRMAN MONCRIEF:** Yes, and the assumption is that, even in a
13 narrow range, they're being captured representatively, you would
14 say, right?

15
16 **DR. SMITH:** Exactly.

17
18 **CHAIRMAN MONCRIEF:** For those that are constrained inshore. All
19 right, and so, Ryan, we're needing a recommendation. That's
20 correct?

21
22 **MR. RINDONE:** Yes.

23
24 **DR. SMITH:** I have one question.

25
26 **CHAIRMAN MONCRIEF:** Go ahead.

27
28 **DR. SMITH:** I think Dave still had his hand raised. Did you have
29 another question?

30
31 **DR. CHAGARIS:** Harry asked the question I was --

32
33 **DR. SMITH:** Okay.

34
35 **DR. CHAGARIS:** It was on the SEAMAP recruitment index.

36
37 **DR. SMITH:** Okay. Great.

38
39 **CHAIRMAN MONCRIEF:** Yes, and I wasn't ignoring him. He de-raised
40 his hand.

41
42 **DR. SMITH:** Okay. Sorry. I saw his name on the list, and I was
43 like uh-oh. Okay.

44
45 **CHAIRMAN MONCRIEF:** All right, and so, in a sense, this
46 recommendation looks like approving it by species for all finfish.
47 What's the -- What's kind of the route here?

1 **DR. JOHN FROESCHKE:** I guess we kind of went back and forth offline
2 about whether to go through the presentation from the working group
3 after the doing the triggerfish one, since there's a couple of
4 slides in there on that, but I don't know. Otherwise, if you want
5 to make recommendations now, maybe we should just go through those
6 items.

7
8 **CHAIRMAN MONCRIEF:** Yes, and so, I mean, to me, that will provide
9 further context. The only reason I brought it up is because, under
10 that specific item, there is motion or recommendation, but I am
11 fine with getting more context on these efforts between the
12 workgroup and triggerfish, and then kind of wrapping it all up in
13 one big conversation.

14
15 **MR. RINDONE:** That's acceptable.

16
17 **CHAIRMAN MONCRIEF:** Are you all good with that?

18
19 **DR. NANCE:** Let me ask this question. Right now we're talking of
20 a methodology, and it seems to be -- I'm comfortable with it for
21 red snapper. Should we -- Should we talk -- Should we do a
22 recommendation on the methodology itself, and not whether it's
23 applicable to other species, or do you want to do both those
24 together, I guess, Chair?

25
26 **CHAIRMAN MONCRIEF:** I think, especially given that we've got the
27 two workgroup presentations, or the one workgroup presentation
28 summary that's going to provide, you know, the detail that they
29 went through, and we're going to hold that one off until after the
30 triggerfish one, I say let's wrap it all up in one.

31
32 **DR. NANCE:** Okay.

33
34 **CHAIRMAN MONCRIEF:** That will have the maximum amount of context.
35 Go ahead, Katie.

36
37 **DR. SIEGFRIED:** Thanks, Mr. Chair. Just a question before you all
38 get into the weeds of everything else. It would be useful for us
39 to know, at the center, if you think that this team didn't address
40 any of the CIE recommendations that are possible to address,
41 because that was one of the concerns that's been brought up to us.

42
43 For us, we're approaching this as this is a good methodology to
44 use for the species identified by the observers, and you'll address
45 that at some point with your motion, but if you could talk about
46 the CIE recommendations. I heard a number of comments about it,
47 but that would be helpful before you get into the weeds of other
48 things.

1
2 **CHAIRMAN MONCRIEF:** All right. Let's pull up that slide with the
3 CIE comments, just so they're in front of everybody. That's slide
4 29. To me, in general, I would say -- With the results from the
5 red snapper one, to me, it kind of controlled for everything you
6 could control for, and made assumptions for everything you could
7 make assumptions for, and tried to alleviate whatever biases you
8 would have across-the-board, and I think, the way it went back in
9 time at least, it was about as representative as you're going to
10 get without digging into that old information and trying to make
11 more assumptions.

12
13 I mean, to me, the -- It's kind of like what we deal with as a
14 whole in every fishery. It's just you've got one scaler, which is
15 the overall effort, right, the overall look at the fishery, and,
16 obviously, the first recommendation there is kind of outside the
17 scope that could be addressed within the study, and, really, it's
18 kind of outside the scope of what could be addressed in the room,
19 but, to me, that's kind of the one that stands out of --

20
21 You know, obviously, there's been some technological issues, and
22 there's been implementation issues, everything else like that, and
23 those things are coming to the forefront, and the so question is,
24 is there a better design there to ensure that that information
25 remains stable and representative over time?

26
27 I don't think that kind of -- That's not addressed in his study,
28 and that's not addressed in here. He had -- I think, for the most
29 part, Steve has kind of addressed most of the concerns that the
30 group had. That's just my thoughts.

31
32 That major Recommendation Number 1, that's a very big-picture
33 question. It kind of falls outside the scope. As important as it
34 is, and as much as I'm sure we would like to weigh in on it, that's
35 the biggest part of this entire thing, and so anybody else have
36 any responses to the CIE reviewers and how it was addressed?
37 Harry, is that a ghost hand, or are you ready?

38
39 **MR. BLANCHET:** That's for a comment for another point.

40
41 **CHAIRMAN MONCRIEF:** Okay. How about this? Anybody disagree with
42 that monologue I threw out there? All right. We're going to say
43 everybody generally agrees that they were met. Harry, you got
44 your comment for another point? You want to go ahead and throw it
45 out there?

46
47 **MR. BLANCHET:** Yes, and you had brought up the list of species.
48 The one that jumped out at me was, many years ago, Bruce Thompson

1 at LSU pointed out to me that there was a big challenge with
2 identification of offshore flounders between southern flounder and
3 broad flounder, not to mention all of the other flatfishes that
4 are in the world, but those two are very close, and very
5 challenging to identify, and so I wonder if anyone has taken a
6 real look at how many of those southern flounder are southern and
7 how many are broad. That's not something that, unless you've been
8 specifically trained in differentiating between those two species,
9 you're going to pick up on. Thank you.

10
11 **CHAIRMAN MONCRIEF:** Yes, and that's kind of -- When I brought up
12 the list and all that, we had to kind of go through the refinement
13 of, all right, it can't be the entire thing, because some of these
14 things aren't going to match up.

15
16 **DR. SMITH:** That's a fair point. I mean, we're at the point now
17 where, you know, we're in the process of following their
18 Recommendation Number 2, right, the CIE, which is kind of
19 overhauling the whole program, and part of that is we are
20 implementing some electronic technology, cameras with measuring
21 boards, to basically characterize everything, and not just some of
22 the species.

23
24 Absolutely every living marine resource will be characterized
25 going into the future, and so that's what we're working on right
26 now, and getting a length measurement as well and everything. We
27 think this is going to get resolved going forward. It doesn't
28 really help us going backward at this point.

29
30 **CHAIRMAN MONCRIEF:** Yes, and that's always where the question-
31 marks are.

32
33 **DR. SMITH:** Yes.

34
35 **CHAIRMAN MONCRIEF:** All right, and so we've had the presentation.
36 I think we've addressed a fair amount of questions, and got a
37 pretty good picture of it. Let's move forward to the triggerfish
38 presentation, and then, after that, we'll have the recommendations
39 from the working group that Dr. Froeschke will give, and so let's
40 go ahead and move on to that triggerfish presentation, and then
41 we'll wrap it all up again with a suite of recommendations. Thank
42 you for coming. Great presentation.

43
44 **DR. SMITH:** Thanks, everyone.

45
46 **CHAIRMAN MONCRIEF:** Time flies when you're having fun. Let's take
47 a little break.

1 (Whereupon, a brief recess was taken.)

2
3 I'm looking back there to Mr. Chestnut, Joey Chestnut, which I'm
4 ashamed that I missed that joke to start with. All right, and so
5 we're going to go ahead and get things rolling. We are finishing
6 up eating, just to make sure we're going to be within our time
7 constraint today.

8
9 **MR. RINDONE:** Joey Chestnut ending up in the minutes was not on my
10 bingo card.

11
12 **CHAIRMAN MONCRIEF:** Well, it's up to you whether it ends up in the
13 summary, and so he's going to talk to us about, once again, going
14 down the route of shrimp bycatch, and this is going to be focused
15 on bycatch estimation in a different format, essentially, and so
16 go ahead and take it away.

17
18 **GRAY TRIGGERFISH BYCATCH ESTIMATION (SEDAR 100)**

19
20 **DR. CHESTON PETERSON:** Okay, and so my name is Cheston Peterson.
21 I'm an affiliate at CIMAS. I'm on Steve's team of analysts. I
22 mostly work on shrimp trawl bycatch. I kind of found my way into
23 working on some data-poor species, and so, as Steve talked about,
24 some species are not quantified in the observer program, and gray
25 triggerfish, that we're here to talk about now, are one of those
26 species, meaning that some improved shrimp -- Or the improved
27 shrimp bycatch method that he just presented for red snapper isn't
28 suitable, because they're not in the observer data.

29
30 While SEAMAP data cannot be used as a direct substitute for
31 commercial trawls, that data can be used in concert with observer
32 data for an alternative by catch method. However, SEAMAP data
33 have to be filtered to do this, to better reflect habitat matching
34 commercial shrimp operations, and that's kind of the biggest
35 criticism.

36
37 This assessment of gray triggerfish, SEDAR 100, required an
38 alternative approach. Here we are, and so, as a stopgap, and I
39 really want to emphasize that this was a suggested one-time stopgap
40 measure for gray triggerfish, we suggested estimating bycatch
41 using other species in the observer data, determined through co-
42 occurrence analysis of the SEAMAP trial data that we filtered,
43 and, by we, I mean me. I had that bright idea and found my way
44 into this project.

45
46 The first task for this was to prepare a SEAMAP analysis-ready
47 dataset, and so we did that by filtering the SEAMAP data using
48 existing habitat, catch, and effort information to include only

1 tows that were representative of habitat in which the commercial
2 fleet operates, and we did that by delineating SEAMAP tows on soft
3 bottom or reef hardbottom habitat.

4
5 We used a couple of datasets to do this. The first was just the
6 SEAMAP data itself. Using catch data, we came up with some
7 indicators of reef habitat, which were mostly like forty or fifty
8 species of octocorals that would be indicative of reef or
9 hardbottom.

10
11 We also used shrimp catch rates as an indicator of soft bottom, or
12 shrimp, and we also had the vertical line observer program, where
13 sets are associated with 500-square-meter grid cells that we can
14 cross-match with SEAMAP tows for indicators of habitat, and we
15 have shrimp fleet ELB effort data, and so basically whether or not
16 it's in that expanse of effort.

17
18 This is what the SEAMAP analysis-ready tows look like on the map
19 that you see there, and so the four filters, again, for the SEAMAP
20 data is tows were removed if they intersected known reef habitat,
21 if there was presence of a reef indicator species, mostly
22 octocorals, if they were outside of known fleet effort, and, if
23 they were outside, we just dropped it, and if there's zero shrimp
24 catch, meaning that, if they didn't catch shrimp, we dropped that
25 tow as well.

26
27 This figure just shows everything that was removed for each one of
28 those filters, the tows crossing known reef habitat, which you can
29 see is a little more dense in the eastern Gulf, tows with the
30 indicator species, tows outside of known effort, which there are
31 a lot of, especially in the eastern Gulf, and then tows without
32 shrimp catch at all, and so all those tows were removed from the
33 SEAMAP data.

34
35 I like this table because this shows how many tows are being
36 removed, the number removed from the original batch of tows, and
37 then the percent removed, and then the cumulative numbers, and the
38 one thing I want to point out is that you can see the percent
39 removed for each filter from the original, and then the cumulative
40 percent doesn't increase quite as much in every step, meaning that
41 our filters are working, and so there's some redundancy here, and
42 we felt like that these filters on top of each other were doing a
43 good job of paring down that SEAMAP dataset.

44
45 The second task, now that we have a working dataset from the SEAMAP
46 data, was to use that to determine associations between gray
47 triggerfish and co-occurring species to identify proxy species for
48 bycatch. Suitable proxies would be positively associated and

consistently co-occur with gray triggerfish, and they, obviously, have to be among the species quantified in the observer program, and so one of those original, I think, eleven species.

The co-occurrence analysis allows for blocking or stratification by location and region, depth, season, and so we're able to use a lot of the same stratification variables that you saw in Steve's talk in our co-occurrence analysis, and so this is stratum-level co-occurrence, as well as stratum-level bycatch.

This also allows for multiple proxy species, meaning that, within some strata, if some species are more suitable, or more strongly associated, with gray triggerfish, we could sub them in.

I'm going to explain this co-occurrence analysis. It's really -- A lot of this is just coming down to algebra and Chi-Square, but I'm just using basic principles of probability theory here. P of A and B is the occurrence of Species A and Species B, and so we're calculating a species interaction factor, SIF, which is just the observed co-occurrence of Species A and B over the expected co-occurrence of Species A and B, which is just the product of their occurrence. SIF, the SIF, value over one is considered a positive association, equal to one is no association, and less than one is negative.

In strata, for which we had enough data, we did run statistics, the primary statistical test being a Chi-Square analysis. This is just a two-by-two contingency table, but we did have a minimum sample size requirement of five or more samples for every one of those scenarios you see in that lower-left box, and so catch of both species being zero, catch of Species B being greater than zero, and no catch of Species A, the reverse, and then catch of both species.

When we didn't have enough data, or the data were imbalanced, it would kick to a Fisher's Exact Test instead of a Chi-Square analysis, and then, just to give you an example, if we calculated this for Stratum 423, and so one of our strata, and that's Area 4, Depth 2, and Season 3, we would calculate a species interaction factor and then run a Chi-Square analysis on that.

This one was significant, and you can see the number of tows, where we had 1,065 tows without either species, 106 with both, and 459 and 119 for either one.

Okay, and so, for the co-occurrence analysis, we broke this down in a similar way, like I mentioned, that the bycatch is done, and so we have four primary areas. We had two depths, instead of

1 three, so just less than ten fathoms and greater than ten fathoms,
2 and then three seasons, or quadrimesters, from January to April,
3 May to August, and September to December.

4
5 In Area 1, depths were pooled, and so we just -- We put those
6 together, and then, because SEAMAP doesn't sample in the beginning
7 of the year, we averaged Seasons 2 and 3 for Season 1 in the SEAMAP
8 data. Okay and so for, again, A 1, we had area and season as our
9 stratification, and then, for Areas 2 through 4, we had area,
10 season, and depth.

11
12 Lane snapper was our primary associate, or proxy, species. Lane
13 snapper were positively associated with gray triggerfish in most
14 strata. In Area 2, red snapper had a stronger association at the
15 lower depths, and so we used red snapper as our proxy species
16 there, and then, for some strata, statistics could not be run on
17 the co-occurrence analysis, but the species interaction factors
18 were consistently positive.

19
20 The reason that is is that just, in some of those strata, when we
21 break it down to an area, season, depth combination, to get five
22 tows with all those combinations of species, that just gets tricky,
23 where, in some sparse strata, you don't have that much data.

24
25 We did look at associations across time of day, and I know we
26 talked about that with the bycatch estimation, and those were
27 stable, and so night and day were not a factor in the co-occurrence
28 analysis.

29
30 We had twenty-one, in total, area, season, and depth strata, times
31 three eras, and I'll talk about the eras a little later in the
32 talk, and so sixty-three total strata. Red snapper was used in
33 Area 2, Depth 1, Seasons 1 through 3, and lane snapper used in all
34 other strata.

35
36 This is just the occurrence of lane snapper, gray triggerfish, and
37 then both species in SEAMAP tows. That's from the filtered SEAMAP
38 data, and so you can see all tows with lane snapper in the top-
39 left, all tows with gray triggerfish in the bottom-left, and then
40 the purple on the right is tows that had both species.

41
42 Proportion positive was 0.16 for gray triggerfish and 0.21 for
43 lane snapper, and there's about three times as many lane snapper
44 in the dataset, just in terms of raw numbers, than gray
45 triggerfish, and you might point out -- The one thing that sticks
46 out to me is that lane snapper are pretty dense off Louisiana and
47 Mississippi there, and gray triggerfish are a little sparse, and
48 that's actually where we subbed in red snapper. They were a better

1 associate, and just to remind you there.

2
3 Okay, and so the third task was to actually conduct the bycatch
4 estimation, and that was done by Steve, using the method he just
5 presented for red snapper, obviously, and then lane snapper, our
6 proxy species, and so we use strata-level bycatch estimation on
7 the co-occurring species to calibrate for gray triggerfish
8 estimates.

9
10 Now we're using the shrimp observer data to conduct the actual
11 bycatch estimation, and then we had a SEAMAP conversion factor
12 that we adjusted in every strata for gray triggerfish. That ranged
13 from 0.002 to 8.59, with a mean of 0.8 and median of 0.43, and so
14 I think, when I presented this in the past, this gets a little
15 lost in the sauce, because it's not a one-to-one ratio of lane to
16 gray triggerfish, and I want to be really clear about that.

17
18 It's really just a simple math problem, where we have three knowns
19 and one unknown, and so we have a catch rate for gray triggerfish
20 and lane snapper in SEAMAP, and we have a catch rate for lane
21 snapper in the observer data, and so we're just solving for Y_2 ,
22 our observer catch rate for triggerfish.

23
24 When you work through the math here, your Y_2 is just the ratio of
25 gray triggerfish to lane snapper times your observed catch rate of
26 lane snapper, which is going to give you your Y_2 , and so that's how
27 we estimated gray triggerfish bycatch, where it's the ratio of
28 gray triggerfish to lane snapper in a given stratum in the SEAMAP
29 data times that bycatch rate.

30
31 The conversion factors calculated can apply to the strata level,
32 and, when I presented this last year at the data workshop for SEDAR
33 100, the main suggestion, from the expert panel in the working
34 group, was to explore a time-varying conversion factor, i.e., that
35 this relationship of the two species wouldn't be stable over time.

36
37 That made sense to me, and everybody else working on it, and so
38 that's what we did. We used SEAMAP data to calculate a calibration
39 factor, and then we broke that up into eras, essentially, and so
40 we had a time-varying conversion factor with three eras, from 1987
41 to 2006, 2007 to 2013, and 2014 to 2023, and so we ended up with
42 sixty-four conversion factors across all strata.

43
44 Just to show you an example of this, this is the catch rate, the
45 mean CPUE, of both species, gray triggerfish in blue and lane
46 snapper in yellow, or orange, and then the conversion factors over
47 eras, and so you can see that that ratio does change, and so a
48 time-varying conversion factor seemed appropriate, and that's what

1 we used.

2
3 The final estimates that we presented for SEDAR 100 are here. We
4 have gray triggerfish bycatch in the west and eastern Gulf, and so
5 it's almost in the west, definitely driven by the western Gulf.

6
7 To compare to the last gray triggerfish assessment, we've got SEDAR
8 62 bycatch estimates in blue, and then our current estimates that
9 we're presenting here, and so a lot less variability. This did
10 use the WinDbg models and SEAMAP data in the past, and so it was
11 a pretty messy process for getting this for a gray triggerfish.
12 It's a little more stable.

13
14 **CHAIRMAN MONCRIEF:** Let's hit the pause button, real quick. Jim.

15
16 **DR. NANCE:** Thank you, Cheston. You know those eras that you
17 picked, and were they just because they were the same number of
18 years, or were there some other factor that you used?

19
20 **DR. PETERSON:** That was kind of based on the observed -- Some of
21 the same eras we used in the bycatch estimation, in terms of --
22 It's like periods of when data change, like the ELB period and
23 things like that, and we kind of modeled our eras in the same way.

24
25 **DR. NANCE:** Okay. Thank you.

26
27 **DR. PETERSON:** I think Steve alluded to this in his presentation.
28 Steve compared length frequencies of red snapper between observer
29 and SEAMAP data, and found that the red snapper length frequencies
30 were similar across those two datasets, and so we made the same
31 assumption that the length distribution for gray triggerfish would
32 be similar in the SEAMAP data as it would be in the observer data
33 and commercial data, i.e., that they're catching the same size or
34 same age fish.

35
36 **CHAIRMAN MONCRIEF:** We had a quick one from Mike.

37
38 **DR. ALLEN:** Yes, and I just wanted to -- So the reason to use those
39 time periods was just so that you didn't have to assume that the
40 ratio of lane snapper to gray triggerfish was the same through
41 time?

42
43 **DR. PETERSON:** Correct.

44
45 **DR. ALLEN:** So that's just to block it by --

46
47 **DR. PETERSON:** Just trying to add some variation, yes.

1 **DR. ALLEN:** Okay. Thanks for that.

2
3 **DR. PETERSON:** Okay, and so this is the lengths of gray triggerfish
4 out of the SEAMAP dataset, and so we're assuming this would be
5 representative of what's being by-caught, and so these are almost
6 all sub-legal age, I think age-zero to one fish, and I'm going to
7 skip this intermission and just go into this last little bit.

8
9 We do have 2025 observer data now that we started looking at. One
10 question that was posed to us is can we use -- Can we use the
11 observer data in one year to estimate bycatch for the species, and
12 the short answer is no, and I'll get to that in a second.

13
14 This is just data that Gary Decossas worked up, and I just want to
15 show that there were gray triggerfish being observed last year.
16 I'm trying to orient myself, and I think it's just 30 percent
17 positive trips for gray triggerfish, 36 percent positive for lane
18 snapper, and then some comparisons. You can see the stat zone
19 breakdown on where they're being caught, and mostly being caught
20 in the western Gulf.

21
22 This table is maybe a little confusing, but, basically, this is
23 the number of tows we have in a given stratum. When we've done
24 bycatch estimation in the past, we usually have 89 percent of this
25 covered where we're not having to impute very much for other
26 strata, and so, with this one year of data, we've only got 46
27 percent of the effort covered, in terms of being observed, and so
28 we need more data. We can't just use the 2025 data to estimate
29 bycatch, and, if you've got any other questions about that one,
30 I'm going to defer to Steve.

31
32 This is a plot I made comparing our ratios, our conversion ratios,
33 to observed ratios for just a collection of strata, and so, on the
34 X-axis, you'll just see a few examples strata, which are area,
35 depth, and season number combinations. The black dots are observed
36 for a gear-night combination from Steve's work, the observed ratio
37 of gray triggerfish to lane snapper, and then the blue dots, with
38 the error bars, are our SEAMAP-derived conversion factors.

39
40 One thing I want to point out is that there's not a systemic bias,
41 that our ratios aren't consistently above or below observed ratios.
42 Sometimes they're on target, and sometimes they're a little high,
43 and sometimes they're a little low. Observed ratios higher than
44 the SEAMAP-derived ratios indicate a higher proportion of gray
45 triggerfish than expected from the SEDAR methods, and so, for 222,
46 I think, and 423, we might be underestimating, based on this
47 limited data. For 322, we might be overestimating slightly.
48 That's just a comparison of the observed ratios to the ones that

1 we came up with.

2
3 I think I talked about this before. SEAMAP-derived ratios range
4 from 0.002 to 8.5. The mean was 0.8, and the observed ratios were
5 pretty similar, and I'm just going to end on where we landed, was
6 the workgroup recommended the proxy method as the most robust
7 estimates without additional years of observer data.

8
9 Since we can't use the 2025 data, and we're still waiting on effort
10 data to come in, these are our SEDAR 100 bycatch estimates for
11 gray triggerfish on the left, the east and west, and then, on the
12 right, a plot comparing SEDAR 100 and SEDAR 62 from the past, and
13 that's it for me. I'll leave this here, so you can gaze upon it
14 if you like.

15
16 **CHAIRMAN MONCRIEF:** All right, and so I've got a quick one for
17 you, and then we'll go around the room. The length distributions,
18 real quick, and so, understandably, you get a lot of smaller fish
19 in those trawls.

20
21 I'm trying to think through the assumption that the observed SEAMAP
22 are representative of also what's in the fishery. Thinking about
23 the morphology of triggerfish, it's a little bit wider than a
24 snapper, a little bit more rigid than a snapper, and it definitely
25 has a spine and a couple of hard parts sticking out, and do you
26 think that's a reasonable assumption, given the bar spacing and
27 everything else, that those two are representative of each other?

28
29 **DR. PETERSON:** Yes, I do. I think they're so small that --Since
30 we're talking about really small age-zero to one fish, I think
31 those morphological differences aren't -- I don't think that's
32 going to matter in this context, and so I think that's a safe
33 assumption.

34
35 **CHAIRMAN MONCRIEF:** Okay. I've got Tom, and we'll go to Dave after
36 that, and Jim. Tom, go ahead.

37
38 **DR. FRAZER:** Thanks, Trevor, and so my question was at the very
39 beginning of the talk. I mean, you indicated that you excluded
40 the SEAMAP trawls that didn't have any shrimp, and I'm just trying
41 to better understand the rationale for that decision, and then
42 I'll follow-up after I hear that.

43
44 **DR. PETERSON:** Yes, and I think the rationale is that we're just
45 trying to be conservative on, you know, whittling down the SEAMAP
46 data to something that we're confident represents the commercial
47 fleet, and so tows where they didn't catch any shrimp at all were
48 -- You know, at first, I thought that might be a little heavy-

1 handed, but I think it's actually appropriate, to make sure we're
2 trying to whittle that down in good faith.

3
4 **DR. FRAZER:** But the length of an average SEAMAP trawl, the time,
5 what is that relative to the average time of, you know, an actual
6 shrimp trawl?

7
8 **DR. PETERSON:** It's shorter. I think they're an hour, or thirty
9 minutes.

10
11 **DR. FRAZER:** Yes, and I guess the reason why I'm concerned about
12 that a little bit is that, you know, the reason that you have a
13 regular shrimp trawl on the order of five hours, right, is because
14 they go through these large spaces of no animals, right, and so
15 I'm just -- You know, I have to think a little bit more about
16 whether that's really representative by pulling those particular
17 trawls out of the analysis, and so, anyways, I'll ponder that a
18 bit. Thank you.

19
20 **DR. PETERSON:** Sure thing.

21
22 **CHAIRMAN MONCRIEF:** All right. Thanks, Tom. Dave, go ahead.

23
24 **DR. CHAGARIS:** Thank you. Maybe I missed something, but I'm
25 curious why you didn't just calculate the ratio of gray triggerfish
26 to shrimp from SEAMAP and then apply that to extrapolate up and
27 take out, you know, the middleman of lane snapper and red snapper.

28
29 **DR. PETERSON:** Yes, and I don't think we discussed doing something
30 like that. I think the idea was -- It's a fair question, and I
31 think the idea was it was based around, you know, this new bycatch
32 estimation that we had just done for red snapper, and how to make
33 that work, and so, you know, my mind went to a proxy species that's
34 in the observer data, and so not necessarily a reason. I don't
35 think we discussed just doing like a one-to-one from, you know,
36 shrimp over, but, you know, stuck with the fish species instead.

37
38 **CHAIRMAN MONCRIEF:** All right. Go ahead, Jim.

39
40 **DR. NANCE:** Thank you, Chair. Cheston, I may have missed it, but
41 why did you pull out at the end of this 2025? Was it just because
42 it's a bad year? I'm just curious why you pulled it out of all
43 the other years, and why were we looking at this at the end?

44
45 **DR. PETERSON:** That was -- That got brought up, I think just from
46 the council, that, once we had 2025 data, could we use those data,
47 you know, using this like the new, hopefully standardized method.

1 **DR. NANCE:** Just use one year?

2
3 **DR. PETERSON:** Yes. That was in there from the last time I gave
4 this talk. That was part of it, and I thought it would be good to
5 just go ahead and go over that, too.

6
7 **DR. NANCE:** Thank you.

8
9 **CHAIRMAN MONCRIEF:** Tiffany, go ahead.

10
11 **DR. HOPPER:** Thank you, Mr. Chair. This sort of builds off of
12 what Dave was just asking, to some extent. I'm curious as to
13 whether or not you guys, as sort of a proof of concept, looked at
14 two species that were on the observer data and did some similar
15 ratio work, to see whether or not you could use the ratios and
16 then basically get back out the bycatch answer that you had from
17 the observer data.

18
19 **DR. PETERSON:** Yes, and that's a great idea. No, we haven't talked
20 about that as a method. I mean, part of it is just there's legwork
21 to do all of this stuff, you know, and like so calibrating
22 everything for lane snapper took some time for Steve, and so that's
23 a good suggestion. We could talk about trying to dedicate some
24 time to do that.

25
26 **CHAIRMAN MONCRIEF:** That was a conversation we were having right
27 here, and so, yes, that's great. Have we got any other -- Go
28 ahead, Mike.

29
30 **DR. ALLEN:** Just one more thought, kind of playing off Tom's
31 question, and I wonder -- Did you happen to do any sensitivity
32 about the SEAMAP trawls that were deleted, and like what if you
33 had added those back in, and how much it influenced the estimate,
34 you know, the trawls that didn't have shrimp, for example, you
35 know?

36
37 **DR. PETERSON:** Yes, and we didn't, not all the way through to like
38 affecting bycatch estimation. I played with that in the co-
39 occurrence analysis some, and I felt like, you know, really that
40 -- It really didn't change the results, to be honest, but I felt
41 like that was -- Being more conservative with what we removed was
42 better, you know, because we were trying to find a more
43 representative dataset.

44
45 To go -- To play around with that, and go all the way through
46 bycatch estimation, is a lot of steps, you know, to like -- To see
47 how it's going to be affected, and so we didn't -- We didn't go
48 that far, but, you know, a lot of that was to determine who the

1 co-occurring species are going to be, and so it didn't -- It
2 wouldn't change the bycatch estimation, I don't think, and it's -
3 - You're just potentially changing what, you know, conclusions we
4 would make about associated species.

5
6 **CHAIRMAN MONCRIEF:** Harry, go ahead.

7
8 **MR. BLANCHET:** Thank you, sir. One, talking about removal and of
9 -- I was looking at those areas where you were removing with no
10 shrimp catch, and it's hard to compare the two graphically, but,
11 in Steve's presentation, he had a -- He had a picture of where the
12 shrimp bycatch or -- I'm sorry. Where the shrimp effort was. Let
13 me see if I find what -- That was his slide 16.

14
15 If you look in Zones 16, 17, and 18, there's a big gap in there,
16 where there's very little shrimp trawl effort in that middle shelf
17 region, and there's smaller areas in some of the other shrimp zones
18 where that also occurs, and, in your presentation, there seems to
19 be some relationship to where some of those that you were removing
20 the trawls with zero shrimp seem to be in similar areas.

21
22 I don't know how well they match up with one another, but that --
23 To me, that does give some rationale that you were onto something
24 with removing those things that -- You know, having at least some
25 metric of shrimp concentration as a filter for were these
26 realistic, or was this something that maybe you might have a
27 different type of community in that particular region, because of
28 substrate, you know, more sandy or whatever, and it just makes it
29 less amenable to the shrimp, and so that was one part of it, but
30 I think that there -- I think that where you -- I'll leave it at
31 that. That's enough. Thank you.

32
33 **CHAIRMAN MONCRIEF:** Go ahead, Jim.

34
35 **DR. NANCE:** I was interested in what Dave -- All the comments that
36 are being made, I think one of the issues we're having here is,
37 with red snapper and the shrimp and those types of things, they're
38 all from the observer data, and so they're all being taken in the
39 same trawl.

40
41 We don't have any idea, from the observer standpoint, about
42 trigger, gray triggerfish, and so somehow we're going to have --
43 We're making up how much bycatch there is in a shrimp trawl, trying
44 to find some surrogate to be able to plug into that value, and so,
45 while this methodology is, I think, useful in doing, it's going to
46 give us -- You know, I guess we know that there's not zero bycatch
47 in the trawl fishery.

1 Now, trying to come up with a number that really is there is --
2 That's what we're trying to accomplish, and so, if we utilize this
3 estimate, I think it would be very important, from an analysis
4 standpoint, that we do some type of -- What's the word? For some
5 reason, I always skip that one.

