



February 18, 2022

Peter Hood
Branch Chief
NMFS Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

Re: Reef Fish Fishery of the Gulf of Mexico; Amendment 53 Proposed Rule (Red Grouper Reallocation); 87 Fed. Reg. 2737 (Jan. 19, 2022)

Dear Mr. Hood:

The Gulf of Mexico Reef Fish Shareholders' Alliance ("Shareholders' Alliance") is the largest organization of commercial snapper and grouper fishermen in the Gulf of Mexico. We work hard to ensure that our fisheries are sustainably managed so our fishing businesses can thrive and our fishing communities can exist for future generations. We are the harvesters that provide much of the American public with a reliable source of domestically-caught wild Gulf seafood, and we do this through a philosophy that sustainable seafood and profitable fishing businesses depend on healthy fish populations.

The Gulf of Mexico Reef Fish Shareholders' Alliance ("Shareholders' Alliance") represents commercial fishermen who hold individual fishing quota ("IFQ") shares authorizing them to harvest and sell red grouper and other reef fish from the Gulf of Mexico. The Shareholders' Alliance is the premier organization representing commercial reef fish fishermen in the Gulf of Mexico with members across all five Gulf states.

The Shareholders' Alliance urges the National Marine Fisheries Service ("NMFS") to disapprove Amendment 53. This action turns the Magnuson-Stevens Fishery Conservation and Management Act ("MSA") on its head: it would *weaken* conservation measures for the red grouper stock, while simultaneously *decreasing* the yields the stock can produce. The end result is lower harvests, but higher risk of overfishing. This simply makes no sense, and violates fundamental provisions of the MSA.

The Shareholders' Alliance previously submitted comments on Amendment 53 through counsel and we incorporate those comments here by reference.¹ We write separately in response to the Proposed Rule to highlight specific problems with Amendment 53, and include a number of attachments with this submission.

Recreational Sector Discards Must Be Addressed

NMFS's new Fishing Effort Survey ("FES") indicates that recreational anglers are discarding far more red grouper (and other reef fish) than previously estimated. Annual recreational sector discards of red grouper have exceeded 8 million fish.² Recent analyses indicate that private anglers catch and discard roughly eight red grouper to keep one—with an assumed 11.6% discard mortality rate, private anglers are essentially killing and discarding dead one red grouper for each one taken home.³

This is a waste that Amendment 53 locks in going forward, in violation of MSA requirements to minimize bycatch to the extent practicable.⁴ These high levels of recreational sector discards also "increase substantially the uncertainty concerning total fishing-related mortality, which makes it more difficult to assess the status of stocks, to set the appropriate [optimum yield ("OY")] and define overfishing levels, and to ensure that OYs are attained and overfishing levels are not exceeded."⁵ A foundational premise of Amendment 53 is that these discards are an acceptable management outcome.

Taking Fish From Commercial Fishermen to Cover Recreational Dead Discards Is Unfair

In contrast with the recreational sector, discards of red grouper by commercial fishermen have decreased dramatically in recent years.⁶ "The number of [commercial sector] discards dropped substantially beginning in 2013 with vertical line discards estimated under 100,000 fish through 2017."⁷ Those reductions contribute to higher ACLs, which benefit all sectors. But under Amendment 53, "total landings have to be constrained more to account for the greater numbers of dead discards from recreational red grouper fishing."⁸ So the benefits contributed by the commercial sector's reduced discards are more than wiped out by the recreational sector's increased discards from reallocation.

It is only fair that each sector be responsible for its own dead discards. Each sector's ACL should include that sector's dead discards, and then each sector would have incentives to

¹ Letter from J. Timothy Hobbs, K&L Gates LLP, to Peter Hood, NMFS, on behalf of A.P. Bell Fish Company, Southern Offshore Fishing Association, and the Shareholders' Alliance, in response to the Notice of Availability for Amendment 53, 86 Fed. Reg. 70078 (Dec. 9, 2021).

² Amendment 53 at p. 37, Table 3.1.6.

³ SBRM 5-Year Review (Jan. 13, 2022) (attached) at p. 12 (showing that private anglers landed 307,000 red grouper and discarded 2.4 million; at an assumed 11.6% mortality rate (Am. 53 at p. 196), anglers are discarding dead 278,400 red grouper to take home 307,000).

⁴ 16 U.S.C. §§ 1851(a)(9); 1853(a)(11).

⁵ 50 C.F.R. § 600.350(b).

⁶ Amendment 53 at p. 198, Figure B.1.

⁷ Amendment 53 at p. 199.