6
7 **CHAIRMAN MONCRIEF:** Sensitivity.

8
9 **DR. NANCE:** Thank you. Sensitivity analysis on this, to see how
10 important that number is. Does the model even care how much
11 bycatch there is of this, or does it really affect it? I think
12 that's important, and I think that would help us make decisions on
13 risk later on, but I'm still struggling with trying to figure out
14 if using lane snapper is the best one, but it looks like there's
15 not another alternative if we're going to have an estimate. Thank
16 you, Cheston.

17
18 **DR. PETERSON:** Thank you.

19
20 **CHAIRMAN MONCRIEF:** Katie, you got some thoughts on this one?

21
22 **DR. SIEGFRIED:** Yes, and so we, in anticipation of this SSC
23 discussion, planned on providing a suite of sensitivities at the
24 CIE review for gray triggerfish. Skylar just turned in her report,
25 and we just got our CIE reviewer, and so she's gone all the way to
26 nothing up to the estimate up to larger, to reflect uncertainty,
27 to really push the model and show you what the model does with and
28 without bycatch, but that doesn't help you decide which level to
29 recommend when we do bring that assessment to the SSC.

30
31 **CHAIRMAN MONCRIEF:** Yes, and I think I'm sharing a similar struggle
32 of, you know, us kind of bouncing back and forth of taking SEAMAP
33 to inform the fishery, versus not recommending to use it to inform
34 the fishery, where the utilization is, and then, looking at the
35 tables and stuff like that, while there does seem to be some
36 general relationship if you kind of summarize, it looks like, when
37 you get into kind of the zone-by-zone look and everything else,
38 there's a fair amount of variability in the two.

39
40 It doesn't seem like it's as certain as what we're applying it to
41 be, I guess, when we come up with the general relationship, and so
42 I think, between those two things, it's just kind of hard for me
43 to wrap my head around it, and so kind of a question, I guess, for
44 Katie is, to move forward, do you all need a recommendation from
45 us on method selection, anything else like that, or kind of what's
46 the look here from the SSC recommendation level?

47
48 **DR. SIEGFRIED:** The first one would be is there a fatal flaw in

1 this methodology that would lead you to say it's better to say
2 there's nothing versus use this modeling approach? The second
3 thing, if there's no fatal flaw, then it would be, okay, what do
4 you recommend we use for uncertainty? Do you also continue the
5 recommendation of utilizing the effort time series and an average
6 approach, rather than using the year-to-year variability, and then
7 do you have bounds around which that we could test the model, but
8 we've -- Like I said, we've gone real low and real high, and so
9 we'll encapsulate all the uncertainty for you, but, when you're
10 setting ABCs, you'll have to pick a range.

11
12 What I would like to know from Cheston, and maybe Steve, is there
13 any -- Have there been any recommendations at the table that you
14 would want to do before you continue with putting forward this
15 methodology? Is there something like, I don't know, Tiffany's
16 suggestion, or Dave's suggestion, or something that you're like,
17 oh, maybe we need to do that first, before I recommend this, or
18 are you still confident that this is a good approach, a stopgap
19 approach until we get more years of observer data?

20
21 **DR. PETERSON:** I'm still confident. I would defer to, you know,
22 Steve. I think it's a good idea as an exercise in validation, but
23 I think, to Jim's point, you know, we are presented with a problem,
24 and this is the data we have, and we've mulled this over, and
25 talked about it, and worked on it now for months, and I think this
26 is still our -- You know, this is our best foot forward with what
27 we have available, you know what I mean, and so I'm confident in
28 this.

29
30 I don't think -- You know, I guess I would be surprised. If we
31 went through a validation exercise, and it really suggested we
32 were way off, I would personally be surprised. I would think that
33 a validation exercise would probably look pretty good, you know,
34 and it would hopefully work.

35
36 **CHAIRMAN MONCRIEF:** Go ahead back to that.

37
38 **DR. SIEGFRIED:** So, continuing on with that, I agree. I think
39 some of the things would be cool to do. I do think that the shrimp
40 bycatch efforts at the center have been going on a lot longer than
41 we had money for in the first place, and so we do have to be a
42 little bit careful about other analyses that we ask your team to
43 do.

44
45 I would say that, the uncertainty that you provide, we could
46 potentially expand that a little in the assessment, and just push
47 it, and show the CIEs, and then the SSC, what the model does with
48 that, and then they can decide. If they don't utilize the

1 uncertainty, maybe they're risking something about the stock.

2
3 I mean, I already know what the answer is that we're showing the
4 CIEs soon, but this SSC doesn't, but it's -- You know, spoiler
5 alert, and it doesn't seem to affect status, and it's just as a
6 slight scaler on the projections, and so I think, if we
7 characterize the uncertainty, that's basically the best we can do
8 with this analysis, and it's really a good result of all of this
9 work, that the observer program is starting to identify more things
10 to species.

11
12 I think that's really the best outcome that we've had. If we could
13 get all the effort characterized, I mean, you guys would have
14 accomplished quite a bit as a team.

15
16 **CHAIRMAN MONCRIEF:** All right. I've got Jim, then Jason.

17
18 **DR. NANCE:** Thank you, Chair. As I've said in previous meetings
19 with you, Cheston, mathematically, it's really flawless. I mean,
20 what you've done is very good work, and having -- There's not any
21 mechanism where we have shrimp and triggerfish that we can utilize
22 to -- Utilize that ratio to extrapolate up with the total catch of
23 shrimp.

24
25 We've only got SEAMAP, a trawl survey where we have triggerfish
26 and snapper being caught together, and so taking that ratio, and
27 then utilizing that ratio with what's the observer is catching
28 with that, I think is a good methodology. I don't have any problem
29 with that.

30
31 It's just using another species as a surrogate, and that's where
32 I'm kind of having an issue, but, mathematically, you're fine on
33 it, and so I guess, if we did this -- I can't think of a different
34 alternative of how to do this without just saying we don't know
35 what bycatch is, and so that's where I'm kind of at.

36
37 **CHAIRMAN MONCRIEF:** Jason, and then Dave.

38
39 **MR. ADRIANCE:** Thank you, Mr. Chair. A follow-up on Jim's last
40 two points. I think I do have a little trouble with the surrogate,
41 but I think this might benefit from that side-by-side comparison
42 of the SEAMAP to the commercial trawls. If we're trying to apply
43 this just SEAMAP data to that fishery, I think it might benefit
44 from that.

45
46 **CHAIRMAN MONCRIEF:** All right. Dave.

47
48 **DR. CHAGARIS:** I was just going to reiterate that the alternative

1 would be to not use the observer data at all, and compute the
2 triggerfish to shrimp ratios, and then apply those, and then you
3 take out a lot of the -- I mean, the observer data has very poor
4 coverage, and so it's not like adding that in brings me any
5 comfort, and so I would like to see that alternative analysis. It
6 should be a lot more straightforward than what you've done here,
7 because you're taking out one of the three components.

8
9 **DR. NANCE:** Dave, where would you get that ratio though?

10
11 **DR. CHAGARIS:** From the SEAMAP trawl data.

12
13 **DR. NANCE:** So just using shrimp in the SEAMAP?

14
15 **DR. CHAGARIS:** Triggerfish to shrimp in the trawl ratio, which is
16 essentially what you're getting at, because the lane snapper and
17 red snapper is also a ratio to shrimp, and so you're doing a ratio
18 to a ratio, but just cutting out that middle surrogate species.

19
20 **CHAIRMAN MONCRIEF:** I think what we talked about with the logic
21 test, and the groundtruths and all that stuff, I think those two
22 exercises are a good one to go through, just to have a couple
23 checks on it to see if it checks out, and so I do think that would
24 add some support for me, I guess, in that instance. I've got
25 Ralph, and then Dr. Froeschke. Go ahead, Ralph.

26
27 **MR. TOWNSEND:** Just a question about -- Has this methodology been
28 used elsewhere in the world, so that we can get an idea of, you
29 know, the assumption of ratios of the various species being
30 imputed? Are there similar work elsewhere that we could look to
31 to say how reliable is it?

32
33 **DR. PETERSON:** I haven't looked, personally. I'm not sure.

34
35 **CHAIRMAN MONCRIEF:** All right. Go ahead, Dr. Froeschke.

36
37 **DR. FROESCHKE:** Just a thought, and so, out of my own curiosity,
38 I was looking at the G-FISHER data, which is -- It's on the reefs,
39 which is -- Obviously, these samples aren't intentionally on the
40 reefs, and they sample larger individuals, on average, but it's
41 the same general footprint.

42
43 What I noticed is that, less than ten fathoms, lane snapper are
44 much more abundant than gray triggerfish, at least in a proportion,
45 and, beyond thirty fathoms, it's gray triggerfish, and it's almost
46 entirely gray triggerfish, and not -- It's like the ten to thirty
47 where they're both fairly common, and I wonder if that would be
48 something -- A filter on those observations just within that range

1 would be something to think about.

2
3 **DR. PETERSON:** I think -- I mean, I guess we could do that, but
4 I'm of the mind that, if they're not in those depths, you don't
5 need to filter it, because they won't be in the data. As Steve
6 said, this method works if there are zeros, and so I don't think
7 like -- You know what I mean?

8
9 If the ratio in the deeper depths is way tilted to gray
10 triggerfish, then that should fall through. That's kind of the
11 idea of the method, you know what I mean, having those -- The depth
12 strata there, and so it should account for that without having to
13 just remove it.

14
15 **DR. FROESCHKE:** Well, just as a follow-up, I mean, it assumes a
16 constant ratio within strata, essentially, right?

17
18 **DR. PETERSON:** Yes. Well, constant. I mean, that was the time-
19 varying conversion, but, yes. On some level, there's a constant
20 ratio, and some amount of space.

21
22 **DR. FROESCHKE:** But, for example, in a five-fathom trawl, where
23 the ratio of lane to gray triggerfish is much higher than something
24 at twenty-five fathoms, would that be accounted for in the catch
25 rate by being in different strata, and so it's okay, or is that
26 not?

27
28 **DR. PETERSON:** Yes, because the bycatch estimation is done at the
29 stratum, and so, those depth differences, that's okay. That should
30 all be accounted for in the method.

31
32 **DR. FROESCHKE:** I just didn't know what the exact depth strata
33 are, if that mirrored what I actually saw.

34
35 **DR. NANCE:** I think SEAMAP goes out to at least fifty fathoms, or
36 more, and I'm not sure exactly. We don't have a SEAMAP guy here,
37 but I know we don't go to shallow, but I know they go out fairly
38 far, but you would see that ratio of snapper to triggerfish by
39 each of those trawls, because you're going out from shore out to
40 deep, and so you would see that ratio change, I would assume.

41
42 **CHAIRMAN MONCRIEF:** Katie, go ahead.

43
44 **DR. SIEGFRIED:** Just really quick, John, you mentioned co-
45 occurrence in G-FISHER, but that's very habitat-specific, and so
46 I wouldn't think that that would be something that we would need
47 to compare, but your questions about the strata remains the same.

1 **DR. FROESCHKE:** Correct, and that's what I said. The habitat is
2 totally different, and the age class is totally different. The
3 geographic footprint is essentially the same. I mean, it's Gulf-
4 wide.

5
6 I mean, the soft-bottom habitat that is subject to shrimping is
7 interspersed between the hardbottom, or vice versa. It's the same
8 broad area. If you look at G-FISHER and the shrimp trawls, it's
9 the same area. Just, obviously, on a small scale, the hardbottom
10 is not part of this survey, but my presumption is that the
11 juveniles are intermixed with the adults and things on some scale.

12
13 **CHAIRMAN MONCRIEF:** Harry.

14
15 **MR. BLANCHET:** I'm only bringing this up because it hasn't yet
16 been brought up. Triggerfish is a unique species, just like every
17 other one in the Gulf of Mexico, but, the pelagic phase associated
18 with sargassum, the difference in the trawl length between a
19 commercial trawl that stays on the bottom for five-plus hours and
20 a SEAMAP trawl that goes up and down every half hour may make a
21 difference, in terms of some of these ratios between things that
22 are totally on the bottom and things like triggerfish that have a
23 pelagic phase associated with the sargassum, or the surface layers,
24 and so just I have more caution than normal about relating SEAMAP
25 to commercial trawl without some hard data. Thank you.

26
27 **CHAIRMAN MONCRIEF:** Yes, and I think that's kind of where my
28 concern is at too, Harry, is that we're kind of generalizing across
29 a lot of observations, which is a part of what we do in general,
30 but, in this case, we're doing something that has also been
31 recommended not to be done at times, which is taking that SEAMAP
32 data and trying to apply it directly to the fishery itself.

33
34 From here, I mean, I think we've got a fair amount of voices in
35 the room, at least to provide their opinions. We certainly heard
36 from Katie that you're going to do several iterations,
37 sensitivities, associated with the assessment, to be able to see
38 the magnitude of the impact for each one of those selections.

39
40 I hate to say that we'll wait for the results to make a
41 determination, but, in this case, I think that's probably the best
42 route, because I think, if you put it to me to have to make a
43 decision, I would more lean to not having this in there, just given
44 the uncertainty around it, but that's just my thought, and so any
45 additional thoughts?

46
47 We'll get the presentation from the working group here next, to
48 get their thoughts on it, but any more questions, or any more

1 comments, in the room or online? Seeing none, I appreciate the
2 presentation. It certainly gave us plenty to talk about, and now
3 we'll have Dr. Froeschke give the working group update.

4
5 **PRESENTATION: RECOMMENDATIONS FROM THE WORKING GROUP ON SHRIMP**
6 **TRAWL BYCATCH FOR FINFISH**
7

8 **DR. FROESCHKE:** I'll start talking while they pull this up, and so
9 this working group was the culmination of an SSC review of this
10 last May 2025, and there was a request for some additional time
11 and for a subgroup to dig in and ask some more questions, and so
12 it took some time to put this together, and provide some input for
13 you all to consider.

14
15 There isn't anything that's earthshaking in here. We went through
16 and had a lot of the same discussions you've had here, but I will
17 go through this.

18
19 Just to kind of give you a quick overview, we tried to put together
20 a broad group of experience and expertise. The Science Center and
21 the colleagues, obviously, were a big part of this, and contributed
22 a lot to this work, and so thank you again to them. We had SSC
23 members, and we had industry members that asked lots of questions.
24 There was lots of coordinating, trying to find time to get everyone
25 together and narrow down what kinds of things should be presented
26 to the group and ask questions, and so thank you in advance to
27 everyone that participated in the workgroup.

28
29 We met a couple times. We met once in March, as sort of a
30 preliminary discussion. There wasn't enough time, and so we
31 developed a longer -- It says two days, and it was really two kind
32 of half-days. We went through longer versions of both of these
33 presentations, and tried to refine down what the concerns might
34 be, and, really, it was a time for the workgroup to flog the
35 analysts with questions, and they participated, and were patient
36 with us, and so we do appreciate that.

37
38 We went through these species-specific efforts. We've seen these.
39 We looked through the methods, the gear selectivity, and then we
40 talked about both the red snapper and gray triggerfish assessments,
41 and made some thoughts about that, which are largely consistent
42 with what they did was reasonable, given what they had to work
43 with.

44
45 I'll just kind of go through this one-by-one. I've tried to
46 highlight the feedback of the group, and not so much
47 recommendations, in yellow, just to hone-in on that. We went
48 through, and there were questions about species-specific effort

1 estimates, because we've had some discussions that they're not
2 species-specific, and it's just an effort estimate, which is true.

3
4 Then we've seen, in different iterations, that we have like the
5 map here that they produced that there were species-specific effort
6 estimates, and so they patiently went through and explained how
7 that was done, and it really is a combination of the effort is
8 just effort.

9
10 It's not by species. As you know, it's an ELB, and it's just a
11 GPS logging device, but then, there are ratios with the SEAMAP
12 data, and then based on the shrimp statistical grids, that then is
13 filtered, for lack of a better term, into these species-specific
14 maps that you see here.

15
16 That tried to clear the air of how this was done, because sometimes
17 we see it presented different ways, and so that was very confusing
18 to the group, particularly the industry members, and so that was
19 helpful to clarify.

20
21 The take-home message from all of that is, at the end of the day,
22 it's not the species-specific effort estimate that matters. It's
23 the effort by statistical grid, which you see here, and so it's
24 presented in this map by species, but, in practical senses, it's
25 the effort by statistical grid, and so the workgroup -- We looked
26 at all this, and we didn't have any specific recommendations on
27 this, and it was quite helpful to allow a better understanding of
28 this, particularly to the industry members I think that may not
29 have grasped how complicated and nuanced that discussion was.

30
31 This is just the one-slide summary of this expansion procedure.
32 When we had our initial meeting in March, there were a lot of
33 questions about how you go from buckets to nets, to multiple nets,
34 to multiple tows, to trips, to estimates, and so they just walked
35 us through this soup-to-nuts, and so we were able to ask all those
36 questions about the baskets, and the expansions and things.

37
38 As you'll see on the slide, they are really the two pathways, the
39 one for the red snapper, which everything from a net is enumerated,
40 and it just goes from catch per net, and then the expansion factor
41 is quite straightforward. The top level, where it says, "basket
42 of subsample of net", that was what we considered the lane snapper
43 pathway, which was the proxy to gray triggerfish, because we didn't
44 have it in the list of characterized species, and so we went
45 through this thing.

46
47 We asked many of the same questions. We had similar kinds of
48 discussions. We discussed that the observer coverage is quite

1 low, and that there are many strata to estimate, and so, even with
2 the best data that you could imagine, there are always going to be
3 resource challenges.

4
5 We did discuss that there are some strata that are present perhaps
6 in the system, but don't make a lot of sense, and so they're not
7 -- They don't really factor in, because they're zero, and so, for
8 example, a daytime pink shrimp, which isn't really a thing, and so
9 we discussed that, and they explained how that works, and it's not
10 really an issue in the actual producing of estimates, but that was
11 a good discussion, and so, in totality, I think the workgroup was
12 fairly satisfied with how this is done and appreciated the
13 explanation.

14
15 This one, we went through the two-net versus the four-net,
16 reiterating that the four-net is not automatically twice as
17 efficient as the two-net, and there's these day-night things, and
18 they explained the patterns by time. It was similar. We didn't
19 really have any specific concerns or recommendations on that. We
20 were fairly pleased with what they presented, and how this was
21 done, and I'm not going to go too detailed, since you just saw
22 these.

23
24 The takeaways on this red snapper, as the one species that has
25 been characterized, and so, specific to red snapper and the
26 purposes for use in the ongoing stock assessment, the workgroup
27 was satisfied with what was done.

28
29 They did request that the method specifically that is used for red
30 snapper to be considered for some of these other species that
31 aren't currently characterized, but, again, that's --Based on what
32 we have here, it's probably the best that we have for any of the
33 finfish species.

34
35 For triggerfish, we talked a long time about triggerfish. There
36 was perhaps different viewpoints in the room, which was, I think,
37 healthy. It was a complicated discussion, in that there really
38 just isn't a lot to work with.

39
40 I mean, I think it wasn't a debate whether zero is the right
41 number. I mean, obviously, triggerfish are caught, and so that
42 sort of leads you into a proxy situation. I think, speaking on
43 behalf of the workgroup, what they did was reasonable. They went
44 through a lot of steps to try to account for as many biases and
45 things, or I don't know if "biases" is the right word, but
46 discrepancies between the two species as they could.

47
48 The availability of the 2025 data, in which they did characterize

1 the data, was interesting. It wasn't part of this, and they
2 explained that it was just too sparse, because there were so many
3 strata, and that makes sense.

4
5 We did talk about there's some differences, particularly in
6 southwest Florida, where lane snapper are much more common than
7 gray triggerfish.

8
9 It's a little bit difficult to tell from those, but there are some
10 of those kinds of things. Not seeing how that would propagate
11 through the assessment, it's hard to know if that's something that
12 needs to be, you know, concerned about or not.

13
14 Overall, we thought what they did, based on what they had, I mean,
15 was correct, if you say -- I mean, not to say it couldn't be done
16 differently, but I don't know that, you know, there was any --
17 There was nothing that you just saw and said, oh, that's not
18 plausible, or reasonable, and so I think the workgroup, at least
19 in that sense, was satisfied. I mean, we all wish we had different
20 things, possibly, but, given what we had to work with, I think it
21 was reasonable.

22
23 Like I said, there were some, I mean, concerns in the room about
24 the proxy. I think that you would probably hear, given our
25 preferences, none of us would ever use a proxy, but that's just
26 not where we're at.

27
28 I don't think -- You know, no one suggested that we use, like I
29 said, zero instead of some sort of estimate, whether -- You know,
30 what that estimate is is a different issue, and how much
31 uncertainty around it, and just sort of reiterate that the red
32 snapper method is certainly preferred. It does sound like, based
33 on the research, that things better even than that are perhaps on
34 the horizon.

35
36 We thought about how this would work for other species. King
37 mackerel, at least at the time, was sort of next in line. Now we
38 understand it's a pause on that while we work through some
39 incorporating additional landings data in Mexico, and so maybe
40 that's not the right time.

41
42 That's what we thought, at least at the time, but it does sound
43 like, you know, new and better things are on the horizon, and so
44 I think we're all excited about that. I think that's the last
45 slide. Yes, and that's it. I'll try to answer any questions on
46 behalf of the workgroup, if you have them. I'll try to keep my
47 own mouth shut, but, otherwise, we can move on.

SSC DISCUSSION AND RECOMMENDATIONS

CHAIRMAN MONCRIEF: All right. A couple folks who were on the workgroup are on the call, and in the room, and does anybody have any other questions about what the workgroup came up with? It sounds like they had the exact same conversation we did, to a degree. Anybody online? All right, and so now it's time to put everybody on the spot.

We've got to come up with recommendations, and we held off until we got all the information from the first presentation, the triggerfish presentation, and the workgroup presentation.

The workgroup had some quasi-recommendations, you could say, in there that kind of matched up with a lot of what we were talking about. I think the sentiment in the room overall is the red snapper methodology seems to be appropriate, and it seems like it might work for other finfish species.

The only thought I had to that one, just in my mind, is that, as that work is completed, that it's gone through at some level, whether it be to this group or at the given workshops. I know that's kind of a detail-ish thing, to go through at the workshop, and those things are kind of busy, but that was kind of my thought process.

As we continue to extend it to different species, just kind of take a look, and make sure it's passing the logic test before it gets moved on, and so does anybody have any comments on that one, or a recommendation? Jim, you're pandering over -- I can see it, and you've got some pondering going on in your head. Something like the SSC finds -- Jim.

DR. NANCE: So I've been -- I was on that working group too, and so anyway, but --

CHAIRMAN MONCRIEF: Expert in the room then. You've got it.

DR. NANCE: No, and not an expert, for sure, but I would like -- Here's what I've been thinking about. **The SSC found the methodology using observer data that's been developed by the Southeast Fisheries Science Center and being used to estimate red snapper bycatch in the Gulf is acceptable for data input into assessment models.**

I think the presentation by Dr. Smith today was, I mean, excellent. I think he really captured -- We've gone over this, I think, for a couple of years now almost, but today's presentation really

1 brought that home, and I think this methodology, while it's -- I
2 think it's very nice for red snapper, and I think it provides a
3 very good estimate that I'm comfortable with for utilizing in the
4 model, and so that's what I would like to propose as a motion, at
5 least on the methodology that was developed and is being used for
6 red snapper.

7
8 **CHAIRMAN MONCRIEF:** All right. That one needs a second, and we
9 can discuss it, but John is going to second it. My only comment
10 there, and it doesn't necessarily deal with the motion directly,
11 and it just deals with the process afterwards, right, and so, if
12 the SSC puts this motion forward and blesses that that methodology
13 is acceptable for data input, as it cascades down the species, or
14 as assessments come up, what's the route to how that would be
15 looked at?

16
17 **DR. NANCE:** I would think that we would need to -- This is for --
18 This is specific for red snapper.

19
20 **CHAIRMAN MONCRIEF:** Just red snapper, and not across-the-board.
21 Okay.

22
23 **DR. NANCE:** Because that's the one that I like -- I mean, we've
24 got a lot of data, the methodology, and I think the methodology -
25 There's two things in here. We've got a methodology, and how it's
26 being used for red snapper is good.

27
28 Now, we need to have another motion after this, and what are we
29 going to do with the other species? This methodology works for
30 red snapper, and I'm not sure it works for other species, so what
31 do we do? I think king mackerel was one that somebody said we may
32 have enough data to be able to try this methodology with that, but
33 I'm just proposing this one as the methodology for red snapper.

34
35 **CHAIRMAN MONCRIEF:** Dave, go ahead.

36
37 **DR. CHAGARIS:** Well, to that point, I agree, and I think the motion
38 is worded that way, although maybe you want to put "input into red
39 snapper assessment models", you know, to be specific. My question
40 for you, Jim, is would this also apply to the hindcast?

41
42 I agree with the methodology and everything, you know, from the
43 period where we have the data, right, but there's still this
44 hindcast period that seems like maybe they haven't really settled
45 on, you know, the hindcasting, the pre-observer data period of
46 1984 onward.

47
48 **DR. NANCE:** I do think that hindcast works for snapper. I'm

1 comfortable with how it's being utilized to be able to estimate
2 red snapper back in time.

3
4 **CHAIRMAN MONCRIEF:** All right. Everybody else okay with that?
5 Dave, you got any friendly amendment, or clarifying sentence on
6 the end, like continue development of hindcast scenarios, anything
7 like that?

8
9 **DR. CHAGARIS:** I mean, maybe we can capture that, you know, in the
10 context, but I do think that there's maybe some things to look at
11 in the hindcast. Harry had some thoughts, ideas, the same ideas
12 that I had of using the recruitment index from SEAMAP to scale
13 that back, but this -- You know, you've got to get this ironed out
14 first, and I think those hindcast scenarios could be on a species-
15 by-species -- The hindcast period could be addressed on a species-
16 by-species basis.

17
18 **CHAIRMAN MONCRIEF:** Yes, and I agree. All right. Any other --
19 I've got Harry. Harry, go ahead.

20
21 **MR. BLANCHET:** Those were the points that I had my hand stuck up
22 for, and I don't know that, in the current red snapper assessment
23 process, that we have time to go back and look at different methods
24 of hindcasting, and so, as a friendly amendment, say "data input
25 into the current red snapper assessment models", and I would be
26 happy with that, but I do think that there is some more lifting
27 that needs to be done in looking at that historic dataset. Thank
28 you.

29
30 **DR. NANCE:** Yes, and let's -- Perfect. Take that, and I'm
31 comfortable with that.

32
33 **CHAIRMAN MONCRIEF:** John? All right. **Friendly amendment accepted.**
34 Jason.

35
36 **MR. ADRIANCE:** Just for further clarity in the future, should we
37 put the actual SEDAR number, or just leave it as current? Just a
38 thought.

39
40 **CHAIRMAN MONCRIEF:** Six to one and half dozen to the other. All
41 right. No other comments? Katie, go ahead.

42
43 **DR. SIEGFRIED:** I just have a question about the SSC's intent here,
44 and I think it's red snapper specific, rather than what the CIE
45 was reviewing, where it's the species that are identified in
46 observer data, and so what's the distinction you're drawing, and
47 why? You haven't seen the data sample sizes for the other species
48 yet, and so why are you saying this?

1
2 **DR. NANCE:** Why am I saying this? Well, the methodology itself I
3 think is very good. We've seen what it does with red snapper, and
4 I'm comfortable with using that in a red snapper model. I haven't
5 seen it in other species, and so I can't really say whether I would
6 accept other species being used with this methodology, but the
7 methodology as presented is sound, and it being used for red
8 snapper bycatch in the current red snapper model is scientifically
9 valid.

10
11 **DR. SIEGFRIED:** It might be useful -- Not to impede this motion,
12 but it might be useful then, if the SSC wants to know what the
13 sample size is for the other species, so that you understand the
14 difference between them or something, because, otherwise, each
15 time we have a SEDAR, you're going to have to relitigate the same
16 reviewed methodology based on the sample size, when it seems like
17 the methodology will hold, given what the CIE has said with the
18 minimum sample size, and so do you see what I'm saying?

19
20 It seems like -- I don't think this would negate you all saying
21 that, in general, the CIE review is valid, and, in general, it's
22 acceptable for species identified to species, given sample sizes
23 are sufficient, or something like that, but I just wanted to know
24 the intent more. Thanks.

25
26 **CHAIRMAN MONCRIEF:** Yes, and I think -- So, not to say it, but
27 this one is red snapper specific. The next one will cover -- The
28 next motion we make will cover the additional species. Is that
29 the thought? Go ahead, John.

30
31 **MR. MARESKA:** Yes, and so my thoughts behind it just being specific
32 to red snapper was, in the current protocols for the observer
33 program, all the red snapper get pulled out, and Dr. Smith
34 mentioned that, you know, the subsampling needs to be reevaluated,
35 and so, before I feel like it should be applied to all other
36 species, I would like to see what the results of maybe modifying
37 the subsampling protocols, and then looking at the nets, you know,
38 the topic that Harry brought up, and so I think there's some things
39 that still need to be fleshed out before it should be applied to
40 all other species.

41
42 **CHAIRMAN MONCRIEF:** You good? Okay. Ralph.

43
44 **MR. TOWNSEND:** First, I was going to agree with Harry. There's a
45 lot -- We know there's a lot more data for red snapper, and so
46 treating red snapper differently is reasonable, but the second
47 thing is just the broader point.

1 The only information we've seen to this point is the information
2 about red snapper. Making the jump from one species to many
3 species, on the basis of the presentation I'm seeing here, I don't
4 see the basis for that.

5
6 **CHAIRMAN MONCRIEF:** All right. I feel like this motion is specific
7 to red snapper, correct?

8
9 **DR. NANCE:** It is, yes.

10
11 **CHAIRMAN MONCRIEF:** Okay. All right, and so we're not making the
12 jump just yet to other species, and so we'll do that on the next
13 one, to cover those concerns. Harry, go ahead.

14
15 **MR. BLANCHET:** John made my point.

16
17 **CHAIRMAN MONCRIEF:** All right. Any other comments in the room, or
18 online, for this motion? **Seeing none, do we have any opposition**
19 **to this motion? Seeing none, we'll say it passes unanimously.**

20
21 All right. Let's knock out this other species deal, because I
22 think we've been circling around it, and we all carry a similar
23 sentiment. Not to put you on the spot there, Jimbo, but do you
24 want to take a stab at this one, too?

25
26 All right, and so, with this one, I mean, I think, you know, the
27 general sentiment is, one, we don't know the sample sizes, the
28 distribution of the various species, everything else like that.
29 This is going to be on an as-it-comes-up basis, and so the question
30 there is just, programmatically, does that mean, like Katie said,
31 every time one of these is calculated, does it come to this group?
32 Does it go at the working group level with SEDAR, or kind of how
33 does that all operate?

34
35 If we were to see a table of sample sizes, would we, you know,
36 with confidence be able to say, should sufficient sample sizes
37 exist, this methodology can be used across different species? I
38 think that's what we're kind of circling around.

39
40 **MR. RINDONE:** Mr. Chair, in my mind, usually, like in the SEDAR
41 process, once it's established that a methodology is appropriate
42 for use, and even given the caveats that Dave was talking about
43 with seeking additional validation by species, that's all
44 something that could be evaluated within the SEDAR process, and so
45 starting off with, okay, we've used this method before, and we
46 found it appropriate before, and we tested it again with this
47 species, and these are the results, and this is what we did for
48 validation, and then it's discussed as part of the SEDAR process.

1
2 If there are hang-ups observed, then appropriate pivots can be
3 made at that point, but, typically anyway, it's steady as she goes
4 until such time as it is no longer steady.
5

6 **CHAIRMAN MONCRIEF:** Gotcha. John, your concerns with the net
7 configuration sampling, baskets, species, all that kind of stuff,
8 is that a future presentation, in your mind, or what do you think?
9

10 **MR. MARESKA:** I think we're probably going to -- I think they had
11 a timeline to -- Hopefully they've got some funding to do some of
12 the work that was mentioned here, and is that --
13

14 **CHAIRMAN MONCRIEF:** I'm looking back there in the back.
15

16 **DR. NANCE:** They're not going to shake their heads unless she does.
17

18 **MR. MARESKA:** Good point. Good point, and so hopefully they're
19 going to be able to do some of that work, and address the
20 subsampling, and maybe look into the net configurations, and, you
21 know, for those reef fish, like red snapper, are they more
22 frequently caught in nets one and four, versus two and three, and
23 maybe that has nothing to do with prop wash, and that has to do
24 with escapement, and that's a big question.
25

26 If they can address the subsampling, if they find differences in
27 red snapper, then that should be brought back to us, you know.
28 Well, with red snapper, they're catching everything, but if they're
29 finding, with the subsampling, and how that's corrected, we just
30 need to know about it, and so that all should come up with the
31 next species that's brought to us.
32

33 **CHAIRMAN MONCRIEF:** Thoughts, Katie.
34

35 **DR. SIEGFRIED:** I guess I was kind of thinking of the hindcasting
36 discussion we were having earlier, too. I'm sorry if I'm confusing
37 those two things, but that funding, that we unfortunately didn't
38 get, would help a lot with understanding how to use the SEAMAP
39 data better.
40

41 I was just chatting with the division director, and finding out
42 what they actually did get money for, because it's always helpful
43 when the SSC is able to tell us what they would support us studying,
44 but the SEAMAP project that we put in for, that Steve put in for,
45 was so expensive that we just did not have the funds for that part.
46 Let me just think a little bit about what might be helpful for you
47 all to put in.
48

1 **CHAIRMAN MONCRIEF:** All right. Go ahead.

2
3 **DR. SIEGFRIED:** So I was curious, and I don't know if, Steve, if
4 you're okay being put on the spot, but can you talk a little bit
5 about -- You said earlier about the species that you thought --
6 That you felt confident about using this methodology for were
7 federally-managed species. What types of other work would you
8 recommend be done in order to apply this to the other identified
9 species?

10
11 **DR. SMITH:** At the moment, I mean, all we have are what has been
12 collected, and so we don't have data on multiple baskets
13 previously. We don't have data on nets two and three, for
14 instance. It just doesn't exist, and so that's part of our work
15 right now, and so it's kind of like -- The field protocols are
16 really -- There's sort of three main aspects to it that we're kind
17 of addressing at the moment.

18
19 One is we want to characterize everything, all the species, all
20 the -- You know, all of what I would call living marine resources,
21 right, and so nothing is like not identified to species level, or
22 the smallest -- It's the lowest taxonomical level we can possibly
23 get.

24
25 I would like to get a size estimate on everything. That includes
26 shrimp, carapace length of shrimp, right, and we -- Basically,
27 we've gotten the video cameras, and we're working on the machine
28 learning algorithms, and it looks like it's actually going to be
29 able to do it, estimate carapace length of an individual shrimp.

30
31 That is going to allow us to rapidly sample a basket, you know,
32 with this system, because, basically, it's getting images of every
33 fish, or every animal. It enumerates them, you know, and the
34 machine learning is being developed to analyze -- You know, to
35 identify the different species, and that might be a little tricky
36 for some of them, but we have, you know, the observer there, and
37 we have groundtruth, and we have images, et cetera.

38
39 That's kind of like one side of the work, is to get that working,
40 because then we can characterize more than just one basket. I
41 mean, right now, it's just a time thing, you know, and so I've got
42 -- Right now, I've got observers out, and they're characterizing
43 three, four, five, multiple baskets now per net, and so then we
44 have some data that we can analyze this inter-basket variability
45 issue, and that's what it gets down to, is how many baskets should
46 we be subsampling for a net.

47
48 Then there's the issue of how many nets do we sample, and so,

1 basically, I want to collect data from every net right now, and
2 that's what we're instituting, including the trinet, and so I want
3 everything, you know, characterized, and then we can start
4 addressing these questions of what was the impact of the choice
5 of, you know, in the past, of just sampling net-two or three or
6 nets -- You know, on a two-net, or one and four on a four-net.

8 Basically, we're in the process of figuring those things out.
9 That's kind of the focus right now, and so subsampling at the net
10 level and subsampling within a net at the basket level,
11 characterizing all the species.

13 This is not going to help us with the hindcast, okay? It's not.
14 That's something that, to me, I don't know if we can get any better
15 at that right now, shy of, like I said, developing some sort of
16 field experiment study with the industry and the center and SEAMAP
17 and the observer program, and so like see if we can do a calibration
18 experiment and fish commercial trawls and SEAMAP in the same time
19 and space, do a very controlled experiment.

21 Then I think we can nail down these Fishing Power factors amongst
22 all those gears and amongst the SEAMAP to the commercial. To me,
23 that's the scientific way out of this conundrum.

25 Other people have come up with ideas about taking some of the
26 observer data that we're now collecting on more species, and then
27 just using the Stock Synthesis model to generate data back in time.
28 I don't know, and that's a modeler perspective. I'm not a big fan
29 of that, but, you know, there's, obviously, other ideas about how
30 we could go do this.

32 **CHAIRMAN MONCRIEF:** I just had a quick question for you. As we
33 figure out kind of a realistic path forward to be recommended by
34 this group, looking at the makeup of the working group -- Jim, you
35 participated in it, and it's got some of our Shrimp SSC on it,
36 industry members, everybody else, and does that seem like a
37 realistic pathway here to try to select a few more species, maybe
38 some that are coming up for assessment, or across the distribution
39 of what we think sample sizes would be, and have that group be
40 able to look at the results of the same methodology applied to
41 them? Do you think that's a realistic thing for you to do?

43 **DR. SMITH:** What I would say is that I believe there's been a SEDAR
44 data workshop already, right, on king mackerel, and is that
45 correct, or is that coming up?

47 **DR. SIEGFRIED:** There wasn't a data workshop for that, but we will
48 have a data TWG after we finish our collaboration with Mexico.

1
2 **DR. SMITH:** Okay, and so, anyway, I think the team now -- There's
3 other people that have taken over the bycatch estimates from me,
4 you know, and there's some federal staff. I think they went
5 through adapting my methodology for king mackerel, and so they
6 produced that.

7
8 Then I ran the lane snapper, you know, in order to do the proxy
9 for gray trigger, and that species worked fine, in my opinion. I
10 haven't looked at -- You know, we haven't really tried it on the
11 other stuff, but it looked to me like vermilion had plenty of data,
12 and I'm not sure what some of the others, but those for sure had
13 enough data.

14
15 Then we would have to see about some of those other ones. I'm not
16 sure. You know, I mean, if the occurrence is just tiny, you know,
17 if we just really didn't pick them up in the trawls much, then
18 that becomes the issue, but I think the reason those species were
19 chosen in the first place is because they were seeing them like
20 pretty frequently, and so that's why --

21
22 That's kind of that list, short list, of characterized species,
23 you know, with some of the principal things that they were seeing
24 back, you know, when they started the program, and so I have a
25 feeling most of those are going to work, you know, one way or the
26 other.

27
28 **CHAIRMAN MONCRIEF:** Katie.

29
30 **DR. SIEGFRIED:** Yes, and so vermilion, king, Spanish, and cobia
31 are the things that are coming up next on our schedule. Is it
32 okay if I give you my feedback about the best way to review?

33
34 My understanding, and please, council staff, if I'm wrong, correct
35 me, is the purpose of that working group was not only to review -
36 - It was not primarily to review the methodology. It was to
37 understand all the datasets, and so, a lot of the heavy lifting of
38 that workgroup was going over all the datasets and bringing in
39 experts in the actual fishing to understand the datasets better.

40
41 I think technical review is better accomplished at a SEDAR TWG,
42 and then follow-up at the SSC when the model is reviewed. I think
43 that group, which has to get FRN noticed every time it meets, is
44 a pretty cumbersome thing to use to review this.

45
46 **CHAIRMAN MONCRIEF:** The working group?

47
48 **DR. SIEGFRIED:** The working group, the bycatch working group, that

1 John just recapped.

2
3 **CHAIRMAN MONCRIEF:** Okay.

4
5 **DR. PETERSON:** Yes, and I would agree with that, just coming at it
6 from being, you know, one of the analysts that presents this. The
7 SEDAR data workshop is where you're really -- Your audience is
8 other analysts, and other data people, and so they have a -- You
9 know, they kind of understand, you know, what we're dealing with,
10 but they also have the insight to delve into aspects of it that
11 are -- That get really into all the technical modeling and all
12 that, and I don't think that's an appropriate thing for this
13 workgroup, you know, that we had.

14
15 They -- You know, it's just the composition was not set up for
16 that kind of a review, right? We're not talking about did you use
17 the right, you know, general linear model, and, you know, what was
18 your error distribution, and, you know, we didn't get into the
19 technical aspects of all of the stats, whereas they really dive
20 into that in these SEDAR data workshops, and so, to me, that's
21 probably the more practical frontline of defense here, you know,
22 for like whether they think a method should go forward or not, you
23 know, or a species application should go forward or not.

24
25 **CHAIRMAN MONCRIEF:** Yes, and I would say it's always nice to have
26 some of the others in the room every now and then when something
27 sticks out, to have the answers, rather than making the assumption
28 of what you're saying. Jim, go ahead.

29
30 **DR. NANCE:** I will say though that the working group had shrimp -
31 - You know, the shrimp fishery on it, which I think is important.
32 I think they bring a good dynamic to -- You've got analysts there
33 looking at the analytical part, but then you've got real-world
34 people that are looking at --

35
36 **DR. PETERSON:** I agree that they should be invited to the -- They
37 should come to the data workshop, and be there.

38
39 **DR. NANCE:** Yes, but I'm just saying that the working group
40 provides a different avenue for them to have their input, and I
41 think that was appropriate.

42
43 **DR. PETERSON:** I do, and I think that what the industry folks on
44 that group -- They brought up the more intriguing questions for us
45 to sort of explore, and so I really appreciated that.

46
47 **CHAIRMAN MONCRIEF:** Carrie.

1 **EXECUTIVE DIRECTOR CARRIE SIMMONS:** Thank you, Mr. Chair, and so,
2 I mean, I think -- I appreciate the contractor's effort on this,
3 and all the hard work, and the Science Center. I think, just to
4 kind of recap, what's happening here, is there's been so many
5 changes to this particular fishery, and I think the center now has
6 the staff to get what we need to kind of advance some of this in
7 our finfish assessments.

8
9 As we look forward to looking at some of these interactions with
10 protected resources, there's been huge advancements in the general
11 methodology, its application, particularly to red snapper, by
12 using the observer data, versus SEAMAP, but those changes,
13 including the effort estimation that happened with Kyle's work, we
14 didn't have any shrimpers in the room.

15
16 We didn't have anybody that was there, nor could they attend every
17 finfish data workshop that we have, and so I think it was really
18 important, even after the desk CIE review, to kind of shed a light,
19 and have everybody have a much better understanding of all the
20 improvements that were made by the center and the contractors, and
21 I hope we've at least done that for you, even though we've probably
22 irritated the heck out of you along the way.

23
24 I think, you know, that that's certainly one of the outcomes that's
25 happened with this effort of the finfish working group, and I
26 think, you know, we should be happy with that.

27
28 I think one of the issues also with the SEDAR process that's
29 happening is we have an observer program that's making all these
30 changes, and so do we go ahead and use this other method, but can
31 we start taking some of that new observer data and applying in a
32 different way? We'll have to figure that out.

33
34 I don't know that SEDAR is the right place for it, because I don't
35 know that we have all the right -- The data workshop, unless we
36 have all the right people there. I think that's something we can
37 work on with the center, and our staff, to try to figure that out,
38 but, I mean, I think we're going to go through a lot of growing
39 pains, essentially, with this fishery right now.

40
41 You have a fleet that's contracting. We're trying to get the new
42 program in place at the council level, and we're trying to figure
43 out what's happening, because the ELBs are no longer, you know,
44 submitting the data electronically, and so we have all these
45 changes that are happening that we're going to have to work
46 through.

47
48 I just -- My thought is people are going to have to be flexible,

1 and we're going to have to try to figure this out together. The
2 working group did specifically ask if they could take a look at
3 the king mackerel, because -- It is characterized, but it's not
4 quantified like red snapper is, and so I think, if we can, we would
5 like to accommodate that, as time allows, because we also have
6 this protected working group that we have to get going on,
7 protected species working group that we have to get going on.

8
9 We're trying to balance all those things with our staff, Science
10 Center staff, and Regional Office staff, and so we have all that
11 stuff going on, but I think, even though this process was long and
12 drawn out, there's been many, many improvements that have happened
13 in the various working groups and SEDARs and stuff, and this kind
14 of puts it all together for finfish, and so I think that's been a
15 huge accomplishment, in my opinion.

16
17 We would like to do that for king mackerel. That is our next
18 thing, as far as finfish goes, and so we'll have to circle back on
19 that one, and then I guess you guys are going to talk about
20 triggerfish next.

21
22 I think one of the issues with that one is the proxy that was being
23 used, and is that going to be kind of the way of the future, or is
24 there going to be enough data, with this new process with the
25 observers, that we can, in the next year or two, start considering
26 that process, or, you know, what's the state of the fleet going to
27 be?

28
29 We have to keep updating that effort estimate, and so there's going
30 to be so many changes that we're going to have to go through, I
31 think, for this particular fishery. I think, on the horizon, we
32 have the same issue with the recreational data. I think it's kind
33 of outgrown some of the SEDAR process as well, and we're going to
34 have to put our heads together to figure out what's going to happen
35 there as well, and so my two-cents, whatever it's worth.

36
37 **CHAIRMAN MONCRIEF:** Right. Thank you for that, and so I'll throw
38 down a sentence in my head, and we'll let everybody wordsmith it,
39 and see if somebody wants to hone it outside of myself. All right.

40
41 **Let's go with the SSC supports expanding the bycatch methodology**
42 **for finfish species to include additional finfish species. Sorry.**
43 **Expanding the bycatch methodology to include additional finfish**
44 **species. The SSC also recommends that the results of these**
45 **additional analyses, or additional species, and I don't know, and**
46 **we'll get somebody wordsmith it later, be presented to the working**
47 **group, and/or the appropriate SEDAR -- The Shrimp Bycatch Working**
48 **Group and/or the appropriate SEDAR group, committee, workshop.**

1
2 That basically says what I think the sentiment is, which is we
3 would like to see this continue to expand, and have additional
4 species included, and that work has already been done, as mentioned
5 by Dr. Smith.

6
7 We've already got one recommendation from the working group to
8 look at king mackerel in a little bit of detail, if that can be
9 there, and then, in the future, it will go to the group as needed,
10 or deferred to for -- Go ahead, Ryan.

11
12 **MR. RINDONE:** One minute, and so SEDAR workshop or topical working
13 group.

14
15 **CHAIRMAN MONCRIEF:** David.

16
17 **DR. NANCE:** I'll second it.

18
19 **CHAIRMAN MONCRIEF:** Jim seconds it, and so it's now legitimate to
20 talk about. Griffith, then Chagaris.

21
22 **DR. GRIFFITH:** Thanks, Mr. Chair. I would just say, instead of
23 "additional analyses/species" -- It seems like you're talking
24 about additional efforts to do this, something like that.

25
26 **CHAIRMAN MONCRIEF:** What's wrong with that? Of these additional
27 efforts. **Replace "analyses/species" to "efforts".** All right.
28 Chagaris.

29
30 **DR. CHAGARIS:** So I was just going to make a request for a friendly
31 amendment to, at the end of the first sentence, add "include
32 additional finfish species that are presently in the observer
33 database", because I don't think we can -- I'm not comfortable,
34 and it doesn't sound like the rest of the group is, to extending
35 this to things like gray triggerfish yet.

36
37 **CHAIRMAN MONCRIEF:** Good clarification. Ralph.

38
39 **MR. TOWNSEND:** So it seems, to me, that a big advantage of this
40 approach, looking at the various charts, is that it avoids what
41 seems to be very high variances that came from the old SEAMAP
42 approach, and, from an assessment point of view, those really
43 large, probably unrealistically large, variances are probably
44 problematic, but I have the reverse concern about this approach.

45
46 That is, to do this approach, because the observer data is sparse,
47 we group together multiple years of data to get these ratios, and
48 I'm concerned that we're imposing some consistency, or lack of

1 variance, by averaging it out over multiple years, so that the
2 variance estimates are actually too low, because we've -- Again,
3 we've used averages over multiple years, and we've assumed
4 technology isn't changing, and all that sort of thing, over long
5 periods of time to generate this.

6
7 The idea that we're endorsing a new methodology when we, I don't
8 think, fully understand the implications of some of the stuff
9 underneath it, bothers me just a little, although I will say that
10 having it in the observer database, the most recent amendment,
11 does help some.

12
13 **CHAIRMAN MONCRIEF:** Yes, and I hear that, Ralph. I think you could
14 also point to, you know, point estimates over time increasing by,
15 you know, ten to twenty-fold in a consistent fishery, with a
16 consistent effort, might be, you know, equally problematic, and
17 this one seems to kind of help at least get us into a more
18 consistent realm, that seems what could be more accurate, and with
19 the gain of precision. Any other comments here? Katie.

20
21 **DR. SIEGFRIED:** I think -- Dave, did you mean characterized in the
22 observer program, or did you mean -- Okay, and so just to make
23 sure I understand what you're trying to say.

24
25 The other thing is, you know, the Science Center is not going to
26 have the funding to send people to both a shrimp bycatch working
27 group and an appropriate SEDAR workshop, or topical working group.
28 To say "and", and I don't know if the SSC really intends "and"
29 here in all of the instances, and it's just going to be a
30 negotiation. This is a suggestion from the SSC, and so I
31 understand that's the intent, but there will be discussions about
32 just feasibility of attendance to both, if that's requested.

33
34 **CHAIRMAN MONCRIEF:** Yes, and the -- To my knowledge, the Shrimp
35 Bycatch Working Group has been two webinars thus far, and has that
36 format been working out all right?

37
38 **DR. SIEGFRIED:** That's not the only work that's conducted, is just
39 to attend the webinars, and so --

40
41 **DR. NANCE:** It's a little bit different than the topical working,
42 you know, those types of things, and I didn't have -- You guys
43 have done a tremendous amount of work, but it's just been two --
44 We've had two webinars, and so those have been short compared to
45 what they had to do.

46
47 **DR. SIEGFRIED:** Yes, and it's just the amount of -- I'm thinking
48 mostly of the contract staff that you've heard from a number of

1 times here, and then at those meetings, and then at all of the
2 data workshops they've gone to, and I -- You know, I'm getting
3 heavy messaging, from the people who pay them, that they can't do
4 this too much longer, and so we have to -- We're trying to transfer
5 some of the capacity to feds, and all of that, but I just wanted
6 people to be aware that the "and" is unlikely to occur for most
7 species.

8
9 **CHAIRMAN MONCRIEF:** Which I think is fine. I think -- I mean,
10 recommendation, suggestion, and it all basically says the same
11 thing. You also have to operate as pragmatically as possible, and
12 so, if that means it's only one, two, or three, or we're just going
13 to go over this one, or here's a suite, and here's your chance to
14 do it, and after this it's done, that's up to you all to figure
15 out, but I think at least the sentiment from this group overall
16 is, as it expands, if there's an opportunity to have some other
17 eyes look at it, and not just technical staff, or, you know,
18 individuals from the states, but also the fishery themselves, to
19 be able to, you know, at least give the sniff test, and it wouldn't
20 be a bad thing. All right. Any other comments on this one? No
21 hands. No hands online? Doggone it, Saucier. We were so close.
22 Go ahead, Saucier.

23
24 **MR. SAUCIER:** Sorry about that, Mr. Chair. Just a quick question.
25 Just to confirm what we're voting on here, we're only including
26 those species listed on the slide there as being characterized
27 previously by the observers, and, when the time comes that we need
28 to estimate bycatch by the shrimp fishery, either the working
29 group, or this group, or another topical group will have the
30 opportunity to review the data and get a refresher on the methods,
31 and is that correct?

32
33 **CHAIRMAN MONCRIEF:** Essentially, yes. Whether it goes down to
34 every single species as they come through will be one thing, and,
35 also, to further clarify that list, it's those that are on the
36 list that are federally managed that will be assessed, and bycatch
37 will need to be compiled, because that shortens that list
38 substantially. I hope that answers your question.

39
40 **MR. SAUCIER:** Okay, and so there will be reviews per species as
41 these species come up in the future, and this isn't a carte blanche
42 approval of any of those select species and methods there.

43
44 **CHAIRMAN MONCRIEF:** No.

45
46 **MR. SAUCIER:** Okay.

47
48 **MR. RINDONE:** All these things will be reviewed in the SEDAR

1 process, as everything else is reviewed in the SEDAR process.

2
3 **MR. SAUCIER:** Okay. Thank you.

4
5 **CHAIRMAN MONCRIEF:** All right. Any other hands online? **Seeing**
6 **none in the room, is there anybody who disagrees with this motion?**
7 **Hearing none, and seeing none, it's unanimous.** And break.

8
9 (Whereupon, a brief recess was taken.)

10
11 **CHAIRMAN MONCRIEF:** All right. We are at that time. Let's get
12 back to our seats and keep this train moving. All right, and so
13 we've got everybody back. We've got folks online.

14
15 All right. We've got to wrap up the shrimp trawl bycatch stuff,
16 and that means we need a recommendation on the gray triggerfish
17 bycatch estimation. That's the last thing we need to cover. We'll
18 move on to that next item. Everyone had time to take a bathroom
19 break, get a snack, get re-energized. During that time, did
20 anybody come up with any recommendation or language? Paul.

21
22 **DR. MICKLE:** Yes, and I sent a motion to Jess. You can put it up
23 there. The intention of the motion, while she's bringing it up,
24 is to, again, keep the wheels moving, moving forward, and I put in
25 some passive language there that may appease the group, or not,
26 but I don't know. I may pull a Bob Gill and vote against it, and
27 so, anyway, just for discussion's sake, we'll go ahead and pull it
28 up there, and, if I get a second, I'll expound.

29
30 **DR. NANCE:** I'll second it, Chair.

31
32 **CHAIRMAN MONCRIEF:** All right. It's seconded. We'll have some
33 discussion. Go ahead and start it, Paul.

34
35 **DR. MICKLE:** Yes, and so the motion, I guess, maybe downshifts a
36 little bit from the previous motion, or two motions ago, with the
37 red snapper, of course. Looking at in the discussion today, a lot
38 of good points were made, and I added such words as "considered",
39 and "estimate", and then I specifically tied it to SEDAR 100 only.
40 This is a species-specific and stock-assessment-specific motion,
41 so we don't get ahead of ourselves.

42
43 **CHAIRMAN MONCRIEF:** Should we have something in between
44 "methodology" and "using", like "acceptable"? Like should we say
45 something there, in that first part, about -- I'm trying to read
46 it through in my head, and maybe I'm misreading it.

47
48 The SSC found the methodology using observer data that's been

1 developed by the Southeast Fisheries Science Center be considered
2 to estimate gray triggerfish.

3
4 **DR. NANCE:** You need to put a comma after "methodology", and then
5 I guess after "SSC". I think after "Southeast Fisheries Science
6 Center", a comma.

7
8 **CHAIRMAN MONCRIEF:** All right. Let's get it straightened out, and
9 then we'll we can have further discussion. So, in your mind, would
10 you say, after "Southeast Fisheries Science Center", you erase "be
11 considered" and you put "acceptable", or did you deliberately put
12 in the "considered", to have it less defined?

13
14 **DR. MICKLE:** Yes, and that was my intention, to have "be
15 considered" in there, but, if it needs to be changed, I'm open to
16 it. John, what did you say earlier? Be used?

17
18 **MR. MARESKA:** To get rid of "be considered", and that comma, and
19 just say that it's "been developed by the Southeast Fisheries
20 Science Center to estimate gray triggerfish bycatch in the Gulf
21 and is acceptable for data input".

22
23 **DR. MICKLE:** Yes, and just remove that. I accept that suggestion.

24
25 **CHAIRMAN MONCRIEF:** All right, and then I'll add my two-cents, and
26 so we went over this a few times. It sounds like there's going to
27 be multiple iterations of this one within the assessment already,
28 outside of just this one. As the input, my thought, just to add
29 some language to it, would be "and is acceptable for consideration
30 as a data input into SEDAR 100", which might get to what you're
31 trying to get to with that language, because it is going to be
32 just a -- It's one of multiple iterations that you're going to go
33 through, and it won't be the input for that specifically, right?

34
35 **DR. SIEGFRIED:** The other ones are for sensitivity, and so, right
36 now, what was provided at the data workshop is used as base, but
37 it could always be considered. Sensitivities could always be
38 considered.

39
40 **CHAIRMAN MONCRIEF:** Okay. Go ahead.

41
42 **SSC MEMBER:** Just for the purpose of not being ambiguous, you might
43 say using SEAMAP and observer data, so it's clear that we used
44 both for that method, if that's what you're recommending.

45
46 **CHAIRMAN MONCRIEF:** All right. Paul is good with it.

47
48 **SSC MEMBER:** Change "that's" to "that have been developed".

1
2 **CHAIRMAN MONCRIEF:** Adriance.

3
4 **MR. ADRIANCE:** Thank you, Mr. Chair. For clarification, this is
5 the proxy methodology we just saw.

6
7 **CHAIRMAN MONCRIEF:** Go ahead, Mike.

8
9 **DR. ALLEN:** I'm just wondering if the committee wants to add in
10 something about the sensitivity analysis here, because I think
11 that's really useful, and it's not one trajectory of bycatch
12 estimates. It's, you know, acknowledging that you're going to
13 consider a range of those, to see how it would affect the results.

14
15 **CHAIRMAN MONCRIEF:** I would agree to that, because I'm still not
16 -- On my end at least, I feel like it's got to be -- It's going to
17 have to be multiple. Go ahead.

18
19 **DR. NANCE:** We haven't seen that yet though.

20
21 **CHAIRMAN MONCRIEF:** We haven't.

22
23 **DR. NANCE:** And won't for a while, and so this is -- I think what
24 we're trying to do here is we were presented with a methodology
25 today, a proxy methodology today, that's being used using SEAMAP
26 and observer data to estimate gray triggerfish bycatch. Is that
27 methodology acceptable to the SSC?

28
29 **CHAIRMAN MONCRIEF:** To that point?

30
31 **DR. MICKLE:** To that point, that is in the scope of work, which we
32 have to keep our eye on, for the Item 5 scope of work for this
33 meeting. Thank you.

34
35 **CHAIRMAN MONCRIEF:** Go ahead, Katie.

36
37 **DR. SIEGFRIED:** So, to the concern that Trevor and others have
38 stated, where, you know, you want to see what it does to the model,
39 the sensitivities are really meant to show us that the
40 directionality of the change is what we would expect the model to
41 do. It's not to pick which of these alternatives.

42
43 The other thing though -- I mean, the other thing is it's perfectly
44 fine for the SSC then to say, well, we're so uncertain that we
45 want to look at this range of values that come out based on those
46 sensitivities. Those don't contradict each other, and so I don't
47 think that, if you say this, you're saying we can't identify an
48 envelope of uncertainty later.

1
2 **CHAIRMAN MONCRIEF:** Go ahead, Jim.

3
4 **DR. NANCE:** I agree, Katie, because that's -- This is the
5 methodology. How we see that after we do sensitivity runs -- How
6 we utilize this is up to us, but this is the methodology, proxy
7 methodology, to estimate -- **To give us an estimate of bycatch, and**
8 **we probably need to put "proxy methodology", just so that we're**
9 **not -- Because we had a methodology above.**

10
11 **CHAIRMAN MONCRIEF:** All right. Good with that, Paul? Okay. All
12 right. Other topics that came up within this were some additional
13 exercises, like what Dave and Tiffany came up with. Does that
14 merit inclusion into the motion, or we would let the conversation
15 that we had reflect our viewpoints on it as a group?

16
17 **DR. NANCE:** I think -- In my opinion, I think just have our
18 viewpoints specified out as it's being presented. I think this is
19 a -- If we start putting a whole bunch of things in there, the
20 motion gets kind of muddy.

21
22 **SSC MEMBER:** Speaking of muddy, I'm not really sure if we need
23 that word "and" after "Gulf" in the last line.

24
25 **MR. RINDONE:** I changed it to "Gulf as acceptable".

26
27 **SSC MEMBER:** Okay.

28
29 **CHAIRMAN MONCRIEF:** Chief wordsmith on the case. All right. Any
30 more comments on this motion? Ralph.

31
32 **MR. TOWNSEND:** Don't you need a comma after "Gulf"?

33
34 **CHAIRMAN MONCRIEF:** **Ryan, don't you need a comma after "Gulf"?**

35
36 **MR. RINDONE:** Carrie would say you don't need any commas anywhere.

37
38 **MR. TOWNSEND:** It seems like you need either none or two.

39
40 **MR. RINDONE:** Sure, Ralph. We'll put one there for you.

41
42 **CHAIRMAN MONCRIEF:** All right. Go ahead, Dave.

43
44 **DR. CHAGARIS:** I mean, it's kind of tough, right, because we feel
45 like, you know, the grass could be greener if we see the analysis
46 that Tiffany suggested, and then we could all buy into it better,
47 or if there's a simpler approach that doesn't use the observer
48 data at all, and I do feel like that's a big part of this. I don't

1 want to, you know, add a whole bunch of words to the motion, but
2 if there's a way to capture that.

3
4 **CHAIRMAN MONCRIEF:** So it's either we can put it in the motion, or
5 we basically explicitly stated on the summary, and, when I give
6 the presentation to the council, we'll make sure that's one of the
7 bullets associated with this topic, and so that will be the way.
8 Either we formalize it in the motion or I'll put it in the
9 presentation. I'm good with either.

10
11 **DR. CHAGARIS:** I mean, I just don't want it to get lost, and then
12 we run with this, and we never circle back to the things that could
13 strengthen the analysis over time.

14
15 **CHAIRMAN MONCRIEF:** Mike.

16
17 **DR. ALLEN:** I mean, just a comment that, the way this is worded,
18 it's taken as the SSC thinks that this method could be used as-
19 is, right, in SEDAR 100, but that's not what I'm hearing around
20 the room exactly, and so that's what I was trying to get at.

21
22 **CHAIRMAN MONCRIEF:** Jason.

23
24 **MR. ADRIANCE:** Thank you, Mr. Chair. To Mike's point, I'm going
25 to go ahead, so you don't have to ask later, and I'm likely going
26 to vote no when you ask for opposition.

27
28 **CHAIRMAN MONCRIEF:** All right. I don't think you'll be the only
29 one.

30
31 **MR. RINDONE:** Dave, the SSC remained in favor of considering other
32 approaches in the future as part of ongoing investigations into
33 improving the estimation of shrimp trawl bycatch. That's in the
34 summary. It's not in the motion, but it's in the summary, and so
35 that's something that Trevor can mention when he reports back to
36 the council, and Mike can echo since, you know, he's sitting here.

37
38 **DR. CHAGARIS:** True, and it should stay there, but we're voting on
39 the motion as it's worded.

40
41 **CHAIRMAN MONCRIEF:** Strong enough feelings to put it in there,
42 Dave, or will that suffice?

43
44 **DR. CHAGARIS:** I mean, I think I'm in the same boat as Jason. Like
45 I'm likely to vote no, because of the way it's worded, but, you
46 know, if we want to sort of get to more of a consensus statement,
47 then I think we could probably get there with a little bit more
48 work.

1
2 **MR. RINDONE:** We could probably just append that to the end of it,
3 or you could send it -- Or it could be its own separate motion,
4 since it would be applicable not just to gray triggerfish, but to
5 other relevant federally-managed species.