⁸ Amendment 53 at p. xiv.

minimize bycatch and bycatch mortality in order to increase landings. Punishing the commercial sector by reducing its quota to account for dead discards by recreational anglers is not fair and equitable as required by National Standard 4.⁹

NMFS Has Already Implemented an Unlawful Reallocation

The recreational sector's ACL is 1.0 million pounds as codified in NMFS regulations.¹⁰ Yet even though the "Southeast Fisheries Science Center (SEFSC) has determined the MRIP-FES data represent the best scientific information available for recreational landings,"¹¹ NMFS is not using that best available science to track usage of the recreational sector's 1.0 million pound codified quota. Instead, NMFS has assumed that the recreational sector's quota should actually be 2.10 million pounds.¹² Thus, by permitting the recreational sector to catch 2.10 million pounds and holding the commercial sector to its 3.16 million pound ACL, NMFS has unilaterally changed the allocation already from 76% commercial / 24% recreational (as set by the FMP) to 60% commercial / 40% recreational. Amendment 53 would merely codify what NMFS has already done behind the scenes. This is grossly unlawful.¹³

Indeed, NMFS contends that reallocation under Amendment 53 "distributes the reductions in ACLs [from changing the management "currency" to FES] more equitably," because "both the commercial and recreational ACLs would be reduced by approximately the same amount (18-20% for the commercial sector and 18-19% for the recreational sector)."¹⁴ But these percentage figures are flawed. They assume the recreational sector already has a 40% allocation (2.10mp of a fictional 5.26mp total ACL). So, these purported percentage reductions resulting from Amendment 53 actually *exclude the effect of reallocation*. In reality, the codified quota for the recreational sector is increasing by 73% (from 1.0mp to 1.73mp), while the commercial quota decreases by 32% (from 3.72mp to 2.53mp) from what the commercial sector would get by merely changing the currency to FES units but keeping the current allocation split (Action 1, Alt. 2).

Automatic Reallocations Based on FES Are Arbitrary

⁹ 16 U.S.C. § 1851(a)(4).

¹⁰ 50 C.F.R. § 622.41(e)(2)(iv).

¹¹ Amendment 53 at p. 104.

¹² Amendment 53 at p. xx (Table 1); p. 20 ("The current ACT is being tracked using MRIP-CHTS equivalent landings."); p. 151 ("Currently, recreational landings for red grouper (as well as many other reef fish) are calculated in MRIP-FES, and must be converted to MRIP-CHTS for quota monitoring."); p. xxiii (Action 1 "would preclude the need to convert landings [in FES] back to MRIP-CHTS for management"; "Alternative 1 would continue monitoring landings using MRIP-CHTS units, which are not considered the best scientific information available."); p. 16 ("although Alternative 2 retains the current percentage allocation, it would result in a decrease in the recreational ACL when compared to the MRIP-FES equivalent of 2.10 million pounds").

¹³ NMFS has taken similar actions in the past to benefit the recreational sector. See 82 Fed. Reg. 27777, 27779 (June 19, 2017) (NMFS re-opening the private angler fishing season for red snapper, despite projecting that "the private recreational sector will substantially exceed its annual catch limit" as a result, and delay stock rebuilding by six years). NMFS projected it could get away with this action because the MSA does not permit temporary restraining orders. See attached memo to Secretary of Commerce Wilbur Ross ("your action would remain in effect for at least 45 days before a court could act").

¹⁴ Amendment 53 at p. 294.

Even assuming that NMFS's new Fishing Effort Survey ("FES") accurately shows that anglers have been catching more fish than previously estimated, that finding should not automatically trigger a reallocation in favor of the recreational sector based on historical landings estimates recalibrated into FES "units." Retrospectively adjusting historical landings estimates from thirty years ago is fraught with uncertainty; there is widespread discomfort with (and scientific criticism of¹⁵) the accuracy of such revised estimates for use in making allocation decisions. The Gulf Council itself has expressed reservations with these data.¹⁶ Those reservations should be resolved before proceeding with any reallocation based on such data.

Moreover, revised recreational landings estimates based on FES do not provide a complete picture necessary for allocation decisions. Had these estimates been known about earlier, they would have been plugged into stock assessments and generated higher OFLs, ABCs, and ACLs for both sectors. The commercial sector would have had an opportunity to increase its harvests as well. Amendment 53 does not even consider this reality.

NMFS attempted to re-create historical ACLs based on FES calibrations for other species like king mackerel.¹⁷ No similar attempt was made for red grouper. Our understanding is that attempting to calculate historical ACLs going back to the years used for red grouper allocation (1986-2005) was difficult. But without undertaking that exercise, reallocation is just a one-way ratchet in which only the recreational sector can ever benefit. In that regard, red grouper reallocation under Amendment 53 is similar to red snapper reallocation under Amendment 28, which a court struck down as not fair and equitable as required by National Standard 4.¹⁸

In addition, as described above, FES also shows that recreational anglers have been discarding far more fish than previously estimated, and this new information about discards and resulting fishing mortality must be factored into allocation decisions.

Other Councils, such as the South Atlantic and Mid-Atlantic Fishery Management Councils, are also contending with FES calibrations, but neither is taking the approach that the Gulf Council is taking by automatically reallocating based on FES-calibrated historical landings for the recreational sector. In approving the Councils' actions, it is arbitrary and unfair for NMFS to treat commercial fishermen in the Gulf differently than fishermen in other regions, especially when the NMFS Southeast Regional Office oversees - and the same staff work with - both the Gulf and South Atlantic Councils.

The Gulf Council Should Follow Its Own Allocation Policy

¹⁵ Thunberg, E.M. and C.M. Fulcher 2006. Testing the stability of recreational fishing probabilities. In Sumaila, U.R. and D.A. Marsden (eds.) 2005 North American Association of Fisheries Economists Forum Proceedings. Fisheries Centre Research Reports 14(1). Fisheries Centre, the University of British Columbia, Vancouver, Canada, at 176.

¹⁶ Letter from Mara Levy, NOAA GC, to Dale Diaz, Gulf Council Chair, dated January 24, 2022 at 1 ("consensus has not been reached on which of the survey methods [Marine Recreational Information Program or various state surveys] is both most precise and accurate with respect to producing private recreational red snapper catch and effort data," quoting the Gulf Council's letter to NMFS requesting analysis under National Standard 6).

¹⁷ See attachments.

¹⁸ *Guindon v. Pritzker*, 240 F. Supp. 3d 181 (D.D.C. 2017).

Under the Gulf Council’s allocation policy, FES data recalibration should have triggered a comprehensive allocation review.¹⁹ That review begins with an assessment of current management objectives, whether the existing allocation is meeting those objectives, and whether adjusting the allocation could better meet management objectives.²⁰ An allocation review does not begin with the premise that one sector should receive a greater allocation,²¹ but that is precisely what happened with Amendment 53 when NMFS initiated the reallocation motion that instigated the Amendment 53 process in October 2019.

For all of these reasons we urge NMFS to disapprove Amendment 53. Thank you for considering our comments.

Sincerely,

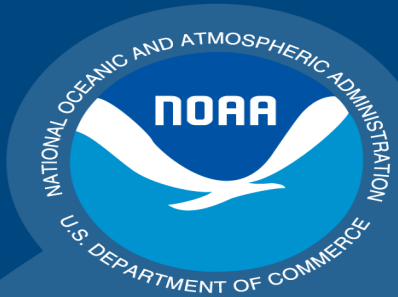
A handwritten signature in black ink that reads "Eric Brazer". The signature is written in a cursive style with a prominent "E" and "B".

Eric Brazer
Deputy Director

¹⁹ Amendment 53 at p. 255.

²⁰ Amendment 53 at p. 227 (“An allocation review is a structured review of current allocations based on adaptive management (i.e., evaluating successful attainment of management objectives) to determine if further action is required. The purpose is to determine if current management objectives are being achieved through the existing allocation...”).

²¹ Amendment 53 at p. 223 (“To this end, the working group clarifies that "review" is the evaluation described in the preceding paragraph that leads to the decision of whether or not the development and analysis of new alternatives is warranted, and is not, in and of itself, an implicit trigger to consider new alternatives.”).



**NOAA
FISHERIES**

SEFSC 9583: Influence of CHTS/FES changes on the management advice for Gulf King Mackerel

SEFSC Staff



Standing, Reef Fish, Socioeconomic and Ecosystem SSC

August 9 – 11, 2021

INTRODUCTION

- The SEFSC was asked to provide sensitivity runs of the Gulf of Mexico King Mackerel stock assessment model to demonstrate the effects of changes made to the recreational catch/discard data (CHTS vs. FES) and shrimp bycatch (2013 estimate vs. 2020 estimate).
- Note: An earlier attempt to address this request more directly (by replacing the CHTS statistics in the 2014 base model with FES estimates) resulted in model instability, and did not produce reliable results.



METHODS

- Data and model used to configure the four king mackerel runs

Baseline: SEDAR
38 (2014)

SEDAR 38U
Base

DATA / Model Used	Model 1	Model 2	Model 3	Model 4
Terminal Year	2012	2012	2012	2017
SEDAR 38	X			
SEDAR 38U		X	X	X
CHTS	X			
FES		X	X	X
Shimp 2012	X	X		
Shrimp 2020			X	X



OFL and ABC Projections

- OFL = the 50th percentile of the projection of F_{SPR30}
- ABC = the 43rd percentile (P^*) of the projection of F_{SPR30}



Results

Model 1

P* = 0.43 YEAR	LCI	Retained Yield (mt)	UCI	ABC in MT	OFL (million lbs)	ABC (million lbs)
2015	3505	4220	4936	4122	9.30	9.09
2016	3204	4008	4812	3898	8.84	8.59
2017	3007	3858	4710	3741	8.51	8.25
2018	2879	3756	4634	3635	8.28	8.01
2019	2793	3689	4586	3566	8.13	7.86
2020	2733	3642	4550	3517	8.03	7.75
2021	2689	3604	4520	3478	7.95	7.67
2022	2656	3574	4492	3448	7.88	7.60
2023	2630	3550	4469	3423	7.83	7.55
2024	2611	3531	4451	3404	7.78	7.51
2025	2596	3516	4436	3389	7.75	7.47
2026	2585	3505	4425	3378	7.73	7.45
2027	2576	3496	4416	3369	7.71	7.43

Model 2

P* = 0.43 YEAR	LCI	Retained Yield (mt)	UCI	ABC in MT	OFL (million lbs)	ABC (million lbs)
2015	3250	3917	4584	3825	8.63	8.43
2016	3001	3774	4547	3667	8.32	8.09
2017	2846	3676	4506	3562	8.10	7.85
2018	2751	3612	4473	3493	7.96	7.70
2019	2690	3573	4455	3451	7.88	7.61
2020	2649	3546	4442	3422	7.82	7.55
2021	2620	3524	4429	3400	7.77	7.49
2022	2598	3506	4414	3381	7.73	7.45
2023	2581	3491	4401	3366	7.70	7.42
2024	2568	3480	4391	3354	7.67	7.39
2025	2559	3470	4382	3345	7.65	7.37
2026	2551	3463	4375	3338	7.64	7.36
2027	2546	3458	4369	3332	7.62	7.35