6
7 **CHAIRMAN MONCRIEF:** I'm open to either.

8
9 **MR. RINDONE:** Would you want to be a standalone at the end or --
10 Would you want it to be a standalone motion, or would you want it
11 to be part of this motion?

12
13 **DR. CHAGARIS:** I think I would prefer it to be part of this motion,
14 because it's all within the context of the gray triggerfish
15 analysis.

16
17 **MR. RINDONE:** I think, in that context, you could either offer a
18 substitute motion or see if the motion maker would amend it.

19
20 **CHAIRMAN MONCRIEF:** Paul, a friendly amendment to add language in?
21 Do you want to see the language first?

22
23 **DR. MICKLE:** We can -- Let's go ahead and try to add the language,
24 Dave, if you want to.

25
26 **MR. RINDONE:** All right. I'll send it to the queens in the back
27 of the room real quick, so they can put it all together. You want
28 me to send it to meetings, Jess?

29
30 **DR. MICKLE:** Actually, I recommend a substitute motion, and, if it
31 passes, that's great. If it doesn't, then it would fall back to
32 this one. There might be some opposition on your motion, and
33 that's all.

34
35 **CHAIRMAN MONCRIEF:** All right, and so it will be the same thing,
36 with the language added, and we'll just add in as a substitute
37 motion. Go ahead, Katie.

38
39 **DR. SIEGFRIED:** I'm just curious, Dave and others who are opposed,
40 is it that it's acceptable, not acceptable at all, or it's only
41 acceptable as a stopgap, or if there's other things you want to
42 see before it's acceptable, or you just don't think it's
43 appropriate? There's all kinds of different ways this potentially
44 could go.

45
46 **DR. CHAGARIS:** That's part of the issue, is that it can be
47 interpreted, you know, differently, and I guess my concern is that,
48 if we say that what we saw today is acceptable, that just might be

1 what's pushed through SEDAR into the stock assessment, without
2 ever actually circling back to the additional analyses that are
3 requested. The substitute motion, I think, would --

4
5 **MR. RINDONE:** I'm sorry. The substitute motion would be the
6 content of the original motion, plus the sentence that I sent you,
7 and then as modified, as Dave wants to fiddle about with that one.

8
9 **CHAIRMAN MONCRIEF:** Go ahead and make sure you're good. Once you
10 are, we'll get a second for it.

11
12 **DR. NANCE:** I'll second it for comment. I want to put something
13 in it. **The SSC also -- I think just put "also" there.**

14
15 **DR. CHAGARIS:** Yes, and I like that, but I'm wondering if we can
16 change "remained in favor of considering other approaches" to "also
17 recommends" -- I'm trying to think of a concise way to say what
18 Tiffany was suggesting, was like a ground-truthing analysis.

19
20 **CHAIRMAN MONCRIEF:** Recommends further investigations? Recommends
21 further investigations into improving the estimation of shrimp
22 trawl bycatch.

23
24 **DR. CHAGARIS:** I just have a I think I have two specific things in
25 mind, right, that are getting lost in the vagueness, but maybe
26 that those further investigations can be spelled out in the
27 bullets.

28
29 Like if we saw this approach applied with species, the proxy
30 approach applied where we have two species that are in the observer
31 data, and we could correct that, that would give a lot more
32 confidence, and then, you know, also trying to see if we can do
33 this without the observer data at all, where we don't have observer
34 data. **You can delete that at the end.** I mean, it does make it
35 read better.

36
37 **CHAIRMAN MONCRIEF:** All right. Adriance.

38
39 **MR. ADRIANCE:** Thank you, Mr. Chair, and so I'm still in a quandary
40 here, because I'm in favor of the second half of this, because of
41 all those things we discussed, but then the first half still says
42 it's acceptable, and I fear what we discussed earlier, that it
43 just becomes the way things go about. Yes, we recommended further
44 investigations, but this was deemed acceptable, and so it moves
45 forward, and that's the only problem I have with this motion as it
46 is.

47
48 **MR. RINDONE:** So I guess I had something else written down. I had

1 acceptable for consideration.

2
3 **CHAIRMAN MONCRIEF:** Yes, and so two words added.

4
5 **MR. RINDONE:** "For consideration as a", because the assessment is
6 still underway. It still has to undergo peer review, and then it
7 will still come in front of you guys, and so, really, until it
8 completes peer review, everything is under consideration.

9
10 **CHAIRMAN MONCRIEF:** Konner, and then Katie.

11
12 **MR. LOCKFIELD:** Would reversing the order help, if you led with
13 "the SSC recommends further investigations into improving the
14 estimation of shrimp trawl bycatch when using SEAMAP data", and
15 then follow that with "the SSC found the proxy methodology as
16 acceptable for consideration'?"

17
18 **CHAIRMAN MONCRIEF:** Motion maker and seconder?

19
20 **DR. NANCE:** To that point, I think what we're trying to say though
21 is we are either not going to estimate or we're going to estimate
22 it, and so, right now, we've got this. The SSC found that this
23 methodology that's developed to be acceptable for use in the
24 assessment.

25
26 If we don't say that, we don't have anything to go into the
27 assessment. By saying that we're saying that, we're saying that
28 it's acceptable to be used, but we need to other further recommend
29 -- We need to keep investigating this, because we're going to find
30 various things that may make this better. That's the way I read
31 this, is in the future, because SEDAR 100 is going to end here
32 quick, right? This other stuff is not going to happen in a month,
33 and I know that.

34
35 From my perspective, I like just the first part, in the fact that
36 we either accept it or we don't, and, if we don't, that's fine,
37 but we need to tell the council this is good for SEDAR 100 or it's
38 not, and I think that's what we want to say in that first -- In
39 that motion.

40
41 **CHAIRMAN MONCRIEF:** Go ahead, Katie, and then Dave.

42
43 **DR. SIEGFRIED:** The timeline here is tight for SEDAR 100. The
44 center has presented things to you saying this is just a stopgap
45 measure for this assessment, for this species. This is what we've
46 been able to accomplish in the time we have.

47
48 Our CIE review is next month, but it goes to the SSC after that,

1 and then we're doing the MRIP-FES update and all of that, and so
2 there's other things that are changing in the model as well.

3
4 Anything that would be suggested would have to be quick in order
5 to apply just to SEDAR 100. However, when the SSC reviews it,
6 they may not be as concerned if they see that it doesn't have a
7 big impact, and that you can identify the uncertainty, and so I
8 still think that it can -- I mean, I'm not a motion writer, but
9 "as acceptable as a stopgap measure for data input into SEDAR 100"
10 would capture what we've been telling you it is, as opposed to
11 this is what we plan to do forever.

12
13 I mean, I know Dave knows that we're not going to -- We're not
14 thrilled with this either. This is kind of the best we could do,
15 and there's some good ideas that have been brought up, and so
16 hopefully that can be captured.

17
18 **DR. CHAGARIS:** Maybe one other -- I was going to say one other
19 thing we could add, that I think would help me, is at the end, and
20 "into improving the estimation of shrimp trawl bycatch without
21 using proxy species." Like I think we want to get away from it,
22 if we can, or we need to demonstrate that it's something that is
23 robust.

24
25 **CHAIRMAN MONCRIEF:** All right, and so, before I get to those last
26 two hands, Katie mentioned stopgap measure. Is that something you
27 want in place of "data input", is "as a stopgap measure for SEDAR
28 100", or you want to just leave it as it is?

29
30 **DR. NANCE:** I would leave it as it is.

31
32 **CHAIRMAN MONCRIEF:** That's your seconder. You're the primary
33 though, and so you make the call, and then we'll move through the
34 comments and vote. Good? All right. Good. Let's get to Ralph,
35 and then Dan after him. Go ahead, Ralph.

36
37 **MR. TOWNSEND:** Isn't the last sentence about saying the SSC
38 believes that validation -- That substantial validation of the
39 proxy methodology is required before applying anyplace else, but
40 perhaps that -- Without using proxy species implies it, but it
41 seems, to me, that what we were saying is there's no validation of
42 this approach. Using it as a stopgap is fine, but, before it gets
43 used again, it really needs substantial work on validation.

44
45 **CHAIRMAN MONCRIEF:** Yes, and I would say it -- I don't want to
46 speak for you, Dave, but, basically, it says that further
47 evaluation will be needed before this is used as a commonplace
48 effort.

1
2 It doesn't necessarily restrict it to a direct evaluation of proxy
3 species, but it says, overall, we probably need to come up with
4 methods, and they likely don't need to include proxy species, given
5 what we've observed in the conversation we've had today. Dan, go
6 ahead.

7
8 **DR. PETROLIA:** Thank you, Mr. Chair. Just my two-cents is I guess
9 I find the substitute motion wishy-washy relative to the original.
10 I'm not sure -- You know, we've got the "acceptable", but for
11 consideration, and then we've got the last sentence.

12
13 I guess I feel -- I'm kind of where Jason is, in that it still
14 says we accept it, but, with the last few edits, I feel like I'm
15 not sure what we're saying, and so I don't know. I almost feel
16 like the original motion, even if there's a -- If it's less
17 unanimous, at least it's clear. That's all I've got.

18
19 **CHAIRMAN MONCRIEF:** All right. I appreciate that input. We'll
20 get Ryan, and then Harry, and then we're going to wrap this thing
21 up with some votes.

22
23 **MR. RINDONE:** Yes, and so I was just going to add, Mr. Chair, like
24 as the council staff member that goes to all the SEDAR assessments,
25 if I'm trying to convey the intent here, you know, to a SEDAR body,
26 it would essentially be that, you know, what you've done up to
27 this point is consider for this assessment, because you guys have
28 explicitly labeled SEDAR 100 in here. You haven't said for gray
29 triggerfish period, and so be presumed acceptable for all for this
30 assessment and future assessments.

31
32 You've made it specific to this one, and then, also, that, you
33 know, this is a good start, but we need to -- We need to keep
34 chipping away at this, and we need to explore some of the things
35 that have been talked about here, like what -- You know, like what
36 Tiffany brought up, and that needs to be a focal point for work
37 moving forward, which seems to be the gist of what's been discussed
38 here.

39
40 This recommendation, and the substitute motion, is explicit to
41 SEDAR 100 in the first sentence, but, beyond SEDAR 100, that's
42 where the second sentence comes into play, and so let's not just
43 settle on what was done here for SEDAR 100, and we're going to use
44 that forever. Like we're going to keep working at this.

45
46 **CHAIRMAN MONCRIEF:** Yes. We're good with that, and so we've got
47 Harry. Jim, we'll get to you. After Jim, we're going to vote on
48 this thing. Harry, go ahead.

1
2 **MR. BLANCHET:** I guess my issue at the moment is -- I have two
3 issues at the moment. My primary issue at the moment is it now
4 seems like we're trying to say do anything you want to do, but
5 just don't use proxy species. That may or may not be the intent,
6 but that's what I'm taking from the reading of it, and, anything
7 you do, if you don't have the species in-hand, you're going to be
8 using a proxy species, even if that is your shrimp landings, and
9 it's still a proxy.

10
11 The other part of that is that, at the end of the day, when you
12 come up with that estimate, that estimate has got a lower CV than
13 a lot of our recreational landing statistics for the species, and
14 so is that the one that's going to drive the truck? Are we going
15 to be driving the truck with the shrimp trial bycatch estimates?

16
17 You know, how this actually gets implemented, and worked in the
18 assessment, is a bit of a black box, and that's probably a good
19 thing, but I really -- I don't want to take proxy species off the
20 table. I think that we should let that workgroup do what it wants
21 to to improve the estimates, however they can do it, and I don't
22 want to --

23
24 **MR. RINDONE:** We could say "when possible".

25
26 **CHAIRMAN MONCRIEF:** Go ahead, Dave.

27
28 **DR. CHAGARIS:** Maybe another way to put it would be "estimates of
29 shrimp trial bycatch for species that are not in the observer" --
30 That are not in the observer -- "Characterized in the observer
31 program", and that sort of juxtaposes against the previous. We
32 have a methodology where we have observer coverage, and then we
33 have a methodology without observer coverage, that is currently a
34 stopgap, but maybe needs more work.

35
36 **CHAIRMAN MONCRIEF:** All right, and so --

37
38 **MR. RINDONE:** For species not characterized in the observer
39 program.

40
41 **DR. CHAGARIS:** Yes.

42
43 **CHAIRMAN MONCRIEF:** Good? Good with the change, and then make a
44 comment.

45
46 **DR. NANCE:** I'm just saying -- Mine is I'm probably going to vote
47 against the second one, because it's too muddy. I'll vote for the
48 first one, and then make a motion to add that last sentence as an

1 additional motion. That way they're not together.

2
3 **CHAIRMAN MONCRIEF:** All right. Before we take out the third
4 drawing board then, let's start with the second drawing board, and
5 what's up?

6
7 **MR. RINDONE:** Jess, it's a shrimp trawl bycatch for species not
8 characterized in the observer program. For species not
9 characterized in the observer program.

10
11 **CHAIRMAN MONCRIEF:** All right. Let's just go ahead and bring up
12 the old roll call. Let's knock this substitute motion out. If it
13 fails, it goes back to the original motion, and we'll vote on it.
14 If that fails, we'll bring out the chalkboard and get back after
15 it. Take it away.

16
17 **MS. MATOS:** David Griffith.

18
19 **DR. NANCE:** Is there any way to see the motion while we're voting?
20 Can you read the motion?

21
22 **MR. RINDONE:** The SSC found the proxy methodology, using SEAMAP
23 and observer data that has been developed by the Southeast
24 Fisheries Science Center to estimate gray triggerfish bycatch in
25 the Gulf as acceptable for consideration as a data input for SEDAR
26 100. The SSC also recommends future investigations into improving
27 the estimation of shrimp trawl bycatch for species not
28 characterized in the observer program.

29
30 **CHAIRMAN MONCRIEF:** All right. The motion has been read. Let's
31 get down our list.

32
33 **MS. MATOS:** David Griffith.

34
35 **DR. GRIFFITH:** No.

36
37 **MS. MATOS:** Paul Mickle.

38
39 **DR. MICKLE:** No.

40
41 **MS. MATOS:** Dan Petrolia.

42
43 **DR. PETROLIA:** I'm a no.

44
45 **MS. MATOS:** Tiffany Hopper.

46
47 **DR. HOPPER:** Yes.

1 **MS. MATOS:** Jack Isaacs.
2
3 **DR. ISAACS:** No.
4
5 **MS. MATOS:** Steve Saul. John Mareska.
6
7 **MR. MARESKA:** Yes.
8
9 **MS. MATOS:** Steven Scyphers.
10
11 **DR. SCYPHERS:** Yes.
12
13 **MS. MATOS:** Jason Adriance.
14
15 **MR. ADRIANCE:** No.
16
17 **MS. MATOS:** Harry Blanchet.
18
19 **MR. BLANCHET:** Yes.
20
21 **MS. MATOS:** Tom Frazer. David Chagaris.
22
23 **DR. CHAGARIS:** Yes.
24
25 **MS. MATOS:** Jim Nance.
26
27 **DR. NANCE:** No.
28
29 **MS. MATOS:** Ralph Townsend.
30
31 **MR. TOWNSEND:** Yes.
32
33 **MS. MATOS:** Andrew Ropicki.
34
35 **DR. ROPICKI:** Yes.
36
37 **MS. MATOS:** Trevor Moncrief.
38
39 **CHAIRMAN MONCRIEF:** Yes.
40
41 **MS. MATOS:** Konner Lockfield.
42
43 **MR. LOCKFIELD:** Yes.
44
45 **MS. MATOS:** Jason Saucier.
46
47 **CHAIRMAN MONCRIEF:** Technical difficulties. Hold on one second.
48

1 **MR. BEHRINGER:** This is Don Behringer. I am here, but I just came
2 on late. I'm going to abstain from this vote, since I didn't hear
3 much of that conversation.

4
5 **CHAIRMAN MONCRIEF:** Good idea, Don. That's a noble abstain.

6
7 **MR. SAUCIER:** This is Jason Saucier. I'm a no.

8
9 **CHAIRMAN MONCRIEF:** All right. Tom is definitely out? All right.
10 **So, with that, it looks like we have a narrow passage of the**
11 **substitute motion.**

12
13 I will reflect that in the conversation with the council, when we
14 give the presentation, to let them know how robust this
15 conversation was, and what we truly tried to distill with this,
16 and Mike will be there to help further describe the conversation.
17 Jimbo.

18
19 **DR. NANCE:** I do think it reflects -- This is a -- I think we're
20 all trying to make this -- You know, get the best estimate of
21 bycatch, and so I think, whether this one passed, and the other
22 one didn't, that type of thing, but we're all trying to use a proxy
23 method, or something else, to be able to estimate bycatch.

24
25 **CHAIRMAN MONCRIEF:** All right. Those familiar with Roberts Rules,
26 that was handled correctly, right?

27
28 **MR. RINDONE:** Yes.

29
30 **CHAIRMAN MONCRIEF:** It overrides the other, and are there any
31 additional motions associated with any of these three things we've
32 covered so far? If not, we're closing the book on it, and we're
33 moving on to Frank's presentation. Seeing no hands online or in
34 the room, moving on. Ryan, the scope of work.

35
36 **REVIEW OF THE MINIMUM THRESHOLD NUMBER OF FEDERAL GULF SHRIMP**
37 **PERMITS**

38
39 **MR. RINDONE:** Frank is here to regale us on the trend of valid or
40 renewable federal Gulf shrimp permits as it relates to the minimum
41 threshold number of valid or renewable federal Gulf shrimp permits
42 established under Shrimp Amendment 17B.

43
44 The council requested that NMFS provide an updated approach to
45 setting this minimum threshold, and NMFS is here to do that, as
46 well as review the types of data for potential inclusion in an
47 updated approach. You guys should consider everything Frank shares
48 with you, ask questions, and provide input as appropriate.

1
2 **CHAIRMAN MONCRIEF:** Take it away, Frank.

3
4 **MR. FRANK HELIES:** Thank you, Mr. Chair, Ryan, and the SSC. It's
5 good to see you all. Frank Helies, NOAA Fisheries, Southeast
6 Regional Office, Gulf team.

7
8 This is going to be a very brief overview of the minimum threshold
9 number of federal Gulf shrimp permits. Essentially, a little bit
10 of background on how we established it, some of the trends in the
11 active permits, some of the available data that we have, and we're
12 looking for some feedback on potential paths forward and potential
13 methods for looking at the threshold.

14
15 Why we're here. At the November 2025 council meeting, the council
16 asked us to review and provide some updated analyses for the
17 threshold that was established in 17B. Subsequently, at the April
18 2026 meeting, the council directed staff to work on an amendment
19 that would update the status determination criteria for penaeid
20 shrimp in response to the recent SEDAR 87 stock assessment.

21
22 We're also trying to consider modifying the threshold number of
23 permits in that action, and so that's going to be Amendment 20 to
24 the Shrimp FMP, and we've started working on that, and then we
25 were asked to provide a brief update at this meeting.

26
27 All right, and so, Shrimp 17B, it was effective in 2017. In Shrimp
28 15, we updated the SDC for penaeid shrimp, and, in 17B, we defined
29 an aggregate MSY and OY. We have some institutional knowledge in
30 the room, with Dr. Nance here, and I don't know who else was still
31 around from when we did this, but I'm going to rely on him for
32 specific questions on how we got there, because it was through a
33 working group that came up with the methodology to establish the
34 aggregate MSY and OY.

35
36 17B also set that minimum number of commercial vessel moratorium
37 permits in the fishery at 1,072, and the purpose of the threshold
38 was to maintain catch efficiency, economic efficiency, and
39 stability in the fishery.

40
41 The purpose of the minimum permit threshold specifically was to
42 monitor changes in participation and determine if additional
43 measurement measures were needed, and so the threshold was
44 developed with a number of different things in mind. I'll get to
45 that in the next slide, I think.

46
47 For the other items in 17B, we also looked at a way to hold permits
48 if we reach a certain amount. At the time, permits were

1 continuously declining, and that is still the case, and so, once
2 the number of permits reaches 1,175, we would stand up a committee
3 to determine what to do with any permits that drop below that 1,072
4 number. The current number of valid and renewable permits is
5 currently 1,185, as of today.

6
7 Just for some reference there, in 2006, we had 2,951 permits, and,
8 ultimately, when the shrimp moratorium permit was established, we
9 started with 1,933, and so we've lost quite a few over the years.

10
11 All right, and so a little bit more on the threshold. The threshold
12 applies to both valid and renewable permits and is based on the
13 predicted number of active permitted vessels that we need to attain
14 that aggregate OY number in the offshore fishery. A vessel is
15 considered to be active in a given year if it has harvested at
16 least one pound of shrimp. At the time, in 2017 and 2018, the
17 fishery was predicted to reach that threshold in twenty-four years.
18 We weren't losing permits at the rate that we are currently losing
19 them at.

20
21 All right, and so these are the factors that were considered when
22 they developed that original threshold. The main things were
23 landings, catch per unit effort, sea turtle bycatch effort
24 threshold, and that's currently equal to the 2009 level in inshore
25 and offshore waters, and that level was 76,508 fishing days.

26
27 We also utilized the target effort level for juvenile red snapper
28 bycatch, and so that was originally 74 percent reduced from the
29 2001 to 2003 effort, and we've reduced that twice since 2007. We
30 reduced it to 67 percent, and then we reduced it again in 2020 to
31 60 percent, to account for the rebuilding progress in the red
32 snapper fishery.

33
34 Aggregate OY accounts for relatively high catch per unit effort
35 and landings, while reducing the risk of exceeding sea turtle and
36 juvenile red snapper bycatch. The working group described there,
37 as Dr. Nance was a part of, they concluded that the predicted
38 effort and associated landings in 2009 best balanced the factors
39 described.

40
41 Okay, and so what has changed since the threshold was initially
42 established? We have a number of new initiatives and information.
43 These new initiatives, such as the National Seafood Strategy, are
44 new EOs on competitiveness and deregulation, and the center's
45 Shrimp Futures Project are all looking for ways to find -- To
46 address the economic challenges that are currently being faced by
47 the industry.

1 The updated target level for red snapper bycatch, I just mentioned
2 that, and it went from 74 to 67 to 60 percent, and that's in the
3 ten to thirty-fathom depth zone, in Stat Zones 10 to 21,
4 essentially off Mississippi, Louisiana, and Texas.

5
6 As mentioned earlier, we are trying to update the shrimp effort
7 logbook transition. That is an ongoing effort. The council
8 submitted that framework action to the agency for implementation,
9 and we hope to get that up and running in 2027. We're currently
10 working on the rulemaking.

11
12 We've had a new biological opinion since then, in 2021. That BiOp
13 essentially terminated the sea turtle bycatch effort threshold
14 that was utilized in the 2014 BiOp, and I'll get to this in the
15 slide here coming up, now we do a slightly different way of
16 estimating sea turtle bycatch.

17
18 We've had some new stock assessments for shrimp. The latest was
19 SEDAR 87, and that it showed that pink shrimp, white shrimp, and
20 brown shrimp are all healthy, and of course, unfortunately,
21 economic conditions in the fishery have worsened. Shrimp prices
22 have continued to fall, and we continue to lose these moratorium
23 permits.

24
25 All right, and so I'm going to walk through some of the data that
26 we have available, and I want to thank some of the folks from the
27 center that helped to provide some of this data, Kyle Detloff,
28 Chris Long, Gary Decossas, and Christopher Liese.

29
30 This is taken from -- Where did I take this? This was Shrimp 18
31 I think we took this out of, and so, in 2024, you could see there
32 was 1,287 valid and renewable permits, but only 691 of those were
33 active, and so the percentage of active permits is fairly low,
34 unfortunately, and you could see the number that we've lost each
35 year, the moratorium permits.

36
37 For a moratorium permit to expire, you have an additional year
38 after it expires to renew it, and it's essentially a year in the
39 future. Let's see. The number of valid or renewable permits is
40 the number listed throughout a given year. They're renewed on a
41 rolling basis, and so say, if I had a vessel, I could renew in
42 August, and Matt might renew in September, and so it's a rolling
43 number. Active is one pound of shrimp in each year, and these are
44 preliminary for 2024, and this is based on 2025.

45
46 This is another slide that shows some of the trend in the active
47 vessels. The total vessels, both state-permitted and federal-
48 permitted, is the dark black line. The yellow line there is just

1 the federal permit. This can be found in the snapshot, the latest
2 2026 snapshot, economics of the shrimp fishery that the center put
3 out.

4
5 Catch unit effort, you can see that the catch unit effort goes up
6 as our number of permits goes down, and so 2022 and 2023 and 2024
7 shows the highest CPUE over the entire dataset there, and so the
8 vessels that are out fishing are catching a lot of shrimp on the
9 days that they're out there.

10
11 The effort threshold for red snapper bycatch, you can see how that
12 is, and that's, like I mentioned, the 10 to 21 Stat Zones, ten to
13 thirty fathoms. Currently, about 60 percent, and it's 33,124
14 twenty-hour fishing days, and so that's that red line there. We've
15 been under that for -- We've never exceeded the threshold number.

16
17 Sea turtle bycatch estimates, they're on five-year averages here.
18 They're estimated, and this is through 2020, and so we'll get a
19 new estimate in 2026 for 2021 to 2-26, five-year periods for
20 estimates. The estimates don't necessarily correlate well with
21 total effort in the fishery, likely in part because of low observer
22 coverage and some random variation, is what is observed.

23
24 These mortality estimates also do not include post-interaction
25 mortality. I think we might have some center folks on the call
26 that will be able to answer specific questions about the sea turtle
27 stuff.

28
29 Some available economics, and these are not great, right? We have
30 low shrimp prices, higher costs, minimal new investment, aging
31 fleet, graying of the fleet, no real new entrants. There are
32 permits available. Matt, what did we say was the price of the
33 last permit you saw?

34
35 **DR. FREEMAN:** Like one of the prices I saw recently was for about
36 five-grand.

37
38 **MR. HELIES:** Thanks, Matt, and so permits are available for
39 purchase, but we're not seeing a lot of transfers. This was
40 Christopher Liese, from the center, He had this statement here
41 that the threshold is hypothetical, because actual participation
42 is lower, and is largely driven by economics.

43
44 All right, and so we have three options here. They're all labeled
45 Number 1, and that was a mistake on my part there. This where
46 we're at, and what we can do, and so we have status quo.

47
48 We're currently at 1,185 permits, and so, when we hit that level

1 of 1,175, we can convene the panel, and we can discuss what to do
2 with the permits, as we're likely going to hit that number quickly,
3 I think, with the current rate, and so, once 1,072 is hit, we would
4 put them aside in a pool, and then this panel can decide how they
5 want to distribute them, if they want to do that, or whatever they
6 decide on that.

7
8 Another option is to re-evaluate 2009 as the threshold, as the
9 proxy for the threshold number, and we could use those same four
10 characteristics of CPUE, landings, sea turtle and red snapper
11 bycatch, and see if we can pick a different year that would be
12 more appropriate, or we could come up with a completely new
13 methodology for calculating a threshold and determine if permits
14 have dropped below that new threshold.

15
16 As of 2024, there were 691 active shrimp permits, and that was
17 stated in Amendment 19, which is trying to extend the permit
18 moratorium that expires in October. We're currently in rulemaking
19 for that, and so we could reconsider managing to aggregate OY. We
20 could define a proxy for that.

21
22 We could modify the threshold based on updated sea turtle take
23 estimates, and any other options, and so this is really where we're
24 looking for some feedback from the center, or, excuse me, from the
25 SSC on potential options for us to consider in Amendment 20.

26
27 This was very brief, and just kind of laying out where we're at,
28 what we have available to us to potentially complete these
29 analyses, and so I think that's my last slide. With that, I'll
30 take any questions. Thanks a lot.

31
32 **CHAIRMAN MONCRIEF:** All right. Thanks, Frank, and your time
33 matches your personality pretty well today. Paul, go ahead.

34
35 **DR. MICKLE** Yes, and so I guess a question. This seems like more
36 of trying to figure out -- I wanted to bring it up when we were
37 going through this at the beginning of the meeting with the scope
38 of work, but this seems like a management-based inquiry.

39
40 The council does all sorts of management-based recommendations,
41 and quantitative approaches, but this doesn't seem like a
42 scientific ask here, and then I read a little bit more, and it
43 sounds like the council requested from NMFS, but who -- Did the
44 council request the SSC get involved with this topic? This just
45 seems very management heavy, and not science-based, for which we
46 are tasked to do? How did this originate, I guess, is my formal
47 question.

1 **CHAIRMAN MONCRIEF:** I'll just say I had similar feelings when I
2 saw the subject, and kind of what was going on with it. Ryan, or
3 Frank, any insight? Is this just standard practice that this goes
4 through the SSC when the question is asked, and we've got Dr.
5 Freeman with his hand up.

6
7 **DR. FREEMAN:** Sure, and so the council sent a letter to NMFS
8 requesting this analysis. They met this summer, reviewed what was
9 done previously, and I think pretty much, at this stage, they were
10 interested in getting feedback, to see if there were any additional
11 ideas, in terms of approaches to analysis for determining this
12 minimum threshold, and so I think that that's part of the
13 involvement there.

14
15 **CHAIRMAN MONCRIEF:** Okay, I think -- So just general comments, in
16 my mind. If you had a fishery that was going in the opposite
17 direction say, I think it would be pretty much -- A lot more
18 straightforward to start thinking about ways to potentially have
19 some threshold, based on different metrics, or anything else like
20 that.

21
22 To me, this scenario -- I mean, Paul's comment that, to me, it
23 almost exists more in the management realm than it does anything
24 else I think is the right one, because it's a declining fishery.
25 I can't really think of anything that we would suggest, analysis-
26 wise, that would have an impact, or inform what's going on in this
27 fishery, and, if someone else has different ideas, I'm happy to
28 hear it.

29
30 I'll get to Ralph's question in just a minute, but that's kind of
31 where I -- Where I when I read through the stuff, and kind of had
32 the presentation, and it just seems like, the trajectory of the
33 fishery is on, it's not going to take a scientific analysis.

34
35 It's going to take a larger intervention, in order for it to
36 correct, because, I mean, currently, your active permits are well
37 below the threshold that's even defined, and, yes, it just seems
38 like one of those that re-evaluation -- Let's just say it does
39 increase the threshold, or anything else, and, I mean, the fishery
40 is just not on the trajectory to respond to any increased access
41 at this point, and so it just kind of gets me for a loss. I'll
42 get to Ralph, and then I think Paul had another comment. Ralph,
43 go ahead.

44
45 **MR. TOWNSEND:** Well, this is very much an economic question, and
46 so I'm curious why other members of the SSC don't believe economics
47 is part of the science we're doing, but I will say that I think it
48 raises much more fundamental questions about what is the

1 appropriate size for this fishery as its profitability goes down,
2 and I think that's very much an economic question.

3
4 Whether or not the council wants to hear that analysis perhaps
5 might be different, but, in terms of recommendations, I mean, it
6 seems, to me, that there are pretty straightforward
7 recommendations about the kind of economic analysis that could be
8 done to assess what is an optimum amount of permits for this
9 fishery.

10
11 **CHAIRMAN MONCRIEF:** All right. Ralph, given that sentiment, do
12 you have a proposal to add to it to inform Mr. Helies?

13
14 **MR. TOWNSEND:** Well, I mean, I think I guess I'm going to have to
15 disagree with the assumptions made in the original 2007, which is
16 there's no way to balance the impacts of the shrimp fishery on
17 other finfish fisheries, or on turtles, in terms of economic
18 impacts. They may not be very precise, but there's certainly
19 estimates that could inform the process.

20
21 I mean, from a very simple economic point of view, we have a
22 fishery which is not earning profits, and which continues to cause
23 damage to other fisheries and to turtles. It's essentially an
24 open access fishery, and so that means, at present, this fishery
25 is almost certainly destroying economic value for the country as
26 a whole, and, far from being a problem that the number of permits
27 is inactive, it's an opportunity, I think, to think about balancing
28 the number of permits, at a relatively low cost, against what is
29 really an appropriate economic yield from this fishery.