Model 3

P* = 0.43 YEAR	LCI	Retained Yield (mt)	UCI	ABC in MT	OFL (million lbs)	ABC (million lbs)
2015	4445	5512	6579	5365	12.15	11.83
2016	4234	5458	6682	5290	12.03	11.66
2017	4120	5432	6743	5251	11.97	11.58
2018	4060	5421	6782	5234	11.95	11.54
2019	4030	5425	6820	5233	11.96	11.54
2020	4013	5431	6849	5236	11.97	11.54
2021	4002	5433	6865	5236	11.98	11.54
2022	3994	5432	6870	5234	11.98	11.54
2023	3988	5429	6871	5231	11.97	11.53
2024	3983	5427	6870	5228	11.96	11.53
2025	3980	5424	6869	5226	11.96	11.52
2026	3977	5422	6868	5224	11.95	11.52
2027	3976	5421	6866	5222	11.95	11.51

Model 4

P* = 0.43 YEAR	LCI	Retained Yield (mt)	UCI	ABC in MT	OFL (million lbs)	ABC (million lbs)
2018	4620	5196	5771	5196	11.45	11.45
2019	4222	5096	5969	5096	11.23	11.23
2020	3866	5104	6342	5104	11.25	11.25
2021	3559	4941	6323	4941	10.89	10.89
2022	3523	5014	6504	5014	11.05	11.05
2023	3524	5070	6617	5070	11.18	11.18
2024	3535	5111	6687	5111	11.27	11.27
2025	3548	5141	6733	5141	11.33	11.33
2026	3560	5162	6765	5162	11.38	11.38
2027	3569	5178	6786	5178	11.41	11.41
2028	3577	5189	6801	5189	11.44	11.44
2029	3584	5198	6812	5198	11.46	11.46
2030	3589	5204	6820	5204	11.47	11.47



Results

Table 3. Allowable Biological Catch (ABC) and percent difference from the SEDAR 38 resulting from the four model configurations shown in Table 1 above.

Baseline: SEDAR 38

- Model 2 projections resulted in an ABC 1-7% lower than the SEDAR 38 model. These small changes are due to revisions to the HB landings and discards.

DATA / Model Used	Model 1	Model 2	Model 3	Model 4
Terminal Year	2012	2012	2012	2017
SEDAR 38	X			
SEDAR 38U		X	X	X
CHTS	X			
FES		X	X	X
Shrimp 2012	X	X		
Shrimp 2020			X	X

YEAR	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
	ABC (million lbs)	ABC (million lbs)	ABC (million lbs)	ABC (million lbs)	% Diff from SEDAR 38	% Diff from SEDAR 38	% Diff from SEDAR 38	% Diff from SEDAR 38
2015	9.09	8.43	11.83		0%	-7%	30%	
2016	8.59	8.09	11.66		0%	-6%	36%	
2017	8.25	7.85	11.58		0%	-5%	40%	
2018	8.01	7.70	11.54	11.45	0%	-4%	44%	43%
2019	7.86	7.61	11.54	11.23	0%	-3%	47%	43%
2020	7.75	7.55	11.54	11.25	0%	-3%	49%	45%
2021	7.67	7.49	11.54	10.89	0%	-2%	51%	42%
2022	7.60	7.45	11.54	11.05	0%	-2%	52%	45%
2023	7.55	7.42	11.53	11.18	0%	-2%	53%	48%
2024	7.51	7.39	11.53	11.27	0%	-1%	54%	50%
2025	7.47	7.37	11.52	11.33	0%	-1%	54%	52%
2026	7.45	7.36	11.52	11.38	0%	-1%	55%	53%
2027	7.43	7.35	11.51	11.41	0%	-1%	55%	54%

Results

Table 3. Allowable Biological Catch (ABC) and percent difference from the SEDAR 38 resulting from the four model configurations shown in Table 1 above.

Baseline: SEDAR 38

- Model 3 projections resulted in an ABC 30-55% higher than the SEDAR 38 model. These changes are due to FES and the 2020 shrimp bycatch.

DATA / Model Used	Model 1	Model 2	Model 3	Model 4
Terminal Year	2012	2012	2012	2017
SEDAR 38	X			
SEDAR 38U		X	X	X
CHTS	X			
FES		X	X	X
Shrimp 2012	X	X		
Shrimp 2020			X	X

YEAR	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
	ABC (million lbs)	ABC (million lbs)	ABC (million lbs)	ABC (million lbs)	% Diff from SEDAR 38	% Diff from SEDAR 38	% Diff from SEDAR 38	% Diff from SEDAR 38
2015	9.09	8.43	11.83		0%	-7%	30%	
2016	8.59	8.09	11.66		0%	-6%	36%	
2017	8.25	7.85	11.58		0%	-5%	40%	
2018	8.01	7.70	11.54	11.45	0%	-4%	44%	43%
2019	7.86	7.61	11.54	11.23	0%	-3%	47%	43%
2020	7.75	7.55	11.54	11.25	0%	-3%	49%	45%
2021	7.67	7.49	11.54	10.89	0%	-2%	51%	42%
2022	7.60	7.45	11.54	11.05	0%	-2%	52%	45%
2023	7.55	7.42	11.53	11.18	0%	-2%	53%	48%
2024	7.51	7.39	11.53	11.27	0%	-1%	54%	50%
2025	7.47	7.37	11.52	11.33	0%	-1%	54%	52%
2026	7.45	7.36	11.52	11.38	0%	-1%	55%	53%
2027	7.43	7.35	11.51	11.41	0%	-1%	55%	54%

Results

Table 3. Allowable Biological Catch (ABC) and percent difference from the SEDAR 38 resulting from the four model configurations shown in Table 1 above.

Baseline: SEDAR 38

- Model 4 results are the accepted projections from SEDAR 38U. ABCs are 43-54% higher than SEDAR38. These changes are due to FES, the 2020 shrimp bycatch and new years of data since SEDAR38.

DATA / Model Used	Model 1	Model 2	Model 3	Model 4
Terminal Year	2012	2012	2012	2017
SEDAR 38	X			
SEDAR 38U		X	X	X
CHTS	X			
FES		X	X	X
Shimp 2012	X	X		
Shrimp 2020			X	X

YEAR	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
	ABC (million lbs)	ABC (million lbs)	ABC (million lbs)	ABC (million lbs)	% Diff from SEDAR 38	% Diff from SEDAR 38	% Diff from SEDAR 38	% Diff from SEDAR 38
2015	9.09	8.43	11.83		0%	-7%	30%	
2016	8.59	8.09	11.66		0%	-6%	36%	
2017	8.25	7.85	11.58		0%	-5%	40%	
2018	8.01	7.70	11.54	11.45	0%	-4%	44%	43%
2019	7.86	7.61	11.54	11.23	0%	-3%	47%	43%
2020	7.75	7.55	11.54	11.25	0%	-3%	49%	45%
2021	7.67	7.49	11.54	10.89	0%	-2%	51%	42%
2022	7.60	7.45	11.54	11.05	0%	-2%	52%	45%
2023	7.55	7.42	11.53	11.18	0%	-2%	53%	48%
2024	7.51	7.39	11.53	11.27	0%	-1%	54%	50%
2025	7.47	7.37	11.52	11.33	0%	-1%	54%	52%
2026	7.45	7.36	11.52	11.38	0%	-1%	55%	53%
2027	7.43	7.35	11.51	11.41	0%	-1%	55%	54%

Results

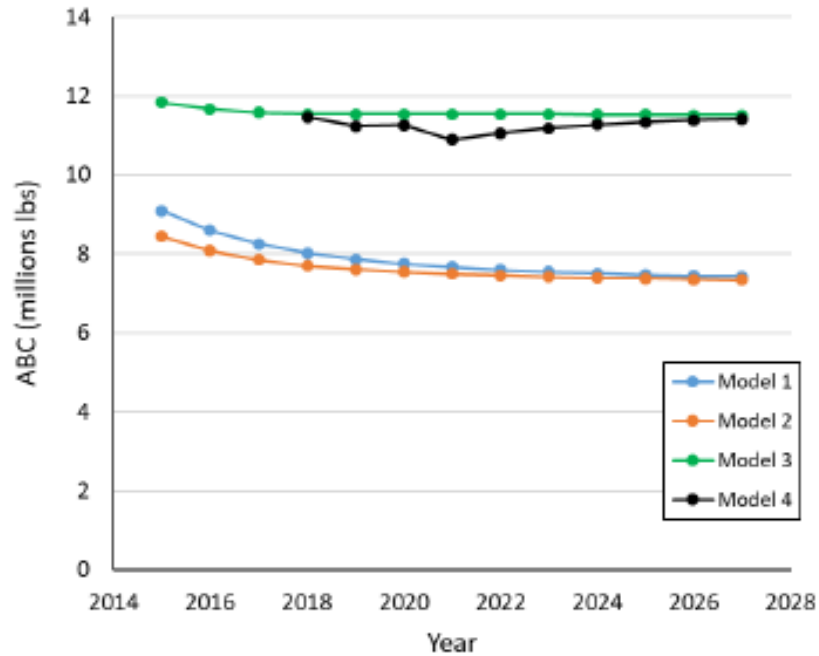


Figure 1. ABC projections for Gulf of Mexico King Mackerel from the four model configuration considered in this study.