30
31 **CHAIRMAN MONCRIEF:** All right. Paul, you got a comment, and then
32 I'll get to Jim. Paul has withdrawn. Jim.

33
34 **DR. NANCE:** Thank you. I remember when we had this committee, and
35 it was -- We had, you know, Walter Keithly, Wade Griffin, Mike
36 Travis, myself, and Corky Perret, those types, but, you know, what
37 we were trying to do is balance this fishery, to make sure that,
38 from an economic standpoint, this fishery is being able to catch
39 shrimp.

40
41 We looked at MSY and OY and those types of things, and it certainly
42 has the ability to impact other fisheries. We looked at that. We
43 always have, and so we had the sea turtle levels, and those types
44 of things, red snapper catch, and so you can have -- Be able to
45 prosecute a commercial fishery and be able to maintain the
46 environment.

47
48 I think it's important that, no matter what we do here, that this

1 is a very important topic that needs to be considered by the
2 council and so forth, and you have a group of individuals,
3 economists, biologists, and also the fishery, to be able to meet
4 together to be able to discuss this item. I think that's the
5 important thing.

6
7 **CHAIRMAN MONCRIEF:** All right. Thanks for that, Jim. Andy.

8
9 **MR. ANDY STRELCHECK:** I appreciate the discussion, and certainly
10 we aren't far enough along with any further analysis, but I would
11 love to get some additional feedback, and so, in terms of Ralph's
12 comment, I do agree, right, and there's economic components to
13 this that are really important, and I think that's the challenge
14 that we have, in terms of reevaluating this threshold, in that we
15 have really bad economic conditions for the fishery as a whole.

16
17 That's why the permits are declining, yet largely all the factors
18 that we considered when we established the previous threshold have
19 improved, right, and so catch per unit effort continues to
20 increase, and red snapper effort, you know, in that zone has
21 continued to decrease.

22
23 We've changed, obviously, our methodology for turtle takes, but my
24 expectation is that they probably are in line, or declining,
25 relative to previous information, just simply because of lower
26 effort levels, and so the fishery is, obviously, declining, in
27 terms of capacity and ability to even harvest optimum yield, and
28 you potentially could actually add more vessels to the fishery at
29 this point, but you have a tremendous amount of latent effort.

30
31 That capacity, if it came back, could come back as part of those
32 permits that exist currently, right, and so I think, from our
33 standpoint, and where we're struggling, and we weren't able to get
34 an analysis before you guys today, is kind of a how, because the
35 trends and mechanics and everything are kind of moving in different
36 directions with regard to how we would typically calculate a
37 threshold, and so I just wanted to provide that perspective, and
38 certainly, if you have just kind of other general thoughts on what
39 could be done, or looked at, it certainly would be helpful.

40
41 I mean, the other aspect is the threshold stands as it was, you
42 know, created a number of years ago, and that is continuing to be
43 a sufficient proxy for the fishery, which would be sufficient
44 advice as well, right, and so I appreciate anyone's input.

45
46 **CHAIRMAN MONCRIEF:** Go ahead, Jim.

47
48 **DR. NANCE:** Andy, just from my perspective, I'm not sure -- When

1 the first committee was put together for this analysis, was it an
2 SSC recommendation, or was it a council? I can't remember how
3 that even came to be, but I remember that working group was put
4 together because of this very question, and I think it certainly
5 is a question now, is what's the number of permits that's usable,
6 those types of things, and where are we at with bycatch levels for
7 red snapper, for sea turtles.

8
9 Certainly the fishery, the ones that are fishing now, are able to
10 maintain the ability because of the high catch per unit of effort.
11 That's the only reason they're out there fishing, is because
12 there's fewer vessels, and they're getting enough product to be
13 able to survive, and so I think it's a good topic to look at.

14
15 I think it certainly is -- I would think maybe, and I don't know
16 if the council recommends those things, to put together a working
17 group for that, but that's what I would recommend, from my
18 perspective.

19
20 **MR. STRELCHECK:** Just to add, Jim, because you were on that
21 previous working group that involved scientists and economists and
22 a whole suite of people, and we have, I would say, a similar
23 working group within the Fisheries Service, right, but we're still
24 scratching our head here, in terms of kind of how can we approach
25 this from an analytical standpoint, especially given all the new
26 information that Frank talked about, and the fact that things have
27 actually continued to improve, with the exception of the number of
28 active vessels and economic conditions in the fishery, right?

29
30 We're meeting a lot of the management benchmarks, but, in order to
31 achieve OY in this fishery, we really need more capacity to
32 actually be back in the fishery in order to achieve that, and it's
33 not going to be there without the economic conditions changing.

34
35 **CHAIRMAN MONCRIEF:** Yes, and so working groups, think tanks,
36 whatever else. I mean, I'll get back to Ralph here in just a
37 second, and see if he's come up with another idea, but has the
38 industry been engaged in this conundrum at all, within some
39 advisory panel or anything else? Go ahead, Dr. Freeman.

40
41 **DR. FREEMAN:** So we were going to wait until there was a little
42 more information on potential approaches to analyses, and then
43 potentially look at convening the Shrimp AP this fall, and, if so,
44 that way, they could be engaged as part of that process, as an
45 action may be developed for the council document, but, to answer
46 your question, not at this point.

47
48 **CHAIRMAN MONCRIEF:** Okay. Ralph.

1
2 **MR. TOWNSEND:** It seems to me that this presentation suggests that
3 there are really two specific economic studies that NMFS should
4 commission. The first one is what is the economic impact of
5 various approaches of dealing with the expired permits, and I think
6 that's important, because if NMFS does sort of the obvious thing,
7 and that is if NMFS says, oh, once the permits are below 1,072,
8 they go into a pool, and then anybody who wants them can take them,
9 you'll immediately get a large amount of exit, because the permits
10 will be value-less.

11
12 They'll be valuable free from NMFS, and so why keep them? Why pay
13 the \$25 every two years, and so I think a very specific study on
14 approaches to handling those expired permits is really -- I don't
15 think it's a very hard analysis, but I think it needs to
16 specifically be done, because that information needs to be in front
17 of the council.

18
19 The second one, it seems to me, is that the definition of optimum
20 yield is not simply biological, and, at present, it's clear that
21 the industry is not making profits.

22
23 People are -- I mean, people are not paying the \$25 for a permit,
24 or \$25 every two years, I guess, would be the way it would be, and
25 so those permits, you know, are providing no economic rents, and
26 I think that the question of what level of CPUE do we need to
27 return this industry at least to profitability, if not to economic
28 rents, that that analysis is probably not very hard to do.

29
30 It probably implies a lot fewer permits than we have right now,
31 and that's not a bad answer. I mean, right now is actually a good
32 time to reduce permits, when, for example, a buyout could achieve
33 that pretty cheaply.

34
35 I think a second, much broader study, that says what is the optimum
36 yield, or what are the economics of defining an optimum yield, in
37 terms of looking at the profitability of the industry, the economic
38 cost of the industry on other finfish, and on turtles, and, again,
39 it's -- That's not -- It's a pretty obvious study to do.

40
41 It's pretty clear what the answer will be. The answer will be we
42 have way too many permits now, and, if we're trying to optimize
43 the economic yield, the overall economic yield, now would be the
44 time to do it, but I think it's -- The difficulty, I think, is
45 people don't want to do that study, because they don't want to get
46 the answer that we should probably allow -- Not only allow, but
47 encourage exit from the fishery, given the current economic
48 conditions.

1
2 Certainly part of that study, looking ahead, would be to look at,
3 you know, the future of shrimp aquaculture, to understand what's
4 going to be the drivers of prices going ahead.

5
6 Again, I think the answer is probably fairly clear, but someone
7 needs to go out and gather the data, understand the technology of
8 aquaculture, understand what the markets want in, terms of shrimp
9 that is viewed as being environmentally sustainable and that sort
10 of thing, and so I don't think it's very hard to say that NMFS
11 should do those two studies as background information, both for
12 the immediate decision about what to do with expired permits, but
13 for the longer look at what to do on Amendment 20.

14
15 **CHAIRMAN MONCRIEF:** Thanks, Ralph. Anybody else at the table have
16 a comment on this one? Go ahead, Mike.

17
18 **DR. ALLEN:** I'll just make a comment that, I mean, it seems, to
19 me, that the number of permits is not an issue here. Like this is
20 -- Anything we do with the number of permits isn't necessarily
21 going to change the situation, and it's really an economic
22 analysis, and understanding, you know, what the constraints are to
23 investment and increasing participation, you know, that kind of
24 approach, similar to what Ralph is saying.

25
26 **CHAIRMAN MONCRIEF:** All right. Anybody else got a comment? Frank,
27 you need anything else from us? Go ahead, Harry.

28
29 **MR. BLANCHET:** This is perhaps just spit-balling a bit, but it
30 seems, to me, that we have one other source of potential effort if
31 you want to get more landings out of the federal zone. You have
32 a bunch of state-only vessels, and those have many of the same
33 economic limits and constraints as the federally-permitted
34 vessels.

35
36 They don't have an additional \$5,000 to throw out to try to buy a
37 permit, if they even know how to get a permit, and so they are
38 going to be within state waters only.

39
40 To me, that's the easiest way to get additional revenue to some
41 participants in the fishery, and more active permits, if that's
42 your goal, and, if you are thinking in those terms, some person
43 who is familiar with those state fishermen, and their wants and
44 needs, might be very useful in a working group. That's what I was
45 going at. Thank you.

46
47 **CHAIRMAN MONCRIEF:** I think that one was tossed around a little
48 bit, however many years ago when this was discussed. It certainly

1 is an avenue. Those are fishermen that are out on the water, and
2 they're there, and so that would be an easy cut-in. Now, most of
3 their vessels aren't big enough to traverse those waters, but there
4 might be a few in there, and so that might be a good one, and so
5 I appreciate that, Harry. Ralph, round three.
6

7 **MR. TOWNSEND:** I just want to state that the \$5,000 figure is --
8 Given that people are walking away from the permits, the permits
9 are clearly not selling for \$5,000. If they were, they would be
10 selling them for \$5,000, rather than walking away, and so I think
11 the \$5,000 is -- As someone used to say, it's a token payment to
12 ask somebody to give you a present. \$5,000, at 7 percent interest,
13 is \$350 a year in additional operating costs. You need to look at
14 it that way.
15

16 I don't think -- I would expect that somebody that knows what
17 they're doing can buy a permit for \$1,000 to \$2,000, and it's
18 hardly an obstacle, and I think it's not reasonable to expect that
19 fishermen don't know how to get these permits. Everybody knows
20 the permits are there. They've been there for twenty years, and
21 I assume that it's a public list, and so it's not hard. It would
22 not be hard for an inshore person to get them. Now, whether their
23 boat is appropriate for offshore, of course, is a very different
24 issue.
25

26 **CHAIRMAN MONCRIEF:** All right, Ralph. All right. Looking around
27 the room, anybody else? Frank, any comments?
28

29 **MR. HELIES:** No, and I appreciate the discussion. I would be happy
30 to take any other feedback offline.
31

32 **CHAIRMAN MONCRIEF:** If we get any, we'll throw it right there to
33 you.
34

35 **MR. HELIES:** Thanks a lot.
36

37 **CHAIRMAN MONCRIEF:** All right. That wraps up that agenda item.
38 Public Comment is up next, and then we'll be done for the day. Do
39 we have any members of the public online, or in there, and I see
40 Bob Zales coming up to the mic. Go ahead.
41

42 **PUBLIC COMMENT**

43

44 **MR. BOB ZALES, III:** Thank you very much. Bob Zales, Executive
45 Director of Southeastern Fisheries. I wasn't really going to say
46 anything until I heard this last conversation about the shrimp
47 industry, but I can't resist, because I appreciate and respect the
48 economic discussion here, but, when you're dealing with theory,

1 and models, and stuff like that, you need to get down to the real
2 world.

3
4 A \$5,000 permit is not a problem with the shrimp fishery. A six-
5 dollar-a-gallon diesel fuel for a \$10,000 tank of fuel is a key
6 problem, the reason why people are not shrimping. You're looking
7 at \$60,000 before you ever leave the dock, to try to make money to
8 come back, and these people are not letting their permits sit out,
9 or go away, because of not interest in this. They're doing it
10 because they're forced to.

11
12 You can look at everything that the federal government currently
13 is doing to try to help the shrimp fishery, and all the trade
14 issues and everything that's going on to try to get them back to
15 be a viable fishery again, and so that kind of information needs
16 to be there.

17
18 I'm going to tell you all a quick story, because everybody knows
19 about all the labeling stuff and everything that's out there,
20 right? I ate at a restaurant, a seafood restaurant, north of
21 Panama City the other day with my girlfriend's family. Seafood.
22 I have pictures.

23
24 Apalachicola, there was a shrimp boat, Panama City, all kinds of
25 stuff in there. I asked the owner, and I said where is your
26 seafood from? Bayou La Batre, Louisiana. Okay. I mean, I've got
27 Louisiana people here, and I've got Alabama people here. There
28 ain't no such thing as Bayou La Batre, Louisiana, and so I didn't
29 ask anything else about that, but that's the classic example of a
30 problem with restaurants and people markets trying to seafood that
31 indicate --

32
33 They didn't say that this is here, but, I mean, you're looking at
34 an Apalachicola boat, a picture of it. You're looking at fish
35 laid out by the shrimp boat restaurant in Panama City from years
36 ago, and it would indicate he's selling fresh local seafood and
37 he's telling you Bayou La Batre, Louisiana. That's part of the
38 problem.

39
40 This problem is much deeper than permits. Permits are the most
41 simple thing about it, and so I don't know how you all address
42 this, but that needs to be considered in everything that's there,
43 because these people are suffering.

44
45 I love shrimp. When I was a kid, I used to go to places, and there
46 was a grants thing that had all the shrimp you could eat. I would
47 eat six, seven dozen shrimp, at ten years old, because I loved it,
48 and these people need help, and everything that they can do. The

1 permit problem, that, to me, is a minor problem. Thank you.

2
3 **CHAIRMAN MONCRIEF:** Thank you, Bob. I think that reflects the
4 original comments that me and Paul had on there of it's a big, big
5 issue that's beyond just a simple analysis to try to inform it, it
6 seems like. I've got Tricia Kimball. Go ahead, Tricia. Is she
7 there? Can you unmute yourself, Tricia, and provide your comment?
8 All right. We'll give you five seconds, but we're not hearing
9 anything on our end.

10
11 **MS. TRICIA KIMBALL:** Can you hear me?

12
13 **CHAIRMAN MONCRIEF:** We got you.

14
15 **MS. KIMBALL:** Okay. Sorry.

16
17 **CHAIRMAN MONCRIEF:** All right. Go ahead.

18
19 **MS. KIMBALL:** Yes, sir. I'm the Vice President of the Port Arthur
20 Area Shrimper's Association, and what I just heard has enraged me
21 so much. It's not like they're just sitting on that permit. The
22 reason why they're not using their permit is because of the fuel
23 prices, everything else, the low price on shrimp at the dock, and
24 it's not just because of imports.

25
26 There are issues going on where our own American people are holding
27 down the price of shrimp at the docks, because, when the price of
28 imports is actually higher than the price of American shrimp,
29 that's a problem, and that's in NOAA paperwork that it specifically
30 states that.

31
32 These people have \$500,000 to \$1,000,000 vessels. You're going to
33 give them a little check, a couple thousand dollars, for a buyout,
34 and then their boat is basically a giant paperweight? That, for
35 most of these guys, is their retirement. They were hoping to be
36 able to sell their vessels and their permits at the end of this,
37 in order to have some sort of retirement, because, at this point,
38 I know, with my husband, all our retirement money is gone, because
39 he's been trying to shrimp these last number of years, trying to
40 make it until things got better, and I know that's what's going on
41 in the fishery. I'm so angry right now that I'm shaking.

42
43 You also have not a single shrimp around the Gulf Council. How
44 can you mandate for the people when they have no representation
45 whatsoever? NOAA Fisheries Assistant Administrator Eugenio
46 Pineiro-Soler even mentioned that fact at the Boston Seafood Show
47 Forum. No one on the Gulf Council has any idea how their rulings
48 directly affect the actual shrimpers harvesting the shrimp.

1
2 I'm not talking processors or fish house owners. They don't count
3 as shrimpers, because they don't catch the shrimp, and they're not
4 impacted anywhere near as much by the crushing mandates that are
5 placed upon the actual shrimpers. I realize imports have had their
6 part as well, but this is our own American people on the Gulf
7 Council who have chosen destructive rules instead of trying to
8 help the drowning shrimp industry.
9

10 We keep hearing about data, data, and there are real live people
11 in this. I don't know if those folks understand that. People
12 that are trying to eke out a living, trying to keep their boats,
13 trying to not lose their homes, and instead the Gulf Council has
14 chosen to stick their head in the sand and say that sea turtles
15 and bycatch are more important than livelihoods of the shrimpers
16 and the coastal shrimping communities that they support.
17

18 The Shrimp Advisory Panel tries to do its best, but it's constantly
19 overruled by the full Gulf Council. When the Shrimp AP requests
20 data or information from the scientific arm of NOAA, or NMFS,
21 usually the people from whom it was requested could not find the
22 time to get around to it by the next year's Shrimp AP meeting, and
23 so decisions are made without the necessary data needed.
24

25 If something is requested of an agency, it seems like the people
26 involved are put out by the request, like it's too much of an
27 effort to be done, what has been requested. How about we work
28 together and do something positive that will help the shrimp
29 industry, instead of speeding up its demise?
30

31 I keep hearing about reports. That's fabulous. That's great.
32 There needs to be intervention, something actually done, and not
33 two years in the future, five years, ten years. The industry is
34 going to be gone by then.
35

36 This was a vibrant, viable industry not long ago, but mismanagement
37 through the government, mismanagement through the Gulf Council,
38 has destroyed it.
39

40 I was looking forward to seeing what would have been put forth as
41 region-specific actions in support of the Executive Order on
42 Restoring American Seafood Competitiveness. As I read the very
43 brief list of two things on the Gulf Council's list, I became very
44 frustrated. Two things of IFQ participation refining, which I'm
45 sure is very important to those folks, and extending the provisions
46 of the DESCEND Act.
47

48 That's it, and both of those were chosen because the Gulf Council

1 had already begun work on them, and they actually said that in the
2 meeting that I was listening to. Zero, zilch, nothing for the
3 shrimp industry, which is the highest-valued fishery in the Gulf
4 of America, and has the greatest number of issues facing it, and
5 yet nothing.

6
7 Is the shrimp fishery just not important enough? I'm very confused
8 by the choices made and not made by this Gulf Council, and now we
9 have the shrimp moratorium permits coming up for discussion again.
10 I'm looking online, and the data that's shown -- The 17B Amendment
11 was all they had when I looked at it, and that's information, data,
12 from ten years ago. What's happening now is more important to
13 know, and it wasn't even represented at the time.

14
15 Now there's a document on there, that suddenly got put up, that
16 actually had some information from this last ten years, but the
17 fishery needs help. It doesn't need mandates. It doesn't need
18 amendments. It needs help.

19
20 You've got the graying of the fleet. Most of these guys that are
21 quitting the shrimp fishery, it's not because they want to. It's
22 because they have to. They have to find something to support their
23 families, and what's going on now, when you talk about putting
24 10,000 gallons of fuel on the vessel, chances are, when you come
25 back, you're not even going to make a profit, by the time it's all
26 said and done.

27
28 These guys are going out, taking money out of their own pockets to
29 keep their deckhands working, because, if you don't have deckhands,
30 then you can't go out at all if things get better, which we
31 certainly hope and pray will happen.

32
33 Right now, we've got the number of valid and renewable shrimp
34 permits at 1,185, and, at 1,175, they're supposed to be working on
35 the panel for the reserve pool permits. That needs to start now.
36 More than likely, that number will be reached next month, or the
37 month after, and I read that the termination rate should have been
38 reached by 2041 or 2042. Well, I guess we really knocked that one
39 out of the park, didn't we? It's getting there a lot quicker than
40 it was supposed to.

41
42 I'm sorry, but the discussion just infuriates me to death, when
43 all they're talking about is data, and they're not thinking about
44 the people's lives that are being impacted. Let's just shut down
45 the industry. Really? You're going to shut down the industry
46 because the government did not take care and make sure that all of
47 those imports were coming in?

1 They didn't make sure that Section 609 policies were followed, and
2 Section 301 policies were followed, which would have kept out quite
3 a bit of the shrimp, which would have kept these shrimpers
4 shrimping on their boats. Thank you very much. I'm sorry, but
5 I'm very upset right now. Thank you.

6
7 **CHAIRMAN MONCRIEF:** Thank you. I thank you for providing your
8 comment, Ms. Kimball. Obviously, we're here at the Scientific and
9 Statistics Committee of the Gulf Council. We're taking all of
10 these issues very seriously. We've got Mike Allen here as a
11 representative for the Gulf Council. He was going to say something
12 back real quick to you. Go ahead, Mike.

13
14 **DR. ALLEN:** Tricia, this is Mike. I've been on the council a year,
15 and I'm on the Shrimp Committee this year, and I would like to
16 learn more about what you would like to see the council do. I
17 have never heard anything, in any of the council discussions, but
18 support of this fishery, and my cell number is on the website, and
19 I encourage you to call me, and let's have a chat. Thank you for
20 commenting today.

21
22 **MS. KIMBALL:** What's your name again?

23
24 **DR. ALLEN:** Mike Allen.

25
26 **MS. KIMBALL:** Mike Allen, and said your cell number is on the --

27
28 **DR. ALLEN:** My cell number is on the council website.

29
30 **MS. ALLEN:** Okay. Yes, sir, I will.

31
32 **CHAIRMAN MONCRIEF:** Thank you, Tricia, and, obviously, there's a
33 lot of discussion that goes on at this table, but I can promise
34 you that, between Jim Nance, who has been a part of the fishery
35 for a while, and everybody else, we certainly want to see the best
36 out of all the Gulf fisheries across-the-board.

37
38 That's certainly a goal of ours, and I think our previous meetings,
39 on the assessment and everything else, reflect that. Frank brought
40 up this subject to the Scientific and Statistics Committee for
41 evaluation, to determine if there's any analytical or mathematical
42 process to try to address this.

43
44 The sentiment, from at least myself and another member, is that,
45 given the state of the fishery, it just seems like it's not an
46 equation, or numbers, kind of look. It's a real issue that's going
47 on that, you know, is going to take a lot of intervention to be
48 corrected, and I think you also had that same sentiment, and so I

1 appreciate you providing your public comment to us, and I hope you
2 pay attention to the rest of the SSC meetings as they come along,
3 and feel free to provide your input anytime.

4
5 **MS. KIMBALL:** Yes, sir, and my husband and I, Kyle, we've been
6 going to Austin. We got two bills passed this last year. We've
7 been working with federal folks as well to try and get laws passed.
8 We're doing everything we can to try and affect positive change,
9 and to hear, oh, let's just shut the fishery down, is very
10 demoralizing.

11
12 **CHAIRMAN MONCRIEF:** Yes, and that doesn't reflect the sentiment of
13 the entire group. That's not where we were. Those were just
14 single discussion points that were coming across, and so don't
15 think that reflects the sentiment of the entire council, or even
16 the SSC at this point, and so, as I said, I appreciate your comment.
17 I'm glad for everything you're doing. Let us know any way we can
18 help. That's what we're here for.

19
20 **MS. KIMBALL:** Okay. Thank you very much. You have a good day.

21
22 **CHAIRMAN MONCRIEF:** All right. You too.

23
24 **MS. KIMBALL:** Yes, sir.

25
26 **CHAIRMAN MONCRIEF:** All right. Anybody else online have public
27 comment? Nobody else in the building? All right. With that, we
28 will adjourn until tomorrow. Tomorrow, we've got a half-full
29 slate. It's a late start, and so you can sleep in if you want.

30
31 (Whereupon, the meeting recessed on July 21, 2026.)

32
33 - - -

34
35 JULY 22, 2026

36
37 WEDNESDAY MORNING SESSION

38
39 - - -

40
41 The Meeting of the Gulf of Mexico Fishery Management Council
42 Standing Scientific and Statistical Committee reconvened on
43 Wednesday, July 22, 2026, and was called to order by Mr. Trevor
44 Moncrief.

45
46 **CHAIRMAN MONCRIEF:** All right. Three items today that we'll cover.
47 We should be able to get through them in a pretty good amount of
48 time. Do we need to do attendance, or are we good?

1
2 **MR. RINDONE:** We're good.
3

4 **CHAIRMAN MONCRIEF:** We're good. All right, and so go ahead and
5 take us through the scope of work for Item 8.
6

7 **REVIEW OF FISHERIES INTEGRATED MODELING SYSTEM (FIMS) PEER**
8 **REVIEW**
9

10 **MR. RINDONE:** All right. Is Dr. Cao on? Yes? Great. All right,
11 and so Jie Cao, who is on our Mackerel SSC, represented the SSC at
12 the NMFS peer review of the new Fisheries Integrated Modeling
13 System. This peer review was held from April 21st to the 23rd of
14 this year, and this new approach is intended to be implemented
15 agency-wide by NMFS for conducting stock assessment work in the
16 future. You guys should listen to Jie's presentation, and ask
17 questions, and we have Katie here, and you can make any
18 recommendations, as appropriate. Your show, Jie.
19

20 **DR. JIE CAO:** Thank you. Can you guys hear me?
21

22 **CHAIRMAN MONCRIEF:** Yes.
23

24 **DR. CAO:** Great. Well, good morning, everybody. My name is Jie
25 Cao, faculty member at NC State University and also a member of
26 the Special Mackerel SSC. Thank you for the opportunity to brief
27 the SSC on the April 2026 independent review of the Fisheries
28 Integrated Modeling System, or FIMS.
29

30 I'm going to be summarizing what the independent reviewers have
31 examined, what they concluded, and the major issues that remain to
32 be addressed. Overall, the review was broadly supported, and the
33 review panel viewed FIMS as a scientifically-sound and
34 strategically-important effort, but, at the same time, the
35 reviewers drew a clear distinction between a promising framework
36 and one that is ready for routine operational use.
37

38 At the end of the presentation, I will conclude with some thoughts
39 about what these findings could mean for the Gulf assessment and
40 management processes. I just want to emphasize that I'm not deeply
41 familiar with all aspects of the Gulf assessment and management
42 processes, and so these are just my observations and
43 interpretations. My goal is, you know, simply to encourage us to
44 start thinking about the implications of FIMS for the Gulf and to
45 provide a starting point for discussion.
46

47 I have organized the presentation into four parts. First, I will
48 briefly explain why NOAA Fisheries is developing FIMS, and what

1 problem is intended to solve, and, second, I will describe the
2 scope of the CIE review, and then I will summarize the panel's
3 major findings, the strengths they identified, the limitations
4 that remain, and the transition strategy they recommended, and,
5 finally, I will try to translate those findings into the Gulf SSC
6 context.

7
8 So why FIMS? Let me begin with this strategic motivation for FIMS.
9 NOAA Fisheries currently relied on several highly capable
10 assessment platforms that develop in different regions and for
11 different purposes. Examples include Stock Synthesis, ASAP, BAM,
12 and other regional or stock-specific tools, and this diversity has
13 produced strong assessments, but they also create several
14 institutional challenges.

15
16 First, maintenance is fragmented, and so multiple code bases must
17 be updated, tested, documented, and supported. In some cases,
18 only a small number of people understand the internal architecture
19 well enough to maintain or modify the software, and so that creates
20 vulnerability when key developers retire, change positions, or no
21 longer have time to support the packages.

22
23 Second, regional platforms often use different terminologies,
24 diagnostics, input structures, and reporting conventions, and so
25 reviewers may therefore spend considerable time understanding
26 software-specific implementation details, rather than focusing on
27 the scientific assumptions and management consequences of the
28 assessment, and, also, incorporating new statistical methods can
29 be difficult in older architectures, and so many legacy tools are
30 robust, because they have been used for decades, but net history
31 can also make major structural changes slow and risky.

32
33 FIMS is intended to address these enterprise level problems. It's
34 not based on the premise that existing assessments are poor. The
35 premise is that maintaining many, you know, separate systems
36 indefinitely is inefficient, and potentially fragile, and so the
37 FIMS vision is a nationally-coordinated modular assessment
38 framework.

39
40 At the user level, analysts interact primarily through R, and the
41 core population dynamics components are written in C++, and the
42 design allows the framework to use modern estimation engines,
43 including, for example, TMB and Stan, and so the word "modular" is
44 very important, because, rather than building one rigid model with
45 every possible option hard-coded into a single structure, FIMS is
46 being designed as a set of components.

47
48 For example, you have a recruitment component, a growth component,

1 selectivity, observation models, and estimation methods, and so
2 this can be assembled and expanded in a controlled way.

3
4 The framework is open source, and developed collaboratively
5 through GitHub, and the proposed changes can be developed on
6 branches, tested, reviewed, and then incorporated into main code
7 base, and so the intent is to create a transparent pathway for new
8 methods to move from research into operational practice, and, also,
9 FIMS aims to support both maximum likelihood and Bayesian
10 estimation within a common framework.

11
12 The reviewers saw that as innovative and potentially useful for
13 both incorporating prior information and for comparing estimation
14 approaches as a diagnostic, and so the long-term ambition is quite
15 substantial. You have a common platform that can serve assessments
16 ranging from relatively simple to data-rich, while maintaining
17 consistent software practices and outputs.

18
19 These are the potential benefits of FIMS. Well, of course, FIMS
20 can extend beyond any single assessment, and so the first benefit
21 is consistency. Basically, you have common terminologies,
22 diagnostics, model summaries, workflows, and these can make
23 assessments easier to compare across stocks and regions.

24
25 The second benefit is more efficient review. Once reviewers are
26 familiar with the platform itself, review time can focus more
27 directly on the stock-specific model configurations, data
28 treatment assumptions, uncertainties, and management implications,
29 and, also, another benefit is sustainability, and so a shared
30 national code base can reduce duplicated maintenance and
31 distribute responsibility across a broader community, rather than
32 relying on a few regional experts.

33
34 Also, the benefits are clear. It's a more clear pathway for
35 innovation, and so new methods can be added as tested modules,
36 rather than requiring, you know, each region to independently
37 modify and validate a separate platform.

38
39 With that background, I will turn to the independent review itself,
40 and so the review was conducted virtually from April 21st through
41 April 23rd, 2026. Aaron chaired the panel, and the three
42 independent CIE reviewers were Steven, Daniel, and Kotaro, and the
43 meeting also included an SSC representative from each of the eight
44 councils, along with the FIMS development team and other
45 participants.

46
47 Before the meeting, reviewers examined the FIMS documentation,
48 code repositories, case studies, testing materials, and I believe

1 there's a background manuscript as well. During the workshop, the
2 development team presented the system architecture, testing
3 protocols, case study comparisons, and some Bayesian and
4 Frequentist estimation. I believe they also talked about random
5 effects, diagnostics, projections, and future development plans.

6
7 The meeting format gave the independent reviewers the first
8 opportunity to question the team, followed by SSC representatives,
9 and then other participants.

10
11 I think one thing worth mentioning is that the panel was not
12 reviewing a single stock assessment. It was reviewing a developing
13 national platform, including both its scientific functionality and
14 the process by which the software is built, tested, documented,
15 and sustained.

16
17 The review was organized around five terms of reference. The first
18 one asked whether FIMS can provide an effective framework for
19 modeling marine populations and ultimately supporting management
20 advice, and so this included questions about baseline features,
21 regional management needs, and long-term community support.