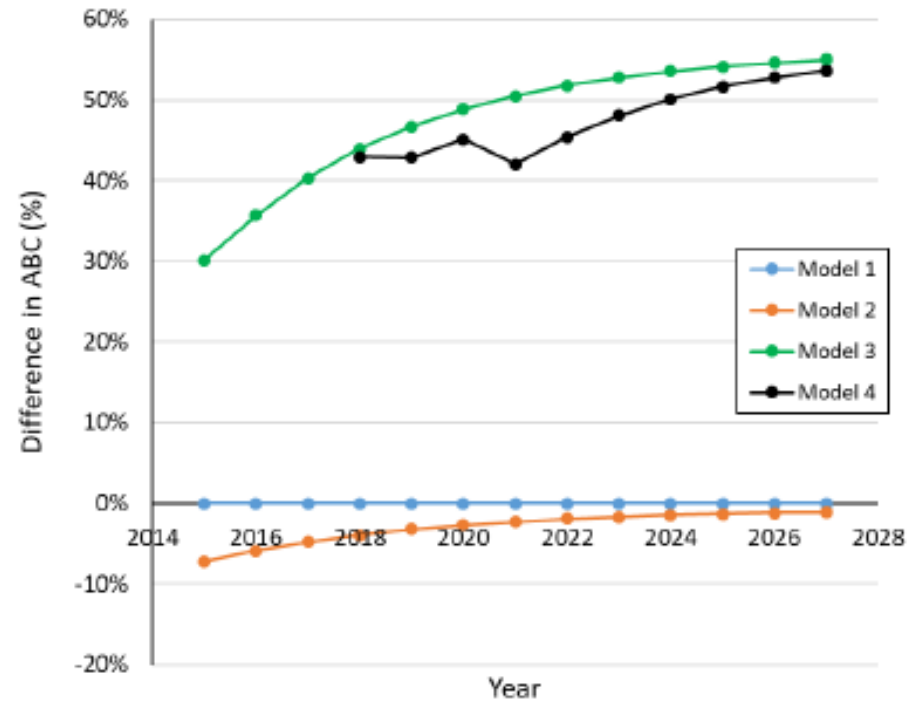


Figure 2. Percent differences between the baseline model (SEDAR 38) ABC projections and the ABCs for the four model configurations considered in this study for Gulf of Mexico King Mackerel from.

Conclusions

- The increases in OFL and ABC from SEDAR38 to SEDAR38U are primarily due to the use of FES recreational statistics.
- New years of data since the previous assessment, the revised SEDAR38U shrimp bycatch estimates, and revisions to the headboat landings and discards ALSO caused changes in OFL and ABC.



**Southeast Fisheries Science Center
Sustainable Fisheries Division**

**Addressing the request made by John Froeschke, Gulf of Mexico Fisheries Management Council
March 16, 2021**

Disclaimer: The results presented in this work are intended for within model comparisons only and not the purposes of management advice of any kind.

The SEFSC was requested to communicate to the GMFMC a comparison of the Gulf of Mexico King Mackerel stock assessment models towards helping to understand the effects of various changes. Changes were made to the recreational catch/discard data (CHTS vs. FES) and shrimp bycatch (2013 estimate vs. 2020 estimate). These changes represented the “best available data” at the time of the SEDAR 38U assessment. The requests made are given **Appendix 1** and **Appendix 2**.

Four models were configured to address this request. Each model isolates a particular model and/or data set in order to evaluate the effect of each change (**Table 1**).

Model_1. Baseline model. The SEDAR 38 model used for management advice:

- Use the original SEDAR 38 projection and the resulting OFL and ABC through FY2027.

Model_2. To evaluate any changes due only to the switch from CHTS to FES data:

- Use the SEDAR 38U model, truncated to 2012
- Replace the SEDAR 38 headboat landings/discards series with that used in SEDAR 38U
- Replace the SEDAR 38 CHTS series with the SEDAR 38U FES series
- Retain the SEDAR 38 shrimp bycatch estimate
- Project exactly as was done for the original SEDAR 38 model.

Model_3. To evaluate the effect of the new data inputs (FES and shrimp bycatch, combined) while retaining the old terminal year:

- Use the SEDAR 38U model, truncated to 2012
- Use the FES series and the updated SEDAR 38U shrimp estimate.
- Project exactly as you did for the original SEDAR38 model.

Model_4. To evaluate the effect of the new data series and population change since 2012.

- Use the accepted projections from SEDAR 38U

The same P* value (0.43) used in both SEDAR 38 and 38U was applied to the OFL to calculate ABC. The resulting retained yield (mt) with 10% and 90% confidence intervals, Over Fishing Limit (OFL) and Allowable Biological Catch (ABC) resulting from the four model configurations shown in **Table 2**.

Model_2 projections for 2015-2027 resulted in an average ABC of 12.08 mp vs. 7.96 mp for the baseline model, an average annual difference of 52% (**Table 3**). This comparison reflects changes in the ABC due to changing from CHTS to FES landings/discards time series. Trends in the projections are shown in Figure 1. Similar to Model_1, Model_2 projections show a near term increase in ABC with a gradual decrease over the years. The shape of the projection trends are very similar however they differ by a scaling factor that changes over time.

Model_3 projections for 2015-2027 resulted in an average ABC of 11.57 mp vs 7.96 for the baseline model, an average difference across years of 46% (**Table 3**). This comparison reflects changes due to both the migration from CHTS to FES time series, as well as the changes in the shrimp fishery bycatch. The changes in the projection due to using the new shrimp fishery bycatch resulted in the stock assessment model estimating a larger starting population size to account for the increase mortality of juveniles.

Model_4 (the model that was used to provide SEDAR 38U management advice) resulted in an average ABC of 10.81 mp vs. 7.96 for the baseline model, a difference of 40% (**Table 3**). This difference reflects all changes in the data (i.e. FES and shrimp fishery bycatch) as well as the updates in the length compositions and CPUE time series that changed the model terminal year from 2012 to 2017. These updated data, specifically the headboat CPUE, resulted in reduced estimates of the most recent recruitment (**Figures 1 and 2**).

Table 1. Data and model combinations used to configuration the four King Mackerel models used for comparisons.

DATA / Model Used	Model 1	Model 2	Model 3	Model 4
Terminal Year	2012	2012	2012	2017
SEDAR 38	X			
SEDAR 38U		X	X	X
CHTS	X			
FES		X	X	X
Shimp 2012	X	X		
Shrimp 2020			X	X

Table 2. Retained yield (mt) with 10% and 90% confidence intervals, Over Fishing Limit (OFL) and Allowable Biological Catch (ABC) resulting from the four model configurations shown in Table 1

Model 1

P* = 0.43 YEAR	LCI	Retained Yield (mt)	UCI	ABC in MT	OFL (million lbs)	ABC (million lbs)
2015	3520	4261	5001	4159	9.39	9.17
2016	3229	4087	4945	3969	9.01	8.75
2017	3038	3956	4873	3830	8.72	8.44
2018	2908	3851	4794	3721	8.49	8.20
2019	2814	3767	4721	3636	8.31	8.02
2020	2744	3702	4660	3570	8.16	7.87
2021	2690	3651	4611	3519	8.05	7.76
2022	2650	3612	4573	3479	7.96	7.67
2023	2620	3581	4543	3449	7.90	7.60
2024	2597	3558	4520	3426	7.84	7.55
2025	2579	3541	4502	3408	7.81	7.51
2026	2566	3527	4488	3395	7.78	7.48
2027	2555	3517	4478	3384	7.75	7.46

Model 2

P* = 0.43 YEAR	LCI	Retained Yield (mt)	UCI	ABC in MT	OFL (million lbs)	ABC (million lbs)
2015	5550	6774	7998	6605	14.93	14.56
2016	5040	6396	7752	6209	14.10	13.69
2017	4690	6106	7522	5911	13.46	13.03
2018	4446	5884	7321	5686	12.97	12.53
2019	4269	5713	7158	5514	12.60	12.16
2020	4137	5583	7030	5384	12.31	11.87
2021	4038	5485	6931	5286	12.09	11.65
2022	3965	5410	6856	5211	11.93	11.49
2023	3909	5354	6798	5155	11.80	11.36
2024	3867	5311	6754	5112	11.71	11.27
2025	3835	5278	6721	5079	11.64	11.20
2026	3811	5253	6695	5055	11.58	11.14
2027	3793	5234	6676	5036	11.54	11.10

Model 3

P* = 0.43 YEAR	LCI	Retained Yield (mt)	UCI	ABC in MT	OFL (million lbs)	ABC (million lbs)
2015	4445	5512	6579	5365	12.15	11.83
2016	4234	5458	6682	5290	12.03	11.66
2017	4120	5432	6743	5251	11.97	11.58
2018	4060	5421	6782	5234	11.95	11.54
2019	4030	5425	6820	5233	11.96	11.54
2020	4013	5431	6849	5236	11.97	11.54
2021	4002	5433	6865	5236	11.98	11.54
2022	3994	5432	6870	5234	11.98	11.54
2023	3988	5429	6871	5231	11.97	11.53
2024	3983	5427	6870	5228	11.96	11.53
2025	3980	5424	6869	5226	11.96	11.52
2026	3977	5422	6868	5224	11.95	11.52
2027	3976	5421	6866	5222	11.95	11.51

Model 4

P* = 0.43 YEAR	LCI	Retained Yield (mt)	UCI	ABC in MT	OFL (million lbs)	ABC (million lbs)
2018		5196				
2019		5096				
2020		5104				
2021	3559	4941	6323	4751	10.89	10.47
2022	3523	5014	6504	4809	11.05	10.60
2023	3524	5070	6617	4857	11.18	10.71
2024	3535	5111	6687	4894	11.27	10.79
2025	3548	5141	6733	4921	11.33	10.85
2026	3560	5162	6765	4942	11.38	10.89
2027	3569	5178	6786	4956	11.41	10.93
2028	3577	5189	6801	4967	11.44	10.95
2029	3584	5198	6812	4976	11.46	10.97
2030	3589	5204	6820	4982	11.47	10.98

Table 3. Allowable Biological Catch (ABC) and percent difference from the SEDAR 38 resulting from the four model configurations shown in Table 1 above.

YEAR	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
	ABC (million lbs)	ABC (million lbs)	ABC (million lbs)	ABC (million lbs)	% Diff from SEDAR 38	% Diff from SEDAR 38	% Diff from SEDAR 38	% Diff from SEDAR 38
2015	9.17	14.56	11.83		0%	59%	29%	
2016	8.75	13.69	11.66		0%	56%	33%	
2017	8.44	13.03	11.58		0%	54%	37%	
2018	8.20	12.53	11.54	10.47	0%	53%	41%	28%
2019	8.02	12.16	11.54	10.60	0%	52%	44%	32%
2020	7.87	11.87	11.54	10.71	0%	51%	47%	36%
2021	7.76	11.65	11.54	10.79	0%	50%	49%	39%
2022	7.67	11.49	11.54	10.85	0%	50%	50%	41%
2023	7.60	11.36	11.53	10.89	0%	49%	52%	43%
2024	7.55	11.27	11.53	10.93	0%	49%	53%	45%
2025	7.51	11.20	11.52	10.95	0%	49%	53%	46%
2026	7.48	11.14	11.52	10.97	0%	49%	54%	47%
2027	7.46	11.10	11.51	10.98	0%	49%	54%	47%
Average	7.96	12.08	11.57	10.81	0%	52%	46%	40%