22
23 The second terms of reference focused on testing, and so reviewers
24 looked at whether the automated tests are robust enough to keep
25 FIMS reliable and what additional testing may be necessary. The
26 third one evaluated the entire pipeline, from data preparation
27 through model construction and estimation to diagnostics,
28 documentation, and assessment outputs, and the next terms of
29 reference asked whether current and future developers can
30 realistically add features as scientific practices evolve, and the
31 last one requested recommendations for future development and
32 consider the general application of FIMS to features management
33 questions.

34
35 I think these -- Together, these terms of reference created high
36 bar. The question was can FIMS support a transparent, repeatable,
37 scientifically-defensible operational process that ends in
38 management advice?

39
40 The evidence considered by the panel ranged from, you know, narrow
41 software tests to basically full assessment workflows, and so at
42 the foundation are the unit tests, which check whether individual
43 functions behave as intended. Above that are integration tests,
44 which examine whether components interact correctly, and so the
45 team also used automated comparisons and continuous integration,
46 and so net code changes triggered tests, and deviation can be
47 identified early.

1 Also, case studies provide another level of evidence. FIMS
2 configurations were compared with simplified versions of existing
3 assessment platforms, including legacy models familiar to NOAA
4 scientists, and these comparisons are essential, because matching,
5 you know, a known model under equivalent assumption helps establish
6 that the implementation is correct.

7
8 At the highest level are the operational workflows, and so, for
9 example, preparing data, configuring a model, evaluating, you
10 know, diagnostics, conducting retrospective analysis, calculating
11 reference points, running projections, and translating results
12 into management advice.

13
14 The panel concluded that FIMS is particularly strong at the
15 software development and automated testing levels, and the
16 remaining uncertainty is concentrated at the full operational
17 workflow level, especially for complex assessment and region-
18 specific management procedures.

19
20 I will now summarize the panel's conclusions and recommendations,
21 and so the headline conclusion contains two basically equally
22 important parts. First, the panel strongly endorsed the direction
23 of FIMS, and so the reviewers consider the scientific foundations
24 sound, the architecture appropriate, and the development effort
25 highly promising, and several reviewers described the use of modern
26 software practices and automated testing as unprecedented within
27 fisheries stock assessment software.

28
29 Second, the panel concluded that FIMS is not yet ready for routine
30 operational use across all assessment types and regions, and the
31 panel, therefore, recommended a staged transition. FIMS should
32 begin with a limited number of carefully selected applications,
33 while more complex assessments remain in established platforms
34 until the required features have been developed and validated.

35
36 The reviewers were pretty explicit that continued use of legacy
37 models for a short period is preferable to, you know, accelerating
38 FIMS' development at the expense of robustness and long-term
39 credibility.

40
41 These are the major strengths the panel identified. The first was
42 the modern modular architecture, and so the framework was designed
43 from, the outset, to be extensible, rather than retrofitted after
44 decades of use. The second was the testing discipline, basically
45 the automated unit and integration testing, continuous
46 integration, version control, and reproducible case studies.
47 Those were viewed as unusually strong for fisheries assessment
48 software.

1
2 The third strength was the collaborative development model, and so
3 scientists from across NOAA Fisheries Science Centers have
4 participated in defining requirements, writing codes, developing
5 case studies, testing features, and providing training, and so
6 this broad participation should improve regional relevance, and
7 institutional buy-in, and also the transparency.

8
9 It's open sourced, and so the GitHub workflow allows proposed
10 changes to be evaluated, and discussed, and it creates a pathway
11 for external experts to contribute, and, finally, the panel viewed
12 the team's attitude as a strength as well.

13
14 The developers were pretty open to methods from outside traditional
15 stock assessment, and were not constrained by reproducing every
16 legacy conventions, and, also, at the same time, the reviewers
17 cautioned that innovation must be, you know, balanced with
18 compatibility, clear documentation, and regional management
19 requirements, and, also, the last strength is the ability to do
20 both Bayesian and Frequentist estimation.

21
22 Those are the gaps, priority gaps, the panel identified, which I
23 think fall into three broad categories. The first category is
24 model structure. Seasonality was repeatedly identified as a high
25 priority, particularly for assessments that use size or
26 composition data collected at different times of year, and so,
27 without appropriate treatment of within-year timing, growth and
28 selectivity signals can be difficult to interpret.

29
30 Also, the ability to represent separate sexes and other sub-stock
31 partitions was also considered as a structural priority, and so
32 these features add dimensionality to the model, and may require
33 substantial architectural work, and so the reviewers recommended
34 addressing them early, before the code base becomes even more, you
35 know, complex and later changes require major refactoring. Growth
36 components also need further development, including how growth
37 interacts with seasonality and size-based observations.

38
39 The second category is management advice, and so FIMS is relatively
40 close to estimating historical population dynamics for simple
41 cases, but the assessment must also, you know, calculate the
42 biological reference point, conduct, you know, projections, and
43 implement regional harvest control procedures, and the current
44 projection approach is flexible, and promising, but it's not yet
45 fully, you know, aligned with all regional conventions.

46
47 The third category is assessment quality control. The panel
48 requested more complete retrospective analysis, expanded residual

1 diagnostics, for example including one step ahead or other
2 composition diagnostics, as well as stronger convergence checks,
3 and so these are additions that the panel identified and
4 recommended, and these are not, you know, cosmetic additions. They
5 affect whether, you know, the SSC can determine that a model is
6 stable, scientifically credible, and appropriate for management
7 use.

8
9 The panel recommended beginning with a small number of carefully
10 selected operational, or near operational, case studies, and so
11 the first step is to select a relatively simple, well understood
12 assessment that fits within the existing capabilities of FIMS, and
13 so the objective should not be to choose the most visible or
14 important stock. It should be to choose cases that provide a
15 rigorous, but manageable test of the complete workflow.

16
17 Second, the FIMS models should be configured to match the legacy
18 assessment as closely as possible. Comparison, like-for-like
19 comparisons, are very important, and differences in output are
20 only informative when, you know, we know whether they arise from,
21 you know, the software implementation, the model assumption, data
22 processing, or estimation choices.

23
24 Third, the initial FIMS applications should run in parallel with
25 the established assessment, and this preserves the existing
26 advised pathway, while allowing the new framework to be evaluated
27 without creating unnecessary management risk, and then the team
28 should document the full workflow, for example the data
29 conversions, model choices, diagnostics, reference points,
30 projections, and review comments or any missing features
31 identified, you know, during the modeling exercise. After the
32 evidence is convincing, then you can -- The operational use can be
33 expanded to more complex stocks.

34
35 The testing framework was one of the most positively reviewed
36 aspects of FIMS, but all three reviewers stressed that automated
37 testing cannot establish biological plausibility by itself,
38 because a model can pass every, you know, software test and still
39 be inappropriate for a stock. It may contain unrealistic
40 assumptions, fit conflicting data sources poorly, or produce
41 unstable estimates, or generate implausible population
42 trajectories, and so, therefore, FIMS still requires expert
43 scientific evaluation, and that includes examining residual
44 patterns, parameter estimates, likelihood components, gradients,
45 et cetera.

46
47 One of the recurring concerns was how to prevent technically
48 generated outputs from being mistaken for reliable assessment

1 results, and so reviewers recommended using warnings when
2 optimization or sampling has failed, and so a convergence problem
3 should not appear only, you know, as a line in the council output,
4 which can be easily overlooked, and so they recommended tables and
5 figures, using tables and figures, to clearly indicate that results
6 are not suitable for advice, and the panel also recommended a more
7 complete reference menu.

8
9 Also, the case studies to also explain why particular
10 configurations were chosen, what alternatives were considered, and
11 how the diagnostics were interpreted, and, at present, some
12 materials are more useful to developers or advanced users than,
13 you know, stock assessment scientists who approach things for the
14 first time.

15
16 One of the clearest things in the review was that estimation
17 population history is only part of an operational assessment, and
18 so the management advice requires additional steps, and the
19 assessment must calculate reference points, determine stock
20 status, projection population under alternative catches or fishing
21 mortalities, and apply region-specific harvest control rules and
22 uncertainty procedures.

23
24 FIMS has a flexible projection design, and the reviewers saw
25 considerable potential in it. However, flexibility alone does not
26 guarantee compatibility with the procedures currently used by each
27 council and SSC, and, for the Gulf, this means that the framework
28 must be able to implement reference point definitions, projection
29 horizons, recruitment assumptions and uncertainty treatments,
30 rebuilding procedures, and ABC workflows used in this region.

31
32 Some of those choices are scientific, or some are policy or
33 governance conventions, and so they cannot be resolved solely by
34 the software development team. They require sustained engagement
35 with the regional assessment scientists, SSC, council staff, and
36 management bodies, and so this is one of the most important reasons
37 for early SSC involvement.

38
39 I will now shift from the general review findings to the
40 implications for this SSC, but, again, it's just my personal
41 observations and interpretations.

42
43 I think, in my opinion, for the Gulf, the most useful question is
44 is FIMS ready for a particular assessment, and I think -- I have
45 listed, you know, several screening questions that can help answer
46 that, and so, first, does the assessment rely heavily on seasonal
47 or within-year timing? This is especially relevant when
48 compositions are collected in different seasons or when fleets and

1 service operate at different times.

2
3 The second question is does the stock require sex-specific
4 dynamics, sex-specific growth, multiple areas, or other population
5 partitions, and these features may place the assessment beyond the
6 current baseline capabilities of FIMS.

7
8 The third question is how complex are growth, selectivity,
9 recruitment, discard and observation structures, and so a model
10 with many, you know, specialized functions may require new FIMS
11 components, and the next question is what management outputs are
12 required, right, and so can the current framework reproduce the
13 Gulf reference point projections, and, you know, some harvest
14 control calculations.

15
16 The last question is are the diagnostics sufficient for the stock
17 known assessment challenges, and so, for example, does the SSC
18 depend on, you know, particular retrospective measures,
19 composition, you know, residuals, or some uncertainty summaries?

20
21 The review makes clear that the SSC has a very important role in
22 regional scientific governance of FIMS. First, the SSC can help
23 define minimum Gulf requirements, for example which structural
24 features, diagnostics, reference point calculations, or
25 projections are required before a model can support FIMS, and,
26 second, the SSC can review and prioritize candidate case studies.

27
28 A technically simple stock is not, you know, automatically the
29 best choice. The case will also provide useful evidence, and fit
30 the regional assessment schedule, and, third, the SSC can define
31 comparison standards, for example what level of agreement with a
32 legacy model is expected, and which differences are acceptable,
33 because of improved methods, and which differences indicate a
34 problem.

35
36 Then the SSC can specify, you know, the evidence needed for
37 acceptance. This includes, for example, reproducible inputs, some
38 comparisons, convergence criteria, retrospective performance, and
39 uncertainty evaluations.

40
41 Finally, the SSC can provide feedback on management outputs, and
42 so the developers need concrete regional examples of reference
43 points, projections, and, you know, reporting formats. Early
44 engagement allows those requirements to basically shape the
45 development before, you know, the regional implementation
46 decisions become urgent.

47
48 Just quickly, what I envision as a practical path forward, I think

1 it could be divided into three stages. In the near-term, you know,
2 the Gulf community should document region-specific requirements
3 and identify a small number of candidate assessments, and this
4 could be done through a structured, you know, inventory of model
5 features, diagnostics and management calculations.

6
7 The next stage is parallel evaluation. For each selected case,
8 FIMS can be run alongside the accepted platform, using matched
9 data and assumptions, and then the differences can be traced and
10 documented.

11
12 The final stage is adoption, and so the operational use should
13 begin only after the relevant features are stable, the
14 documentation is adequate, and the diagnostic meets, you know, the
15 SSC expectations, and perhaps the application can be independently
16 reviewed.

17
18 I believe this is my final slide. I'm just going to summarize the
19 presentation with these five take-home messages. First, FIMS is
20 a strategically-important and scientifically-sound modernization
21 effort. Second, independent reviewers strongly endorse the
22 architecture, collaborative development process, and testing
23 framework.

24
25 Third, FIMS is not yet ready for routine use across all
26 assessments. Important gaps remain in, and I mentioned this
27 earlier, seasonality, population partitions, like sex-specific
28 population dynamics and growth, more diagnostics, reference
29 points, projections, and some more complete documentation.

30
31 Fourth, the recommended next step is not the wholesale replacement
32 of the existing platform. It's a limited number of carefully
33 selected parallel applications that test the entire assessment to
34 advise workflow.

35
36 Fifth, the Gulf SSC engagement is essential. Regional scientists
37 and reviewers should define the features, diagnostics, management
38 procedures, and evidence required before FIMS-derived advice can
39 be accepted, and so the overall message is optimistic, but
40 deliberate. FIMS has strong potential, and protecting that
41 potential requires careful validation, rather than rapid
42 deployment. I think I've concluded my presentation. These are
43 just the documents that I summarized this presentation from.

44
45 **CHAIRMAN MONCRIEF:** Thank you, Dr. Cao, and I appreciate your
46 attendance on this one, and participation in relaying this
47 information over to us. We do have Katie in the room. Is there
48 any additional context you would like to provide on this one?

1
2 **DR. SIEGFRIED:** I'm curious what the SSC members took from that
3 first, but I'm happy to answer questions, and, if I don't hear
4 some of the conversation, maybe I'll weigh-in later.

5
6 **CHAIRMAN MONCRIEF:** Okay. David.

7
8 **DR. CHAGARIS:** Hi, Jie, and thanks for the review of the review.
9 It was really helpful. One of the, I guess, kind of questions I
10 have is that it sounds like this is really designed to be a
11 statistical catch-at-age modeling platform, and maybe expanded in
12 complexity to handle seasonality, but, in many areas, especially
13 the Southeast, and the Caribbean, we have a lot of data-limited
14 species, and so how -- Is this also intended to handle some of the
15 more data-limited situations, or is it strictly a statistical
16 catch-at-age model?

17
18 **DR. CAO:** Yes, and I believe it can handle the data-limited cases,
19 but I'm not entirely sure about that. I don't know if Katie has
20 any thoughts on that. I know -- I don't know if Nathan. Is Nathan
21 here? I think he's also heavily involved.

22
23 **DR. SIEGFRIED:** I can help with that, Jie.

24
25 **DR. CAO:** Thanks.

26
27 **DR. SIEGFRIED:** Yes, and it is meant to replace all the
28 functionality of SS, and we have Southeast reps on the FIMS
29 committee that are helping to make sure all of the functionality
30 that we currently experience in SS is related to FIMS. Nathan is
31 our key point, and is actually working in the code, and I see, on
32 a daily basis, him slamming his head against the wall and trying
33 to get it all in there.

34
35 **CHAIRMAN MONCRIEF:** All right. Tom.

36
37 **DR. FRAZER:** Jie, I've got a quick question, and so, I mean, there
38 wasn't a lot of background materials provided here, and so, when
39 the review committee was looking at things, what did they use as
40 a benchmark population?

41
42 **DR. CAO:** I believe they have several case studies. I don't
43 remember if there is one from the Gulf, but I do think there's one
44 from the South Atlantic. Yes, and they do have case studies.
45 Basically, what they have done is compare, you know, different
46 assessment platforms, and configure the models, and try to match
47 the assessment as closely as possible, and then compare the results
48 with FIMS results.

1
2 **CHAIRMAN MONCRIEF:** All right. Anybody else in the room got any
3 questions? Any hands up online? Harry, go ahead.
4

5 **MR. BLANCHET:** I have so many questions, and some are related to
6 this. One of the first things that struck me also was the
7 application of this for data-limited. Not in the definition of
8 data-limited as the center uses it, but more on an operational.
9 We have things going through a full SEDAR that have real data
10 challenges in them, and we have things that we dealt with in SEDAR
11 49, which was dedicated to data-limited.
12

13 I don't know where, but some of those challenged stocks need to be
14 considered, to see -- The concern that I have is that, if we come
15 up with something where the new procedure says that here's your
16 answer, and the old procedure says that we can't give you a good
17 answer, I want to be able to understand what makes the difference
18 between those two outcomes. Now, that's a very simplified example.
19

20 I think that between the South Atlantic, the Gulf, and the
21 Caribbean, we have plenty of stocks that are challenged, in terms
22 of what we know about their biology and their fisheries, that it
23 would be very, very useful to use some of those poorly-
24 characterized fisheries as some of these test cases. Thank you.
25

26 **DR. SIEGFRIED:** Thanks, Harry, and so maybe I can give some of my
27 overarching comments then. We are going about this -- We're
28 putting all of this effort into this because ADMB, which is what
29 SS is based on, and BAM is based on, and all of that, will no
30 longer be supported sometime in the near future, and so this is
31 built on TMB, which will be supported, and we can use R as a shell
32 around that, and so we need to move away from SS in the long-term.
33

34 We are trying to get all of the features that are in SS and BAM
35 and other things that are important to us in the whole Southeast
36 into this model, so that the concerns that Harry, and I'm sure you
37 all, have are alleviated.
38

39 One of my concerns is this parallel phase, because that's two
40 models run by one analyst, in theory, for each assessment, and two
41 things for you to potentially review, and so part of this national
42 effort to inform the SSCs of all of the reviews, and the process
43 and all of that, is to not do that for every single assessment
44 that goes through the SSC. At some point, that broader adoption
45 phase that Jie pointed out would not have the parallel models,
46 where we have SS and FIMS going forward.
47

48 How realistic that is, I don't know, because I don't know how FIMS

1 will be in the operational phase yet. This CIE review was more to
2 review the process. As Jie said, they were very encouraging that
3 the process is good, but we still need to take more steps before
4 this is fully operational.

5
6 I have the concerns that Harry just stated of making sure that
7 this model is doing what we think it is, just the same way as we
8 did, you know, a decade or more ago with SS, and, anytime like a
9 BAM model in the South Atlantic is done and moved to SS, or vice
10 versa, they want to see both of them at the same time, and so I
11 have a lot of the same concerns, but this is a team of five people,
12 as opposed to Rick Methot on his own, who sort of started all of
13 SS, and so I think that I think we'll get there, but we're just
14 not quite there yet.

15
16 **CHAIRMAN MONCRIEF:** Go ahead, Dave.

17
18 **DR. CHAGARIS:** I mean, I think one thing that could help is maybe
19 doing the parallel process like off-cycle from the assessments,
20 you know, and, I mean, if we set a precedent of every new assessment
21 is going to run both, then it's going to be hard to break that,
22 but, if there's sort of a separate analysis, or demonstration,
23 where none of the data are updated, right, and you're still using
24 whatever data were in the last assessment, you know, and then maybe
25 bring that to us for two or three, you know, types of species,
26 with easy to difficult, you know, I think we span the full gamut
27 here.

28
29 Maybe that's a way to approach that, because I agree, and like I
30 think, if you start running them -- Having them doing it in a way,
31 even if you try to avoid slipping into the trap of them both being
32 up for review, you know, it can still kind of derail things, or at
33 least slow them down, and so I don't know if that -- I know you
34 guys are crunched for time with the current assessment cycle, but
35 maybe that's a way to get ahead of it.

36
37 **DR. SIEGFRIED:** Yes, and I think that's actually what they intend
38 to do, based on Jie's presentation and what I've heard. I think
39 that's why the parallel phase is not during operational, because
40 it would just be too cumbersome to try to do that but I think it's
41 a good point for our region to do a few of the different types of
42 species that you might expect there to be a difference in how FIMS
43 fits it, or doesn't fit it, based on whether all the
44 hermaphroditism is the same, all of the growth equations work the
45 same way, all of the uniqueness that we have in the Southeast is
46 reflected in FIMS.

47
48 There may be some things in FIMS that are just -- They just have

1 to be simplified, you know, and it's not always better to make it
2 as complex as possible, and so we might just have to show that at
3 some SSC meetings before we fully operationalize it.

4
5 **CHAIRMAN MONCRIEF:** All right. Looking around the room, and
6 online, and I've just got one more, and so he listed out -- Harry,
7 let me ask mine, and then we'll get back to you. Just one quick
8 one. There's a lot of list of, you know, potential benefits, a
9 lot of, you know, what could be, and so let's say in the -- This
10 thing goes swimmingly, right, perfect, which we know probably isn't
11 going to happen in our line of work, but let's say everything goes
12 well. What do you think is the most beneficial thing that will
13 come out of it?

14
15 **DR. SIEGFRIED:** Well, we'll still have a modeling platform that
16 will hopefully be like SS, where other people across the country
17 are using it, and we have a centralized set of diagnostics, and a
18 lot of people using it means that all the bugs are worked out at
19 a national level.

20
21 I know that there's consternation across the country, and there's
22 a WHAM model, and there's a BAM model, there's a MAM model out in
23 the -- I just realized that's funny. In the Pacific, and so
24 there's some -- You know, they're not going to want to come off of
25 these projects that they've spent years and years and years to do,
26 and so it -- We're all going to have to adjust, both the people
27 doing assessments and the people that are reviewing them, but, if
28 we all do our individual little models, we end up in those little
29 silos, where nobody else knows how to do them, review them, or
30 debug them for us, and so that's the benefit. We're losing SS at
31 some point, and we have to be proactive about a national platform.

32
33 **CHAIRMAN MONCRIEF:** Okay, and then I saw one of the one of the
34 listed was efficiency. It seems like it's just, you know, moving
35 away from one into an updated platform. Is there any gain in
36 efficiency there, or is it more like nationwide efficiency, in the
37 sense of everyone is going to be kind of learning from each other?

38
39 **DR. SIEGFRIED:** I mean, the more heads in the room, the better the
40 product will be, and, if we wait -- If we wait on this, and a ADMB
41 just stops working, and we can't compile things anymore, or make
42 any changes, that's a terrible place to be with you all, saying we
43 can't fix it, you know, and so then the efficiency of management
44 suffers as well.

45
46 **CHAIRMAN MONCRIEF:** Harry, round two.

47
48 **MR. BLANCHET:** Yes, sir. One of -- Thinking in terms of unique

1 challenges, I will be very curious to see how something like shrimp
2 gets brought into something like this. Thank you.

3
4 **DR. SIEGFRIED:** Yes, and so we have a surplus production model
5 branch, sort of the super simple side, and EDM is actually being
6 brought in, and so Molly Stevens is part of that process, in
7 bringing that as a module into FIMS, and so we're really hoping to
8 get all of the functionality that you all have seen into this
9 shell.

10
11 **CHAIRMAN MONCRIEF:** All right. Tiffany, go ahead.

12
13 **DR. HOPPER:** Just a quick question here. You mentioned that Stock
14 Synthesis has sort of an impending going away date. Do we have
15 any knowledge on what sort of going away date that would look like?

16
17 **DR. SIEGFRIED:** Well, the going away day -- It's not like a doomsday
18 clock or anything, but it's -- Rick Methot is retiring. Rick
19 Methot is the sort of bedrock of SS. There are other people that
20 work for him, and with him, that can potentially help support this,
21 but, when ADMB goes away, that's the real problem, and I don't
22 want to speculate too much, but, as far as I understand, that's
23 kind of already not working anymore for us so, and we have -- A
24 lot of the models are built on TMB, and so ADMB development is
25 already stopped. Dave Fournier sold it off, and nobody else is
26 supporting, and it's done, and so TMB is the replacement for ADMB,
27 but SS isn't built on that at this point.

28
29 **DR. HOPPER:** That makes sense, and I just was thinking in light of
30 some of the things that were mentioned about sort of running some
31 of those parallel analysis, how long we would have the ability to
32 run parallel analysis.

33
34 **DR. SIEGFREID:** Well, SS works as it is now, but, when you want to
35 do make changes to the source code, you can't with ADMB in the way
36 that you would want to, probably, and so we just -- SS now is fine,
37 but, if you need to fix things into the future, that functionality
38 is going to be severely limited from now on.

39
40 **DR. HOPPER:** Okay. That makes sense. Thanks. I was just concerned
41 that this was one of those cases where the architecture was going
42 to go offline, and you wouldn't have the ability to continue doing
43 so.

44
45 **CHAIRMAN MONCRIEF:** Not quite doomsday, and not quite Y2K. All
46 right.

47
48 **DR. SIEGFRIED:** At least we're planning. I mean I'm pretty proud

1 of us for -- I mean, the government is planning, and this is good.

2
3 **CHAIRMAN MONCRIEF:** Absolutely. Nothing says government like
4 planning for impending doom, you know? John, go ahead.

5
6 **MR. MARESKA:** Do we know if Florida, and their assessments, is
7 also following this migration?

8
9 **DR. SIEGFRIED:** I can't speak for them, but they're not going to
10 be able to use SS any better than we are, and so I assume that --
11 I can ask Luiz, and Shanae, and all of those folks, but, I mean,
12 I assume that they'll have to move over as well. It would be smart
13 for them to move over as well.

14
15 The other thing that Nathan wanted me to mention is we won't have
16 the same issue with TMB, because FIMS isn't dependent on TMB, which
17 is why it's developed in C++, and so it's not -- we won't ever
18 have a doomsday clock for FIMS.

19
20 **CHAIRMAN MONCRIEF:** All right. Around the room, no hands. Online?
21 All right. Thanks for that presentation. Good conversation.
22 We're going to move on to Item 9 with Dr. Forrestal, Gulf King
23 Mackerel Landings and Length Composition Data from Mexico. Ryan,
24 the scope of work.

25
26 **DISCUSSION: GULF KING MACKEREL LANDINGS AND LENGTH COMPOSITION**
27 **DATA FROM MEXICO**

28
29 **MR. RINDONE:** All right, and so Francesca is on the line to talk
30 to us about Gulf kingfish landings and length comps from Mexico.
31 We only very recently were able to get our hands on this, and, for
32 those that have been playing the long game, we've been trying to
33 get these data from Mexico since SEDAR 33. Was it 33? No. It
34 was 38. Excuse me, which was completed back in 2013, and so we've
35 been talking about this for a long time, and it's really awesome
36 to have these data available to us now.

37
38 These include recent landings and length composition information,
39 and these data are provided by fleet, which includes a trolling
40 fleet, like a handline fleet, and then also a gillnet fleet, and
41 they're expected to be considered in the ongoing stock assessment
42 for king mackerel, which is SEDAR 99, which the schedule for that
43 is going to be extended by a few months to allow our analysts to
44 work with Mexican scientists on the data and modeling efforts that
45 the Mexican scientists have been working on. The SSC should
46 consider the information presented, ask questions of Science
47 Center staff, and make any recommendations, as appropriate.

1 **CHAIRMAN MONCRIEF:** Take it away.

2
3 **DR. FRANCESCA FORRESTAL:** Hi. Good morning, all. I am Francesca
4 Forestall. I'm the lead analyst for Gulf king mackerel, and
5 hopefully you can see my screen.

6
7 **MR. RINDONE:** Yes.

8
9 **DR. FORRESTAL:** Wonderful. Thank you. So, as Ryan very nicely
10 introduced, I will be presenting some of this new data. This data
11 was presented at the first assessment webinar back in May, and
12 then John Walter also presented this to the Gulf Council, and so
13 we just want to update the SSC where things stand.

14
15 One of the terms of reference for SEDAR 99 was to explore available
16 landings of king mackerel from Mexico, and, as I understand it,
17 this has been on the terms of reference for a very long time, but
18 now we have the ability to actually fulfill this TOR, and so this
19 is the result of the Gulf of Mexico Large Marine Ecosystem Project.

20
21 It has been in the works for I think nine years. It is an almost
22 \$13 million U.S.-Mexico collaboration, and it has been funded by
23 GEF, and it's implemented by the U.N. Environment Program.

24
25 The component that covers our work is Component 2, preventing
26 depletion and restoring living marine resources, specifically
27 implement a joint stock assessment for king mackerel and Spanish
28 macro, and so, on the U.S. side, we have NOAA and the National
29 Marine Sanctuaries, and then, on the Mexican side, we have IMIPAS
30 and then CONANP, and I'm probably not pronouncing the acronyms
31 correctly, but those are our partners that we've been working with
32 to get this data.

33
34 The Mexican landings were supplied by the Mexican Institute for
35 Sustainable Fisheries and Aquaculture, which is IMIPAS, and the
36 figure on the right shows the southern Gulf with all the sampling
37 sites where the landings were recorded, and so there are two
38 fleets, a trolling and a gillnet fleet, and these are artisanal
39 commercial fleets.

40
41 We do have two working papers, one on the landings and one on the
42 length comps, that have been provided, and so the landings are
43 available from 1970 to 2024, and, as I'm sure you all know, king
44 mackerel is unique in the fact that it is modeled on a fishing
45 year rather than a calendar year, and so our Mexican colleagues
46 have very nicely supplied all the data in the fishing year format,
47 which runs from July 1st through June 30th, as opposed to calendar
48 year, and so we can correctly compare the landings on the correct

1 time step.

2
3 The early part of the landings, they don't have it done by -- It's
4 not species-specific, similar to what is happening in the northern
5 Gulf waters for us, and so the gear has been split based on the
6 historical reconstruction. From 1980 onwards, they have
7 statistical yearbooks, and so we have the species specific by
8 fleets, and so you can see the time series from the 1970s of these
9 two fleets for king mackerel.

10
11 They also have length compositions they've been collecting. They
12 do have some age compositions, but they are not -- The sample sizes
13 aren't sufficient for the assessment. They've sampled almost
14 17,000 fish, from 800 fishing trips, and so you can see the length
15 composition for the gillnet as compared to the trolling, and so
16 the gillnet is targeting much smaller fish than the trolling, and
17 we have discussed, with the Mexican scientists, about if this is
18 accurate representation, if maybe some Spanish mackerel didn't
19 sneak in, but they're very clear, and this is all king mackerel.

20
21 There was no -- It's hard to confuse the Spanish mackerel and the
22 king mackerel at the sampling site, and so the confidence level is
23 high that this all -- That this represents king mackerel.

24
25 Then, putting this into context with the U.S. commercial landings,
26 and so this is just commercial landings, we have, within the model,
27 a commercial vertical longline, or -- Sorry. A commercial vertical
28 line fleet and then a commercial gillnet fleet, and that is in the
29 red and the blue. Then the Mexican trolling fleet and Mexican
30 gillnet fleet are in green and purple, and so you can see they're
31 significantly larger than the U.S. landings. This is all in metric
32 tons whole weight.

33
34 Then you can see the proportion of the different fleets over time
35 when the Mexican data comes in, and so the tricky thing, when
36 you're looking at it with the recreational fishery as well, you
37 know, recreational landings are reported in numbers, and so John
38 Walter put the slide together on the left.

39
40 This has the U.S. landings from SEDAR 38, and so these are all the
41 landings from the model, and so it includes commercial and
42 recreational, comparing it to the Mexican landings, and so the
43 Mexican landings do represent a significant source of removals for
44 Gulf king mackerel.

45
46 Then these figures on the right are the outputs from the SEDAR 38
47 update, and you can see that the recreational charter private fleet
48 is the largest component of removals for the northern Gulf fishery.

1
2 Putting the length compositions together, we have all six fleets
3 that will be in the assessment model, and so two U.S. commercial
4 fleets, two Mexican commercial fleets, and then two U.S.
5 recreational fleets, and the Mexican gillnet is selecting a much
6 smaller fish than the other fleets in the model.

7
8 Another decision we discussed at the first assessment webinar was
9 to do a combined-sexes model, as opposed to split out male and
10 female, and so these are all the length comps with sexes combined,
11 and so, looking at all those landings, you know, the obvious
12 question is, is this the same stock, and we have a separate stock
13 in the South Atlantic.

14
15 There is a mixing zone that occurs off the Florida Peninsula from
16 November to March, and then the question -- This has been
17 hypothesized and discussed, that there might be another mixing
18 zone, perhaps off of Louisiana or northern Mexico, and there might
19 be a separate Mexican stock.

20
21 There have been some studies looking at that using mark-recapture,
22 electrophoresis data, and then some regional growth differences,
23 and, with those studies, there was some evidence to support the
24 hypothesis of an eastern Gulf and a western Gulf stock. However,
25 looking at mitochondrial DNA results, it does appear to be a single
26 stock.

27
28 There are some tagging efforts that were conducted. Most of these
29 tag releases were done in the 1980s and 1990s, and these are just
30 the straight line mark recapture, but it does look like there is,
31 you know, connection between the southern Gulf and the northern
32 Gulf, and we got a lot of questions on this during the assessment
33 webinar, and so this was actually from a working paper back from
34 SEDAR 16, and it has all the details of this, but we do have some
35 tagging data.

36
37 When John presented this to the Gulf Council, they agreed to a
38 joint assessment with Mexico, and so we will be working with
39 Mexican scientists to develop an assessment model with all this
40 available data, and so that includes the landings and the length
41 comps, and we're also working on that with them to help develop
42 some CPU indices, and so we might be able to have indices
43 definitely for the vertical line fleet, and potentially from the
44 Mexican gillnet fleet.

45
46 We've already had a couple of meetings. There will be more virtual
47 meetings, and then two in-person meetings to develop this model
48 with the Mexican scientists. One council staff and one council

1 member are invited to attend, and this meeting will be in Mexico,
2 most likely in September, and then we'll have a meeting in Miami
3 in November.

4
5 This work will proceed through the end of 2026. The SEDAR process
6 will restart early in 2027, and then there will be a CIE review in
7 probably mid-2027. Obviously, the question is how do we provide
8 management advice using a model that includes so much data that is
9 outside the U.S. EEZ for joint stock, and this is definitely not
10 a -- You know, we're not going to answer this today, but it's
11 something we need to start thinking about, is that, you know, we
12 could weight the model results by landings, using northern and
13 southern Gulf landings to provide management advice, or perhaps
14 there's the framework for bilateral management, and this would be
15 more shift to the ICCAT management, but these are all things to
16 start thinking about.

17
18 I probably went through that a little bit quickly, and so, if there
19 are any questions, or you want to know any more details, I would
20 be happy to go through it in greater detail.

21
22 **CHAIRMAN MONCRIEF:** Thank you for the presentation. I'm sure we'll
23 have a couple questions here. I'll start off, and so, obviously,
24 the disparity in length comp sticks out a fair amount. Couple
25 that with the magnitude of landings from that specific group, and
26 it has -- It at least gives a little bit of concern, the targeting
27 of the species at that size, relative to maturity, and then the
28 magnitude of it that's being harvested.

29
30 I wanted to at least get an idea, or a sense, of was there any
31 thoughts to compliance in reporting over there? Does this
32 represent the overall magnitude of the fishery, or is it, you know,
33 70 percent of the fishery? Anything else like that? Did you have
34 any idea of compliance on their reporting?

35
36 **DR. FORRESTAL:** Yes, and this is all taken from the port samplers,
37 and it is an artisanal fleet, and so I think they know where the
38 fleets -- You know, what ports the fleets operated out of. There
39 is not a recreational fishery for king mackerel in Mexico, and so
40 this does represent, you know, the vast majority of the landings.

41
42 **CHAIRMAN MONCRIEF:** Okay. So fairly equivalent to our reporting
43 systems and everything else.

44
45 **DR. FORRESTAL:** Yes. Exactly.

46
47 **CHAIRMAN MONCRIEF:** Yes, and I think that's the one that sticks
48 out to me the most. It's just that you've got a large magnitude

1 of fish that are being taken of a small size. That really just
2 sticks out kind of like a sore thumb for that stock. All right.
3 Any other questions around the table? Go ahead, David.

4
5 **DR. CHAGARIS:** Are the Mexican landings prior to 1970 -- Do we
6 know anything about that, or would they just be assumed to be zero?

7
8 **DR. FORRESTAL:** I think we're going to have to assume they're zero.
9 I don't -- I'm sure there was a fishery in place, but there's no
10 records of it. You know, the model does begin in 1929, and there's
11 a lot of interest in changing the start date of that. I think,
12 you know, starting in 1970 could be a reasonable one, given the
13 Mexican landings and the existence of the shrimp bycatch fleet in
14 the model.

15
16 **CHAIRMAN MONCRIEF:** All right. We've got a question from Harry
17 here, or, Katie, to that point?

18
19 **DR. SIEGFRIED:** Yes, and so we'll have to also consider doing a
20 historical reconstruction, like we do for our own commercial.
21 We'll just have to figure out what we need to do to initialize the
22 model, but we haven't even talked to them about it besides just
23 what's your uncertainty.

24
25 **CHAIRMAN MONCRIEF:** All right. Go ahead, Harry.

26
27 **MR. BLANCHET:** I know that, back in the day, there was a contract
28 with Mote Lab to do some collections of that commercial fishery in
29 Mexico, and I didn't see any mention of that, other than a couple
30 of allusions to it in the material I had available. Is that
31 something that could be used, if not for length comp, at least as
32 a validity check to extending those length comps back in time?
33 Thank you.

34
35 **DR. FORRESTAL:** Thank you, Harry. I'm not familiar with that. I
36 don't know about Mote's length composition. I do know we have
37 some otoliths from Mexico back in the 1980s and 1990s, and I don't
38 know if they've been aged, but they're not included in the age
39 comps we have for this assessment.

40
41 **MR. BLANCHET:** I don't have that material here, but Karen Burns
42 was the person who was doing the majority of that work, if not all
43 of it, and, you know, so, somewhere, somebody has got it.

44
45 **DR. FORRESTAL:** Okay. That's very helpful. I'll follow up on
46 that. Thank you.

47
48 **DR. FROESCHKE:** This is John Froeschke, just jumping in. I think

1 I'm a keeper of the data. It may have been shared with Clay Porch
2 in the past, but, if you need it, I think I can track it down for
3 you.

4
5 **DR. FORRESTAL:** That would be great. Thank you.

6
7 **CHAIRMAN MONCRIEF:** I had one more. We've got a couple around the
8 room, but I want to go back to slide 8 real quick. I've kind of
9 mapped them out in my head at this point, but I wanted to make
10 sure I had it squared away, since the units are different.

11
12 All right, and so the SEDAR 38, the blue line on the left, is the
13 total magnitude of U.S. landings, which includes charter and
14 private, which is the largest magnitude of landings in the U.S.,
15 correct?

16
17 **DR. FORRESTAL:** Yes, that is correct.

18
19 **CHAIRMAN MONCRIEF:** So, in general, right, if I'm kind of glossing
20 over this, you've got a higher magnitude of landings from Mexico
21 that outpace the charter and private, and, of those higher
22 magnitude of landings, half of them are coming from a gillnet
23 fishery that's harvesting around a modal distribution of seventeen
24 inches.

25
26 **DR. FORRESTAL:** That does appear to be the case, yes.

27
28 **CHAIRMAN MONCRIEF:** Okay. I wanted to make sure I had it right in
29 my head. Go ahead, Tom.

30
31 **DR. FRAZER:** Thanks, Francesca, and so, on the last slide, you had
32 a possibility that ICCAT might kind of consider this species for
33 management. What's the process, right, for them to consider that
34 as a candidate species?

35
36 **DR. SIEGFRIED:** I'll take that, Francesca.

37
38 **DR. FORRESTAL:** Thanks, Katie.

39
40 **DR. SIEGFRIED:** I don't actually know. We brought this up to John
41 Walter when we started this process, just when we saw these data,
42 and thought all this stuff you all are thinking, and so I'm not
43 sure what the process is for that. I think they're already an
44 ICCAT species, as far as they're considered an ICCAT species, just
45 because they're -- Which category is it? Anyway, I'm not sure,
46 but we would be able to -- We would have to figure that out between
47 now and when SEDAR restarted, and hopefully John Walter can help
48 us with that, because he's so intimately familiar with ICCAT.

1
2 **CHAIRMAN MONCRIEF:** Go ahead, Mike.
3

4 **DR. ALLEN:** Francesca, I just wondered, and is there any current
5 management scheme in Mexico? Is there a stock assessment, or are
6 there any quotas? Is there any kind of thing that's been done in
7 the past with their kingfish fishery?
8

9 **DR. FORRESTAL:** From what I understand, there is no management in
10 place, and they are actively working on an assessment for, you
11 know, the southern Gulf stock, and so what their landings are, and
12 they do have a model that they're sharing with us, but I don't
13 think there's been any management done on king mackerel yet.
14

15 **DR. SIEGFRIED:** In the previous assessment, Francesca, I think
16 that we saw something about that early in the process, but it
17 didn't say there was any overfishing, or an overfished status,
18 right?
19

20 **DR. FORRESTAL:** Yes, and I think so.
21

22 **DR. SIEGFRIED:** Yes.
23

24 **CHAIRMAN MONCRIEF:** All right, and I guess the last question I've
25 got is that, in you all's consideration, or at least from what you
26 all have gathered, this is a targeted fleet for the species
27 specifically?
28

29 **DR. FORRESTAL:** Yes, and it does appear to be targeted.
30

31 **CHAIRMAN MONCRIEF:** Go ahead, Katie.
32

33 **DR. SIEGFRIED:** They actually have an SS model running. They have
34 indices that they're starting to help us out with, too. We're not
35 ready to show any of that. We just wanted to sort of explain where
36 we were going with this, but, yes, they have a full stock
37 assessment running, and they're asking about diagnostics, and so
38 it's not like -- We're not really going and teaching anything.
39 We're just fully collaborating, and they're going to share more of
40 their data with us than just what you're seeing now.
41

42 **CHAIRMAN MONCRIEF:** No, and that would be interesting, if that's
43 a precedent into additional species in the future and everything
44 else, because I think that might help paint a clearer picture. Go
45 ahead, Paul.
46

47 **DR. MICKLE:** Yes, and so, with the large amount of juvenile
48 landings, and the data crossing borders here, and there's even on

1 slide -- You've got imaging here on slide 11 here, and I think
2 there's even some Bahamian potential influence, or spatial, and so
3 that's three countries.

4
5 It seems like a no-brainer for ICCAT, in a lot of ways, and, from
6 a scientific perspective of this group, it may be worth making a
7 recommendation that it goes to ICCAT, from a scientific
8 perspective, knowing that there's so much data, and
9 collaborations, and there's even benefits for Mexico, I'm sure, of
10 having ICCAT help and assist with it.

11
12 Now, with the data flowing from Mexico, it seems like a good time,
13 but maybe if the group wanted to make a motion of a recommendation
14 from this group. If there's any more discussion on potential
15 statements of such, I might make a motion, or someone else can.
16 Thank you.

17
18 **CHAIRMAN MONCRIEF:** To that, Ryan?

19
20 **MR. RINDONE:** To that point directly, Dr. Mickle, I might let that
21 marinate for just a minute, and not to say that that's -- I share
22 your thoughts, and I think that's where it's ultimately going to
23 go, but just more in deference to the Science Center, and our
24 Mexican colleagues, to work through the process they've been going
25 through right now with the models that are being developed by
26 Mexico, the model that Francesca is building with the Science
27 Center staff, and just kind of let them work through that process
28 and figure out what it looks like, since these things are all kind
29 of already underway.

30
31 Then, when it comes before a review, that would certainly be, I
32 think, a great time to consider such a motion, but, if you want to
33 do it ahead of time, by all means, but just to kind of -- My
34 opinion on that is just to give a little bit of deference to all
35 the work that's happening behind the scenes right now and
36 everything that's been described so far.

37
38 **CHAIRMAN MONCRIEF:** I'll put the ball back in your court. Motion,
39 or you want to hold off?

40
41 **DR. MICKLE:** No, and Ryan has got a good point. That's why I
42 didn't make the motion, because, if there's scientific efforts
43 underway, then you're actually hampering when you make such a
44 motion, and then, when the council gets wind of something we did,
45 and made a recommendation, they get excited about it, and, next
46 thing you know, we're going down a different track, and causing
47 issues.

1 **CHAIRMAN MONCRIEF:** Agreed.

2
3 **DR. MICKLE:** I certainly understand that, but I don't want it to
4 fall off the grid, because ICCAT has a lot of strengths. SEDAR
5 has its thing, and there we are. Thank you.

6
7 **CHAIRMAN MONCRIEF:** All right.

8
9 **DR. FORRESTAL:** Just a note on the landing, and so, when I first
10 got the Mexican data, you know, I was a little surprised, and so
11 I wanted to just do some checking, and I looked at the ICCAT
12 landings, and king mackerel landings are reported to ICCAT.

13
14 The only landings in the Gulf come from U.S. and Mexico. If you
15 look at the western Atlantic, then Venezuela and Brazil also have
16 the significant landings, but that would probably be considered
17 part of the South Atlantic stock, or maybe a separate stock, and
18 so we're specifically dealing with the Gulf. It is just Mexico
19 and the U.S.

20
21 **CHAIRMAN MONCRIEF:** Gotcha. Go ahead, Katie.

22
23 **DR. SIEGFRIED:** Thanks, Francesca. To add to that, we are having
24 tagging folks come with us to Mexico to discuss with their
25 scientists maybe some other types of tagging studies that would
26 help us understand the impacts of our catches, or their catches,
27 on our management, because that's one thing that -- The gillnet
28 thing is the question I think a lot of people have brought up.

29
30 You know, of course, their own management is their own business,
31 and that's not our job to tell them what to do, and so we just
32 wanted to make sure we had a picture of what's affecting the stock
33 that the U.S. fishermen are utilizing, and, without the Mexican
34 data, at the very minimum, we didn't think we could do that well.

35
36 **CHAIRMAN MONCRIEF:** This is poised to have some management
37 complexity in the future, it seems like. Any other questions
38 around the table? Go ahead, Carrie.

39
40 **EXECUTIVE DIRECTOR SIMMONS:** Thank you, Mr. Chair, and thank you,
41 Francesca. This slide that we're looking at, I don't know that
42 this was presented during the council meeting, and it seems like
43 it's pretty important information.

44
45 They were external tags, and it seems like this is quite old, and
46 so we're connecting where they were tagged to where they were
47 recaptured, and is that what's happening here, and we're just
48 drawing a straight line, where they could have traveled along the

1 coast and up -- You know, up to Campeche all the way throughout
2 the Gulf, and is that into the South Atlantic? Is that what we're
3 looking at here?

4
5 **DR. FORRESTAL:** Yes, and that's correct, and so these are where
6 they were tagged and then where they were recaptured.

7
8 **EXECUTIVE DIRECTOR SIMMONS:** Do we know what size these fish are?

9
10 **DR. FORRESTAL:** I don't know if they're length comps, but
11 everything is in in that working paper. I don't think the data
12 has been explored further than what is in that paper.

13
14 **EXECUTIVE DIRECTOR SIMMONS:** Well, I would highly recommend, before
15 you guys have that workshop, that you take a very close look at
16 that, because there's very limited tagging information and
17 movement information. I mean, that's the big question, right? My
18 council has already written a letter on that.

19
20 **CHAIRMAN MONCRIEF:** Yes, and it's definitely poised to have impact.
21 Any additional comments on this?

22
23 **EXECUTIVE DIRECTOR SIMMONS:** Yes. A separate point, and could you
24 go to the next slide, please? This is a little bit, you know,
25 obviously, outside our normal process, and I don't think we had a
26 -- Well, maybe we did have a topical working group, and I'm getting
27 confused on this one, but I guess it would be helpful to know, so
28 that we make sure we send the right folks, and that we're
29 contributing the best we can.

30
31 Normally, we would send like an SSC member to some of these types
32 of workshops, and so do you guys have an agenda, or an idea of
33 what would happen at this September meeting, compared to the
34 November meeting, and, you know, is the juice worth the squeeze,
35 as far as sending someone to Mexico? Would it be better to send
36 an SSC member?

37
38 I mean, we're just trying to weigh the pros and cons here, how we
39 can contribute the cost of the travel. My understanding is this
40 meeting is going to be the same week as the red snapper review,
41 and then how is it going to differ than what's happening at the
42 November meeting in Miami, and so if we could -- We can follow-up
43 with you on those details, but I think that's pretty important,
44 that we understand that, so we make sure we're sending the right
45 people to those meetings.

46
47 **DR. FORRESTAL:** Katie, do you want to speak to that? That would
48 be great.

1
2 **DR. SIEGFRIED:** Yes, and so, because it's extra SEDAR, we are
3 bringing everything that happens to any of the meetings, whether
4 they're virtual or in-person, back to the SEDAR process early in
5 2027.

6
7 Our thought process is, even if nobody is sent besides the
8 Southeast Fisheries Science Center and Mexican staff to any of
9 those meetings, we will still tell everything that's happened, and
10 still be able to do further analyses with the data, based on
11 advice, or requests, during the rest of the SEDAR process, and so
12 like, for instance, we showed that tagging data at the last king
13 mackerel SEDAR topical working group webinar, but it was brought
14 up, by John and others, and there's a lot of interest. I know
15 that John Sanchez has been very interested in this process and has
16 been very active in providing data and input to us.

17
18 There is interest in sending folks just to basically witness, to
19 observe the process that's going on in Mexico and in Miami. I
20 think, because of the difficulty in communicating well across
21 webinar, the in-person meetings are important, just to fill any
22 gaps, either language barriers, and, for instance, I was trying to
23 use Google Translate during a call, and it was comical what it
24 said they said. There's no way they said that, and so we've really
25 been trying.

26
27 It's like horses and donkeys, or some weird thing. I mean, it was
28 completely difficult to meet with them that way, and so we're
29 trying to overcome those types of barriers in the communication,
30 and we're making big strides since the first meeting, but the in-
31 person will probably just be so that we can make those in-person
32 connections, do a little bit better work side-by-side on our
33 computers, on the modeling and all of that.

34
35 I don't think it's essential to send anybody, but we wanted it
36 open, in case somebody wanted to come observe the process, but,
37 like I said, for the SEDAR process, we will bring everything back,
38 and fill out the administrative record, and be able to conduct
39 other analyses, even if they didn't happen at the in-person
40 meetings or the webinars.

41
42 **EXECUTIVE DIRECTOR SIMMONS:** So you're anticipating that would
43 happen maybe in November in Miami?

44
45 **DR. SIEGFRIED:** Say that one more time.

46
47 **EXECUTIVE DIRECTOR SIMMONS:** That second meeting, follow-up
48 meeting in the states, might happen in Miami in November, you said?

1
2 **DR. SIEGFRIED:** Yes. Right now it's November. I think when people
3 can go is the week of November 16th.
4

5 **EXECUTIVE DIRECTOR SIMMONS:** Okay.
6

7 **DR. SIEGFRIED:** We will get an agenda to you when we can, and was
8 there another part of your question? Okay.
9

10 **CHAIRMAN MONCRIEF:** All right. Anybody else around the room?
11 Anyone else online? All right. This was a good topic. It will
12 be interesting to see how it plays out over time. We've got time
13 for a break, and so here's what we're going to do. It's going to
14 be eight minutes. Eight minutes. Back at 10:35, and we're going
15 to knock this last item out, and then we'll be able to grab our
16 lunch, eat it, and have a good day. All right.
17

18 (Whereupon, a brief recess was taken.)
19

20 **CHAIRMAN MONCRIEF:** We're two minutes behind here. It's 10:37.
21 I know we're used to these long breaks, but we've got to get back
22 to it. All right. Last item before public comment, we're going
23 off the shelf for this one, all the way to the bottom, the tilefish
24 data triage. Scope of work, Mr. Rindone.
25

26 **REVIEW: GULF TILEFISH DATA TRIAGE AND STOCK EVALUATION OPTIONS**
27

28 **MR. RINDONE:** All right. I'll wait for the scope of work to come
29 up. Dr. Siegfried gets the last word and will present progress
30 to-date on the Science Center's data triage and options for stock
31 assessment for Gulf tilefishes.
32

33 In the Gulf, we have golden tilefish, goldface tilefish, and
34 blueline tilefish, the latter of which is primarily in the eastern
35 Gulf. The last stock assessment of this complex of animals was
36 SEDAR 22, which used data through 2009 and so suffice to say it's
37 dusty.
38

39 This modified approach to considering these data is being
40 considered due to the limited data available to assess the complex,
41 and it will include consideration of things like index-based
42 approaches. The SSC should consider the information presented,
43 ask Katie questions, and make any recommendations, as appropriate.
44

45 **CHAIRMAN MONCRIEF:** The floor is yours.
46

47 **DR. SIEGFRIED:** So Ryan introduced this as dusty in the bottom,
48 and so here I am.

1
2 **MR. RINDONE:** I said the assessment is dusty. We can look to John
3 Walter for that one.
4

5 **DR. SIEGFRIED:** Ironically though, because of capacity at the
6 center, it is me. I am the one who will be presenting this to
7 you, and have gone through this, although the data providers are
8 the ones who have done most of the work here, and there's at least
9 a dozen of those.
10

11 Okay, and so just a quick overview for you. The Science Center
12 was asked to assess the tilefish complex as our first extra-SEDAR
13 assessment. I brought to the SSC, a number of times, some of the
14 changes we're trying to make to help streamline and provide more
15 practical real-time advice for you all. This is our first attempt
16 to take an assessment external to SEDAR.
17

18 As Ryan said, this is a complex, the golden, blueline, and goldface
19 tilefish, are the data presented here for you, and then, first, we
20 conducted a data triage, in order to decide on next steps to
21 provide management advice, because this was considered an
22 alternate management approach. Sorry. An alternate assessment
23 approach.
24

25 All right, and so just some management history for you here. The
26 commercial quota for the tilefishes share category in 2024 was
27 582,000 pounds gutted weight. This quota level has remained
28 unchanged since 2012, split between longline and handline, with
29 long line being the dominant source of take.
30

31 Under the IFQ program's history, the tilefish landings have never
32 exceeded the annual quota that I could find. The highest
33 utilization rate occurred in 2015, at 92 percent, and landings
34 have fluctuated below that mark ever since. There is a small
35 recreational component, and their bag limit is twenty per person
36 per day, and that's been consistent since 1997.
37

38 The assessment history is different depending on which species. I
39 mean, goldface doesn't have one. Golden tilefish had an assessment
40 in SEDAR 22, both an SS3 model and a stock reduction analysis were
41 provided, but it was not directly used for management advice.
42

43 It's unlikely most of you were here, and so I put the language
44 here for you, that the SSC voted that the assessment model did not
45 capture the dynamics of the stock well enough to provide useful
46 management advice. Even though the review noted that the
47 assessment used the best available data, and met the terms of
48 reference, the GC advised that declaring it BSIA would legally

1 require it to be used for management, and so the SSC instead
2 formally declared the model inadequate for that purpose. The
3 blue-line tilefish, there were data provided during SEDAR 22, but
4 there were not enough data to conduct an individual assessment.

5
6 More on SEDAR 22 for you, and the model suffered from some major
7 data and structural issues. There were contradictory abundance
8 trends. The model just very poorly fit the indices, and there
9 were few indices. There were age data issues, in that there were
10 no distinct year classes visible in the compositions, and older
11 ages were missing entirely, and this is likely due to difficulties
12 with ageing.

13
14 It's a difficult fish to age, and there's not a high capacity at
15 the center, although the capacity we have is very capable and
16 working her little heart out.

17
18 The unreliable recruitment estimates were viewed as a pretty major
19 problem, that the model lacked a strong recruitment signal, which
20 made the entire assessment overly sensitive to Sigma R, which
21 affected everything else about the productivity estimates and
22 trusting the magnitude of the population -- The estimates of the
23 magnitude of the population.

24
25 Here we're taking an alternate assessment approach. We're not
26 going to just turn the crank on the model that didn't work last
27 time, and we wanted to take a look at the data in more detail, and
28 try to decide what we could do with it, and so we did do a full
29 data provision.

30
31 This wasn't a quick and dirty. This was a full data provision.
32 Multiple working papers were produced to document all the analyses,
33 and that was due just recently, on July, 10th. They will be housed
34 on the SEDAR website, even though it's an extra-SEDAR process,
35 although where is -- We just had a SEDAR Steering Committee meeting
36 on Monday, and I'm still working with SEDAR to figure out where
37 all of this will be housed.

38
39 We weren't even sure what the number should be, because this is a
40 new process, but I have several working papers that will be there
41 and be part of the administrative record for this assessment
42 approach. Just to jump into it -- Does anybody have any questions
43 about why we did it this way, or how we're going about it? Okay.

44
45 Okay, and so, just to jump in, for the Gulf of America landings
46 for the complex, I have it here split out for longline in teal,
47 and handline plus all other gears in sort of that coral color by
48 year on the X-axis, and it's in gutted pounds. It looks like

1 millions of gutted pounds.

2
3 You can see that longline is the dominant source. We do have a
4 few other sort of errant gear that are just lumped in with
5 handline. It has sort of experienced an increase, a slight
6 increase, and a slight decrease starting in about 1980, up to a
7 peak in the mid 2000s, and then coming down a bit at the end there,
8 although the recent landings are not the lowest in the time series.

9
10 Then this is split out a little bit by species, and here we've,
11 again, got it by year, in millions gutted pounds. Golden tilefish
12 is the coral color, and all others are in teal, and so you can see
13 golden are the dominant source of take. The others are blueline,
14 goldface, and, if we have tilefishes unspecified in the database,
15 that was included. This is just to illustrate golden is the
16 dominant take.

17
18 To compare with what was provided for the SEDAR 22 assessment, the
19 data provider here posted time series for SEDAR 22 in a solid line
20 there, and then this assessment we think is going to be called as
21 SEFSC 1, in the dashed line, and so you can see it's pretty
22 consistent back in time, with a little bit of change in the early
23 1980s, and that's documented in the working paper, but there's not
24 a big change in methodology. It might just be a slight difference
25 in the database, and so we have pretty flat landings for golden.

26
27 This is commercial. Overall pretty flat landings through time,
28 though recent -- There's been a recent sort of declining trend in
29 landings, starting around 2015 to the last year, but it's not out
30 of the realm of possibility back in time.

31
32 The same format here for blueline tilefish, where the SEDAR 22
33 landings that were reported are in a solid line, and the dashed
34 line is the current, and there was -- There were quite a bit of
35 differences here, likely issues of the database, and, also, there
36 could be some ID issues back in time, but, in general, we just
37 wanted you to see the differences in the data provision from the
38 last time this was pulled at the end of the 2000s to now.

39
40 Again, I would say that's a pretty noisy overall flat trend through
41 time, and a little bit of a decline just recently, but not out of
42 the realm of possibility back in time. Please stop me along the
43 way, and I'm just going to go through data, and so there's no
44 reason to wait to the end of it if you have questions.

45
46 **CHAIRMAN MONCRIEF:** I have a question.

47
48 **DR. SIEGFRIED:** Okay.

1
2 **CHAIRMAN MONCRIEF:** You might get to it later on, when you get to
3 the index, but has there been any attempt to calculate effort for
4 this species, and does the effort match the decline in landings?

5
6 **DR. SIEGFRIED:** Does effort match what? Say the last one.

7
8 **CHAIRMAN MONCRIEF:** Does it match the landings?

9
10 **DR. SIEGFRIED:** You mean is the catch per unit effort consistent
11 through time, and so like --

12
13 **CHAIRMAN MONCRIEF:** The number of trips that have targeted this
14 species in general, because it is -- I mean, it's a long ways, and
15 it should be a fairly targeted fleet, and so I'm just wondering,
16 and like does the fluctuation simply reflect the amount of effort
17 undertaken in the fishery, or is there shifts in efficiency from
18 the fleet itself?

19
20 **DR. SIEGFRIED:** I think I have that in a working paper, and I can
21 definitely pull that plot up. I don't recall off the top of my
22 head.

23
24 **CHAIRMAN MONCRIEF:** Okay.

25
26 **DR. SIEGFRIED:** I'll write it down, so I can pull it up. It is
27 calculated to do the discards, and so I think we have both the
28 nominal, so you can see the catch per effort, and then I think
29 there's an effort time series in that working paper as well.

30
31 Okay. This is the golden recreational landings and discards.
32 There's a lot of information shown here, and so I'll try to go
33 through pretty slowly for you.

34
35 So, and o just golden on the for the whole -- For both plots. On
36 the right, we have it by state, color coded by state. The top is
37 the AB1, and those are the landings for both plots, and on the
38 bottom are the B2, and those are the discards. You can see the
39 high uncertainty in the left plot.

40
41 The error bars around the estimates is quite large, both for the
42 landings and for the discards. It's especially high for the
43 discards coming from MRIP, and then, on the top right, it looks
44 like Florida west is most years the dominant source of take, but
45 it varies year to year, which states are taking golden in their
46 recreational fleet.

47
48 We have a working paper for this that will be posted on the SEDAR

1 website as well, and, in these MRIP landings and discards working
2 papers, we always have these investigations, and this is just
3 pulled from that report for a couple of key years, in my mind,
4 where the analyst shows either an outlier, or an exceptionally
5 high or low value, and explains what the intercepts were and all
6 of that.

7
8 For instance, this is a 2021 golden landings estimate, and that
9 was quite high, 62,000 fish. It's not well sampled, with only
10 four positive intercepts. It tells you the stratum, and then it
11 tells you about the intercept records, and this is complete in
12 that document. These are just the two big examples to me.

13
14 It's a total of one angler trip that resulted in a landings
15 estimate of 57,000 fish, which is 92 percent of the total estimate
16 for that one year, with one angler trip harvesting six golden seen
17 by the interviewer. All fish were seen by the dockside sampler,
18 suggesting species IDs were not an issue, and then it talks about
19 the site pressure for this location is elevated, where the catch
20 is higher than -- Estimated to be higher than would normally be
21 the case in that one stratum.

22
23 This is explaining to you any issues that we think would lead us
24 to trust, distrust, apply high uncertainty or not to each of these
25 data points, and recreational landings are exceptionally uncertain
26 for tilefish, as you'll see.

27
28 This is the other one I thought was interesting, is 2015 golden
29 tilefish discard estimate of 139,471 fish. This is also not well
30 sampled, with only one positive intercept from the stratum in
31 Florida west, an intercept record of one that resulted in that
32 discard estimate, where they released ten golden tilefish, and so
33 not something I would make sure the model fits well, and this is
34 most of the direct data.

35
36 Especially the discards, it's just really, really difficult to get
37 a handle on tilefish in the recreational fleet. Although it's a
38 very small proportion of the overall take, I do think it's
39 important to note, and it looks like Harry raised his hand.

40
41 **CHAIRMAN MONCRIEF:** Go ahead, Harry.

42
43 **MR. BLANCHET:** We've got here a great example of something that
44 might want to be minimized in the final. The chances of a guy
45 reporting ten golden tilefish from shore, that's a problem, and,
46 in the grand scheme of things maybe it don't mean much, but it's
47 the kind of a thing that I think does need to get addressed before
48 it gets into the final. Thank you.

1
2 **DR. SIEGFRIED:** That's exactly why I brought it up Harry, because
3 I agree with that, and I wouldn't use this particular data point,
4 and so I agree.

5
6 **CHAIRMAN MONCRIEF:** Go ahead, Jim.

7
8 **DR. NANCE:** Thank you. Katie, when you look at these really
9 outliers, are there others that are not so outlying that we,
10 through investigation, could find issues and those types of things/
11

12 **DR. SIEGFRIED:** Yes, and I think the recreational data -- I mean,
13 when Sam provides this, she puts all of these descriptions, and
14 even for not these egregious cases, right, so that we can take a
15 look at this. These are just two, and I didn't want to take the
16 whole hour talking about all the problems, but I think, if you've
17 actually looked to the end, I'm not recommending we use this as it
18 is. I just wanted to show some of the problems with the data. If
19 we were doing an SS model, and we put this in, and we didn't assume
20 uncertainty, that would be a mistake, in my mind, and that's why
21 I laid it out here for you.

22
23 **MR. RINDONE:** Your intellectual curiosity is very appreciated.

24
25 **DR. SIEGFRIED:** Well this is Sam putting all of this together, so
26 that we can --

27
28 **MR. RINDONE:** Sam's then.

29
30 **DR. SIEGFRIED:** Yes, and I wouldn't know that it was shore either,
31 and I would just go, why is this so uncertain, and so this is very
32 helpful when they put this sort of document out for us.

33
34 Now, I do not want to throw shade on all of the tilefish data.
35 This is just the problems we have with the rec data, and it's
36 mostly a commercial fishery, and it's an IFQ fishery now, and so
37 we're pretty certain about the data now, and so I'm just pointing
38 out that these other components, that sometimes outweigh the
39 commercial landings, are highly uncertain.

40
41 Here I'm showing the blueline recreational landings, and then
42 discards, on the bottom, are absent. On the top, it shows that
43 Alabama, in most years, tends to catch all of the blueline in a
44 recreational fleet, but, as you can see, it's highly uncertain,
45 and really, really small. If you look on the Y-axis, it's
46 thousands of fish, and so it's a pretty small component.

47
48 Then goldface is -- It's just great. There's some goldface in the

1 system, but there's not a lot of data about goldface. There's a
2 little bit from Florida, and it's in thousands of fish, again, and
3 so we've got 600.

4
5 Then, when we look at commercial data, this is the distribution of
6 tilefish caught on commercial logbook trips, and they used this
7 information to help us get a handle on the discards, and so these
8 beautiful plots. I think this is Serena's working paper.

9
10 The golden is on the top-right, and blueline is on the bottom-
11 left. It shows it in a heatmap, with the dark colors being more
12 trips than the lighter colors. You can see, for blueline, it's
13 mostly off the coast of Florida, right out here, and then, for
14 golden, the hotspot is both off of this coast, but also off of the
15 Panhandle of Florida.

16
17 This is the overall estimates of golden commercial discards in
18 pounds by year. You can see they're very, very low up until the
19 implement implementation of the IFQ in 2010. The other catch limit
20 went in in 2012. It's highly uncertain at the beginning of the
21 IFQ implementation, but has come down since 2017, with very low
22 estimated discards, and very low uncertainty.

23
24 I'm not entirely sure what happened, where there were more discards
25 right after the implementation, but there's a lot of uncertainty,
26 and so maybe it was the uncertainty around implementing the system,
27 or reporting, but this is what the data show.

28
29 For blueline, there's been a continued noisy and uncertain time
30 series for the commercial discards, but they're pretty substantial
31 quantity. On the Y-axis, you'll see it's in pounds, and we get up
32 to 100,000 or so pounds of blueline, potentially, if you're looking
33 at uncertainty bars, but we also have uncertainty bars that go
34 down to zero in the late 2010, and so it's just highly uncertain
35 discards from 2006 onwards.

36
37 This is something interesting. On the left-hand side is handline
38 age comps by year. The red indicates years with too few trips for
39 the data to be representative, and so, although it's all plotted
40 here for you, really only 2008, 2009, 2011, 2013, 2018, and 2019
41 for handline have sufficient data for us to even consider modeling,
42 and, if you look at those years, there's not a lot of information
43 coming through, and, without multiple consecutive years for a long-
44 lived fish, we're not going to get any information out of age
45 compositions.

46
47 On the right-hand side, we have a longline, which has more years
48 of data, but there is no -- I put the arrows there to identify

1 the pre and post-IFQ period, so you can see why the shift happened.
2 Basically, it's the larger, older fish for the IFQ, but there
3 hasn't been any year class strength that we've seen come through
4 and propagate out into these age compositions.

5
6 This is -- I can totally see why the last assessment, in that first
7 period, couldn't find any cohort signal, or any information about
8 recruitment, because they're just catching almost the same sizes
9 and ages every year. This one does have -- For longline, there is
10 sufficient sample sizes from 2003 onward, but not pre-2003.

11
12 This is the commercial longline index pre-IFQ. Sorry that it's a
13 little bit spaghetti plot here, but I wanted to show -- SEDAR 22
14 is the red, and so the standardized index is in green, with the
15 error bars around it, and then the nominal index is in blue.

16
17 There is a working paper for this that Kevin put together, but, in
18 general, it's -- There's not much signal here, and I could see why
19 the previous assessment couldn't find much signal here, and we
20 can't do a standardized index post-IFQ. It's not recommended to
21 use that data to plot the population trajectories, and so this is
22 the index that's available for the commercial longline fleet.

23
24 Then this is for the -- The previous one was for golden, and this
25 is for the complex, when you combine all the species together,
26 which was not done for SEDAR 22, and so we don't have a comparison
27 here.

28
29 The standardized index is in red, with the uncertainty bars around
30 it, and then just to show, for reference, that there was a
31 standardization done. If there was some interest in doing a
32 complex model, like for instance in JABBA, which I had started to
33 try to do, this would be more appropriate than just golden on its
34 own. You can see the trend is pretty similar though to golden,
35 which is probably because the majority of the data are golden.

36
37 Then golden tilefish shows up quite a bit in NMFS bottom longline,
38 even though it's only in the deepest depths, and only about 10
39 percent of the survey effort. This was noted as an issue with the
40 previous assessment, that they were concerned about basically
41 anchoring the whole assessment to an index that only covers --
42 That only captures them in about 10 percent of their depth zone
43 effort.

44
45 You can see on the X-axis by year, and the relative abundance on
46 the Y-axis, and then the uncertainty bars are the dashed lines.
47 This is the index, and it's also shown on the SEAFish visualizer
48 website. This is the Science Center putting out as many of the

1 real -time indices as possible, and so this is available at that
2 link at the bottom of the slide through 2025.

3
4 I believe this is available, and hopefully Adam doesn't kill me if
5 I say the wrong time, but in the fall it's updated for the year
6 before, I think.

7
8 **MR. RINDONE:** It's usually available sometime around the middle of
9 November, I think is what I remember hearing last.

10
11 **DR. SIEGFRIED:** So it's nice that it's available for last year,
12 and it's not something where we're a few years late.

13
14 **MR. RINDONE:** So it's like middle of November for the current year,
15 and so most of the data processing has been automated, if I
16 remember what Adam had said the last time we talked about it.

17
18 **DR. SIEGFRIED:** Okay. What you're seeing here for some reason
19 early on is very low abundance estimates. They're double in size
20 or more in the middle of the time period, but they're pretty
21 uncertain, and I'll show you some of the data of why they're so
22 uncertain here in a moment.

23
24 There's also some missing years, due to COVID or I believe 2005
25 was Katrina, and then pretty flat though. If you look at from
26 2017 through the last year, that's a pretty flat trend in the
27 bottom longline.

28
29 To explain more about why the uncertainty is so high for this,
30 it's -- On the right-hand side here, I have a table from Adam by
31 year of the number of samples, the nominal proportion positive,
32 and then the CV index, which you'll see is above 0.5 in many of
33 the recent years, and many of the middle years.

34
35 In general, it's a highly uncertain index, that a statistical
36 catch-at-age model would probably likely ignore with this level of
37 CV, but it does have a pretty decent proportion positive. Even
38 the nominal proportion positive is pretty decent. It's above 15
39 percent, and it goes upwards of 50 percent in the samples here,
40 and so it's -- When it's there, it's there, but it's only -- The
41 index, or the survey, only covers about 10 percent of the depth
42 range.

43
44 I probably already said all the stuff I said on the left. The
45 nice thing about it is that it updates yearly on the SEAFish
46 visualizer tool, and so it is useful for real-time management.

47
48 Golden was covered by the NMFS bottom longline. Blueline and

1 goldface are covered in G-FISHER, and so blueline is rocky
2 outcropping habitat, and golden is muddy bottom burrows, all of
3 that good stuff, and it's not going to be covered by the same types
4 of surveys, and so G-FISHER is going to cover blueline and
5 goldface.

6
7 The G-FISHER folks kindly combined the data for those two species,
8 and they -- Through a number of interactions with me, we decided
9 to truncate the time series to just combine the G-FISHER program
10 years, rather than try to figure out all the issues with combining
11 Pascagoula and Panama City. We just use utilized the G-FISHER
12 program years and restricted the depth to sites that are greater
13 than or equal to thirty meters.

14
15 On the bottom left, you can see by year the number of sites, the
16 number of sites that G-FISHER covers, the number of sites where
17 the fish are present, and then the number of fish sampled. On the
18 right, you can see, for both species, the CPUE is very flat in
19 recent years.

20
21 There's a kind of high point in 2020, which is probably because it
22 was mostly sampled by Florida, and it's the hotspot. Blueline are
23 caught quite a bit right off of Florida, and so I would even
24 potentially truncate this 2021 on if we were to move forward with
25 the full assessment, and you can see the uncertainty there is still
26 pretty high, and the standardized and nominal CPUEs don't differ
27 that much.

28
29 With those data, the question is how to move forward, and so I
30 have some suggestions, but I would also like your feedback about
31 any -- You know, if you think that my suggestions are the right
32 way to move forward, or if there's any other data you would want
33 to see, if you think this is sufficient, but, basically, this is
34 the alternate assessment approach is to come to you, instead of to
35 a separate panel, and ask your opinion.

36
37 It's just plain fact there's not enough data for each species to
38 do a separate assessment, particularly goldface. There's just no
39 way we're going to do a separate assessment. It's probably not
40 likely for blueline, unless it's some real basic data-poor
41 methodology.

42
43 It may also be difficult for managers to use a golden-only model,
44 because it's managed as a complex, and you'll have the same problem
45 that you had with scamp, where you've got an answer for one
46 species, but not an answer for all.

47
48 If a golden model is carried out, how would it be applied to the

1 complex, except if you're weighting by landings, and that would be
2 the only way I would know how to give catch advice there, and then
3 average landings were used post-SEDAR 22 to come up with the catch
4 them for the IFQs, and so I'm not sure that doing a full assessment,
5 and then weighting the outcome by landings, is any better than
6 just using the average landings approach that you're using now.

7
8 Also, I don't think -- You could maybe lighten my language here a
9 little bit, but I don't think they're strong indication. You could
10 say there's some indication, but I don't think there's an
11 indication that immediate action is necessary to prevent
12 overfishing, and I did go over this with folks at the center.

13
14 Capturing a similar number, if not a slightly increasing number,
15 of the older individuals in the commercial compositions is a good
16 sign. I put a box around the composition data I showed earlier on
17 the bottom-right, that shows that it's definitely not -- We're
18 definitely not losing older individuals.

19
20 This is, to me, a sign that we're not having any impact on the
21 spread of the data by fishing. If we were losing a lot of the
22 older individuals, or the composition data were changing in
23 unexpected ways, that would be a concern. The golden index is not
24 decreasing in the last few years, with some caveats.

25
26 The NMFS bottom longline proportion positives are lower in recent
27 years, and the CVs are large, and so it's also hard to be definitive
28 about that statement, but the only index we have for golden doesn't
29 show a strong decline, and it's very uncertain.

30
31 Though the catch limit is not regularly exceeded, we are not
32 hearing concerns from fishermen about tilefish. I didn't get a
33 strong indication from council staff, or any stakeholders I've
34 talked to, that they're concerned about this, and I'm not getting
35 king-mackerel-like phone calls or emails.

36
37 This is -- I just haven't heard much about it, and I actually
38 reached out to council staff and said, so what did you want to get
39 this for, and what are you concerned about, and it's basically
40 that it's old, and they're worried about potentially fishermen
41 moving to starting to target tilefish, as opposed to tilefish
42 telling -- The stakeholders telling them there's any problem with
43 tilefish.

44
45 I have started to use JABBA, which is a Bayesian surplus production
46 model, just to see if I could get it running for this data, and
47 the attempted surplus production models have had trouble coming
48 away from priors, which means that there might not be enough data,

1 or information in the data, to get a good answer, basically. If
2 I give it a prior, and it's not moving off the prior, the data
3 aren't really informing it, and it's being informed mostly by the
4 priors.

5
6 That's just through initial efforts on my part, and it -- I mean,
7 it doesn't have a lot of data, and both the index and the landings
8 are going in the same direction, where surplus production models
9 need more contrast to really get a good answer, get a good
10 convergence there, and so I'm not hopeful that more effort would
11 lead to a better answer, but I just wanted to let you know that I
12 had started doing some of that.

13
14 So, given all the data I've shown you, and my initial efforts on
15 JABBA, which, to be fair, I haven't shown you, but I've done it in
16 the last ten days, and, given all of that, I would recommend --
17 And the lack of concern from stakeholders, I would recommend, at
18 this point, maintaining current catch limits and providing index
19 updates.

20
21 We would provide index updates annually from that SEAFish
22 visualizer tool and ask G-FISHER to run the blueline and goldface
23 index, to keep track of the whole complex, to give the council a
24 vision of what the stock is doing right now. The capacity of my
25 branch is an issue, and of our division is an issue, which is why
26 I'm doing it, which is never a good idea.

27
28 If we were going to do more complex modeling work, we would have
29 to address some priorities for other species, and I don't see
30 tilefish as outweighing the current other assessments that we're
31 doing. Although JABBA models can be produced, it will require
32 more time, and I'm not entirely sure that it will be worthwhile,
33 and so this is what I'm recommending at this time. I think that's
34 it. Questions?

35
36 **CHAIRMAN MONCRIEF:** All right, and so we'll have a discussion on
37 this one. I would like -- If we could, can we go back to slide
38 17, just to get some clarification before we go down this route?
39 This is caught, correct, and not landed, and this is reported stat
40 zone of where those fish were harvested themselves.

41
42 **DR. SIEGFRIED:** That is what the working papers told me. I can
43 double-check with Serena.

44
45 **CHAIRMAN MONCRIEF:** No, and I just want to make sure, and so, I
46 mean, I think, on one hand with these species, you've got some
47 habitat differences between the main two, between blueline and
48 golden, and depth range, and basically base habitat, but then you

1 also have essentially a spatially-constrained fishery in these
2 areas.

3
4 I think blueline itself seems to be more spatially-constrained,
5 but golden might just simply be the location of the individuals
6 that are targeting it. That could lead them there, because there
7 is certainly biomass across the Gulf of goldens off the shelf.

8
9 **MR. RINDONE:** That's correct. They're landed -- Golden is landed
10 Gulf-wide, but there is a significant amount of deepwater grouper
11 and tilefish chartering that comes out of the Panhandle.

12
13 **CHAIRMAN MONCRIEF:** Okay, and so the only thing I would add, at
14 least from my perspective on the path forward, is that since --
15 It's kind of like my similar sentiments that I have on the
16 deepwater grouper side.

17
18 I'm comfortable looking at the indexes to give some sort of signal.
19 We know they're not giving a complete signal, given the caveats,
20 but having something from the fishery as well to see basically
21 where -- How efficient are they, and are they seeing any decline,
22 or drop, or anything else like that, and, if those are able to be
23 calculated beyond just the general catches, I think it would be
24 informative.

25
26 **DR. SIEGFRIED:** I have it on my screen, and I can either email it
27 over to Jessica or --

28
29 **CHAIRMAN MONCRIEF:** While we're getting it pulled up, I'm certainly
30 not one to lack opinions on the recreational data side, but I would
31 say that these are out completely.

32
33 **DR. SIEGFRIED:** Do I have the permission yet, or are you working
34 on giving me permission to show my screen?

35
36 **CHAIRMAN MONCRIEF:** Go ahead, Dave, while we're getting it pulled
37 up.

38
39 **DR. CHAGARIS:** While they're pulling up, I was going to recommend
40 the same thing as you, Trevor, that, you know -- This kind of goes
41 with any of our, I guess, interim analyses, or where we get these
42 index updates.

43
44 I mean, providing more context, more metrics for us to look at,
45 would be really helpful, and so, you know, tracking the number of
46 trips that are landing these species, the landings themselves, as
47 well as the indices, you know, and a suite of metrics would be
48 helpful, but I agree with your recommendations at the end, that

1 there's not a lot to do from a modeling perspective.

2
3 **DR. SIEGFRIED:** I just want to make this bigger for you to see,
4 and so John actually asked this the other day, or yesterday, and
5 so this is the CPUE, just nominal CPUE, from the logbook data from
6 1993 through 2024 for golden, and that shows the catch. This is
7 basically how efficient their catch is, what they're able to get
8 when they put out the effort.

9
10 I don't have the effort time series directly plotted, but, to me,
11 this shows kind of the same thing the landings show. There's not
12 a sharp decline in what they're able to catch. There may be some
13 decline in effort, if I could get that pulled up, but it's pretty
14 steady as she goes, to me.

15
16 **CHAIRMAN MONCRIEF:** Yes, and, I mean, that's the equivalent of a
17 flat line for the last ten years, and so that's consistent. All
18 right. Got any other comments? John.

19
20 **MR. MARESKA:** I guess I would like to see some from the fishery-
21 independent index, the G-FISHER, if we can get some length
22 compositions. If we look at slide 20, something that kind of jumps
23 out to me there is just a lack of younger fish that are showing up
24 since, what, 2010 to 2011. It seems to be a stark difference right
25 there.

26
27 **DR. SIEGFRIED:** For G-FISHER, it would be blueline, and the comps
28 that you have there are golden.

29
30 **MR. MARESKA:** Yes, and that's golden, but -- Okay, and so G-FISHER
31 is only getting the blueline?

32
33 **DR. SIEGFRIED:** Only blueline and goldface, yes, and so it's --
34 Everything that we have for golden is going to be here.

35
36 **MR. MARESKA:** The golden, that seems to be a concern, and maybe
37 that's where the fishermen are concerned, is they're not seeing
38 these younger, smaller fish recruiting in.

39
40 **DR. SIEGFRIED:** I haven't heard any complaints from the fishermen
41 about golden tilefish at all. For the stock assessment side, I
42 would be more concerned if the oldest ages were disappearing. We
43 might not just be sampling where the smallest ones are.

44
45 I remember my office mate, when I first started, Linda Lombardi,
46 came back from a cruise, and she had a tiny little golden, and she
47 was like we never get these, you know, and this was back in 2006,
48 and so it may be just hard to get those on the survey here that we

1 have, but, if there's a pretty substantial number of the older
2 fish, that eases my mind about recruitment in general.

3
4 **MR. MARESKA:** Yes, and so have they modified their fishing
5 practices over the years, because they weren't catching the older
6 fish early on, and now they seem to be, and so have they just
7 switched to a larger hook, or a different bait?

8
9 **DR. SIEGFRIED:** That I'm not sure about, but it's right at the
10 timing of the IFQ, and so, if they're going for the best fish they
11 can get for the limited catch that they've got, that would make
12 sense, but they're also not hitting their cap, and so it would be
13 interesting to hear more from them of maybe why they're catching
14 more older, larger fish.

15
16 **CHAIRMAN MONCRIEF:** All right. Any other comments? Harry, go
17 ahead.

18
19 **MR. BLANCHET:** My main question is, with the longline, we do have,
20 with golden, some very old age information from Florida, back when
21 the longline was first getting started, and I don't know how that
22 related to the fishery, but, at least for the potential for looking
23 at some of the disappearance from something like age-twelve on,
24 from back when the fishery got started to an average of the last
25 ten years of information, it might be useful, just to see if
26 there's any indication of a difference in Z, just kind of a crude
27 look. Thank you.

28
29 **DR. SIEGFRIED:** Yes, and I'll have to see if I can dig that up. I
30 didn't get sufficient sample sizes for longline ages, even in what
31 I'm showing here from 1997 to 2002.

32
33 I don't know of anything earlier than that, but, Harry, to your
34 point, one of the big problems for the last assessment also was
35 difficulty deciding on M, because there's such an uncertainty
36 around max age and the life history and growth and all of that.
37 That was another thing that they had a difficult time nailing down,
38 and, basically, it could run the gamut of answers if they put in
39 Ms from all of the different estimators.

40
41 **MR. BLANCHET:** Yes, and I did that for one of the first assessments
42 on tilefish.

43
44 **DR. SIEGFRIED:** Thank you.

45
46 **CHAIRMAN MONCRIEF:** All right, and so, I mean, I think the
47 recommendations you have there on the last slide of maintaining
48 current catch limits, and just updating, seems to be satisfactory

1 toward the group.

2
3 Adding in the fishery metrics, I think, would be a useful one to
4 have, just to show that stability over time, if it's there or if
5 it's not, and I'm sure it could be -- You know, it could hidden,
6 due to hyper-stability, or you could even have localized depletion,
7 given how concentrated the fisheries are, and do six to one and
8 half dozen to the other, but I think, in those cases, having
9 another signal there would be beneficial. Does anyone else have
10 anything to add that they think should be provided to look at?
11 Anything else? Go ahead, Mike.

12
13 **DR. ALLEN:** Just one statement that I felt like that age
14 composition data were really useful in this, and just keeping that
15 going, to monitor that age data, seems useful.

16
17 **CHAIRMAN MONCRIEF:** Yes, and prayers to the person who has to age
18 those things, because it's real bad. All right. Go ahead.

19
20 **DR. SIEGFRIED:** We have quite a collaboration with Florida for
21 especially blueline, right? We have -- I think that we get a lot
22 of data from them, too, but Laura Thornton is the one who does a
23 lot of the ageing, and she's actually our key ager for a number of
24 things that are coming up, and so we have to figure out how to --
25 It's just really hard when you just have one person who can do
26 each of these things. We really need more money for ageing.

27
28 **CHAIRMAN MONCRIEF:** All right. That wraps up this topic. Thank
29 you, Katie. I think that was a good discussion. One update from
30 -- The next item is we've got an in-between topic before public
31 comment. Go ahead.

32
33 **DR. FROESCHKE:** Well, it's old and it's new, and so I looked at
34 the tagging database from Karen Burns. It was 40,000 and change
35 samples. There were seven kingfish tagged, and no returns, and so
36 -- There was one lizardfish though, and so there is a research
37 opportunity, if someone is looking for a project.

38
39 **DR. SIEGFRIED:** I was hoping to get a little bit of feedback about
40 the alternate assessment approach from the SSC, but also from the
41 council staff, to make sure that we did what they asked.

42
43 This is a new process. You know, you all haven't seen anything
44 like this, where we just bring data and go what do you think we
45 should do, and so how did that go for you, and did the council get
46 what they needed from this triage, making sure that we fulfilled
47 our needs and anything that we can do to improve it? I have to
48 look this way.

1
2 **DR. ALLEN:** I'm sorry. What was the question?
3

4 **MR. RINDONE:** Do you feel like you got what you were looking for?
5

6 **DR. ALLEN:** For tilefish?
7

8 **MR. RINDONE:** Yes.
9

10 **DR. ALLEN:** I think so. From my perspective.
11

12 **DR. NANCE:** I'm not sure what we were looking for from the council
13 perspective, but I feel like anything that we do, where we bring
14 it to us and have a discussion before we go out and start doing
15 things, I think is always beneficial, and so I do like the ability
16 to look at the things, and make recommendations, hear your side of
17 different things, and you hear ours, and I think that that goes to
18 help in both in both directions.
19

20 **CHAIRMAN MONCRIEF:** For someone who likes the simplest approach
21 first, no matter what, to me, this one fit that one to the T, and
22 I would rather -- You know, to me, pushing you all down a complex
23 route, if it doesn't merit it, and trying to force an answer
24 through a model, or another exercise -- To me, this is a little
25 bit more pragmatic to look at it, make judgment calls, think about
26 what can truly provide signal, and give us information, and move
27 from there, and so I would say it was good.
28

29 **MR. RINDONE:** What they said.
30

31 **DR. ALLEN:** Well stated, Trevor.
32

33 **DR. FROESCHKE:** So I totally agree with all that. My only thinking
34 is, and maybe a question. In the hopefully not-too-distant future,
35 when all this data currency business is straightened out, it might
36 be nice to move it into whatever that is, even though there's a
37 tiny bit of only recreational, just because we don't even have --
38 I would assume this is MRFSS, but I would assume -- I would hope
39 we could just use the average landings, and just kind of move that
40 through, but, other than that, I think it's great.
41

42 **CHAIRMAN MONCRIEF:** Carrie.
43

44 **EXECUTIVE DIRECTOR SIMMONS:** Thank you, Mr. Chair. I think it's
45 a good effort, Katie. I think I might have missed this, but you
46 guys said G-FISHER, at least in the eastern Gulf, does go deep
47 enough to capture any type of information on golden?
48

1 **DR. SIEGFRIED:** It's just blueline and goldface, and they truncated
2 it to only thirty meters and deeper.

3
4 **EXECUTIVE DIRECTOR SIMMONS:** So it doesn't really.

5
6 **DR. SIEGFRIED:** I mean, it was limited sampling, and it looked
7 like it was about 10 percent proportion positives, but that's why
8 they truncated it, to make sure that they weren't using data in
9 the wrong depth strata.

10
11 **EXECUTIVE DIRECTOR SIMMONS:** I guess, terminology-wise, you guys
12 would think this is just like a -- It's not really an assessment,
13 per se, but it's just a review of the data available to determine
14 if there's some type of formal assessment that could move forward,
15 right, because we talked about this at SEDAR all the time, and we
16 don't want to ask for stuff that's a waste of time, but we also -
17 - We're making management changes on other deepwater species where
18 we have an assessment, like yellowedge grouper.

19
20 Where we didn't have a successful assessment previously, just
21 taking a look at the information we have available to see if it's,
22 you know, worth the squeeze is I think useful, and so I don't know
23 really what we're calling this, and, I mean, I guess there's not
24 a need to consider any management changes, but it's not really --
25 It's an index-based view, I guess, of what's happening, right, and
26 the fishery-dependent index look as well.

27
28 **DR. SIEGFRIED:** The naming stuff is getting confusing, and I agree,
29 and so it's not necessarily a health check, because you're not
30 comparing to a previous assessment. You can maybe not think of it
31 as an assessment, but it really is.

32
33 I mean you don't have to have a full model, a full statistical
34 catch-at-age model, for it to be an assessment. It could be
35 considered a baby management procedure, where you say you need to
36 look at this in order to decide on management, and you've decided
37 that status quo is fine. This is all databased, and so it's
38 empirical. I mean, it's informing. It's checking all the boxes
39 of what you need to legally do your management, but we can decide
40 what to call it later.

41
42 **EXECUTIVE DIRECTOR SIMMONS:** I mean, I definitely think it's great
43 that you have the age comps, and not just the index of abundance,
44 and so I agree with that as well, but I really appreciate you all's
45 effort, and I guess, in the future, as we have these additional
46 requests on there that are outside the SEDAR process, we can maybe
47 think about a little bit more formally how we want to go about
48 doing these with the SSC.

1
2 **DR. SIEGFRIED:** Yes, and, I mean, I wasn't just looking for praise.
3 There's definitely things that could have been done better on our
4 end here, like creating terms of reference of what you wanted us
5 to look at. Now I have a better idea of what I would have put
6 together for that, and it would have been very simple, but we were
7 just sort of flying by the seat of our pants at this point.

8
9 **EXECUTIVE DIRECTOR SIMMONS:** I wasn't trying to be critical. I
10 was just trying to say, as we talked about at the SEDAR Committee,
11 we probably need a slightly more formal process for this. That's
12 all I was saying. I wasn't trying to be critical.

13
14 **DR. SIEGFRIED:** No, and I didn't take it that way. Thanks.

15
16 **CHAIRMAN MONCRIEF:** All right. You got your piece out of the way?

17
18 **DR. FROESCHKE:** Yes.

19
20 **CHAIRMAN MONCRIEF:** All right. Dr. Froeschke is done. That means
21 we can move on to public comment. We've got Mr. Bob Zales coming
22 up. If you are online, and you wish to provide public comment,
23 there are instructions to do so.

24
25 **PUBLIC COMMENT**
26

27 **MR. ZALES:** Bob Zales, Southeastern Fisheries Association.
28 Kingfish, and that's why I'm here, because we were involved in, in
29 our family business, fishing king mackerel, and, when king mackerel
30 first began to get taken down, and eventually closed back in the
31 late 1980s, that's what got me involved in all this fishery
32 management process, and I'm still here today, and I don't know
33 why.

34
35 Anyway, thank you, John, because, back in the day, they used to
36 have mackerel stock assessment panels. That's what they called
37 them, and they convened at the little house at the Southeast
38 Science Center, and I don't know if it's still there or not, in
39 the back of the Science Center back there, that little house back
40 there, and that's where all the meetings were.

41
42 I participated, and my first one I think was like in 1989. Joe
43 Powers was typically chairman, and Doug Gregory was a member, and
44 there were several other people, and I can't remember, but, in the
45 first few years, I was pretty much the only one in the audience
46 paying attention to what was going on, and a lot of that had to
47 deal with the MRFSS data, because the recreational data, which was
48 driving the king mackerel fishery, there were so many mistakes in

1 there, and that's the reason why we had closures, because of all
2 the problems with that whole thing.

3
4 In that whole process of the stock assessment, and I can't remember
5 the guy's name that came up with the mitochondrial DNA thing, where
6 he identified kingfish for the different stocks, and they
7 identified fish coming up from Mexico through Texas and Louisiana
8 to the river, from Monroe County through Florida and Alabama to
9 the river, and that's where they kind of mingled in.

10
11 Karen Burns was critical back then. She worked remote, and she
12 handled all the Mexican data, what little bit there was, but she
13 took care of all of it. When she passed away, that all went away.
14 We never got any more Mexican data until now, and so it's
15 interesting, and clearly, whatever she did back then, that was all
16 presented to the stock assessment panels, and it was provided to
17 the council.

18
19 Terry Leary was the assistant director under Wayne Swingle at the
20 time, and he was the king mackerel person. He attended all those
21 meetings, and so there's got to be -- All those records from Karen
22 have to be somewhere. I don't know where, but it would be good to
23 have those in there.

24
25 Well, now that we have the new Mexican stuff in there, if they're
26 going to send somebody from the council, I would recommend Sanchez
27 be sent. Number one, he speaks the language. Number two, he's in
28 the hub of the commercial part of the fishery, in the Keys, with
29 the netters and everybody else, where it's a big component in this
30 Mexican data that we're seeing so far.

31
32 I think, in the last data web meeting for kingfish, when they were
33 talking about this, I think the nets in Mexico have a smaller size.
34 It's the reason why you're catching smaller fish. The management
35 procedures for Mexicans are far different than they are for the
36 Americans, and so, somehow or the other, if we're going to combine
37 them, somehow they need to get equaled up somehow, because that's
38 the problem with imports today that we see, right?

39
40 You've got it all these other countries, and they don't have to
41 play the game like we do, and it makes a significant difference on
42 what gets prosecuted, and where the industry stands, and so pay
43 close attention to all that, and, like I say, those records have
44 to be there.

45
46 If you need some more, Doug Gregory is still alive. He has all
47 that history. He was great with every bit of that. When I first
48 went down there, that's when I first met him, way back then, and

1 we became friends immediately. People used to talk about us being
2 brothers, because we look fairly similar. Back then I had beard
3 and gray hair, and he had the same thing. Anyway, he would be a
4 good source of information.

5
6 Joe Powers, if you can find him, he would be another great source
7 of information for all this kingfish stuff, because there's history
8 there that affects how this fishery has gone, and clearly we've
9 got issues with it now.

10
11 They're somewhere, and I don't think there's really a problem with
12 the stock. I think they're just going someplace else that they
13 haven't been historically coming. Last year in Panama City, they
14 were beginning to come back. This year so far, the fishery has
15 been almost nothing, and so we don't know what's happening with
16 them, but something is going on with that fishery, and so, anyway,
17 that's my two-cents.

18
19 To your point, Trevor, when it comes to the effort part with the
20 tilefish, you need to look at the effort. When you're looking at
21 landings going down, you need to see, okay, have we got the same
22 number of boats fishing, and clearly you don't, and you know this
23 from the yellowedge problem, right, and that's the same thing, the
24 same fishery. It's a tough fishery.

25
26 There's only a dozen or so boats fishing today, and it's hard to
27 get people crewed up, because you're looking at ten and fourteen-
28 day trips. People don't want to work that hard anymore, and so
29 you need to pay attention to that. Thank you.

30
31 **CHAIRMAN MONCRIEF:** Have we got anybody online? All right. It's
32 been a good meeting, everybody. We tackled it, and got it done.
33 Meeting adjourned.

34
35 (Whereupon, the meeting adjourned on July 22, 2026.)
36
37

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