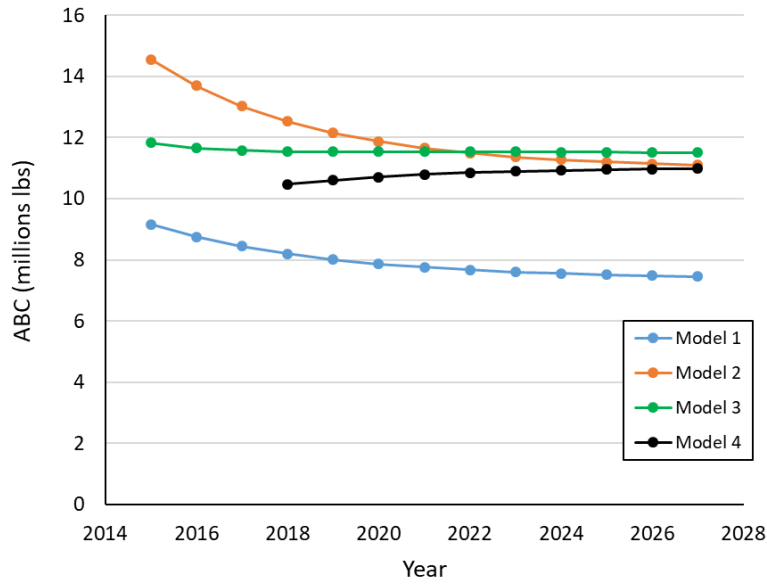


Figure 1. ABC projections for Gulf of Mexico King Mackerel from the four model configuration considered in this study.

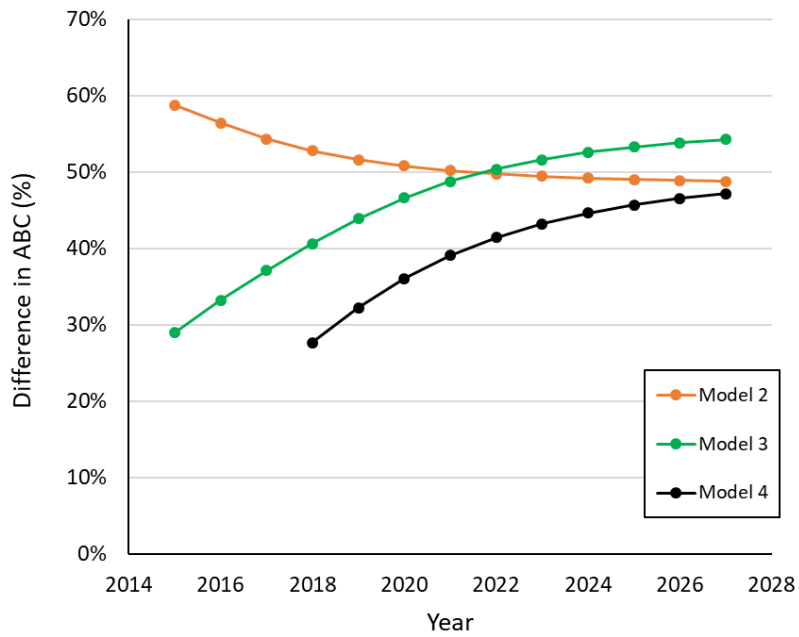


Figure 2. Percent differences between the baseline model (SEDAR 38) ABC projections and the ABCs for the three other model configurations considered in this study for Gulf of Mexico King Mackerel from.



Gulf of Mexico Fishery Management Council

Managing Fishery Resources in the U.S. Federal Waters of the Gulf of Mexico

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006888NOV2020

MEMORANDUM

DATE: November 6, 2020

TO: Dr. Clay Porch, SEFSC Science and Research Director

FROM: Dr. John Froeschke, Deputy Director

RE: King Mackerel Acceptable Biological Catch (ABC) conversion from historical data

During the October 2020 meeting, the Council reviewed the results of the recently completed Gulf king mackerel SEDAR 38 update stock assessment. As part of their deliberation, the Council has requested additional information that may be necessary to modify catch levels and sector allocations based on the use of Marine Recreational Information Program (MRIP)-Fishing Effort Survey (FES) data in the most recent stock assessment. Specifically, the Council is requesting an analysis that would re-estimate the overfishing limit (OFL) and ABC for the fishing years from 2016/2017 through the 2019/2020. The OFL and ABC recommendations that resulted from SEDAR 38 were originally based on MRIP-Coastal Household Telephone Survey (CHTS) recreational data while the SEDAR 38U assessment uses MRIP-FES data. The requested analysis would use MRIP-FES recreational data in the SEDAR 38 assessment to generate the harvest advice in the MRIP-FES currency. No other modifications to the SEDAR 38 model are requested. I have discussed this requested previously with your staff and they have indicated this work could be completed within approximately two weeks (November 20, 2020). Please contact me directly if you have any concerns.

cc: John Walter, Ph.D.
 Shannon Cass-Calay, Ph.D.
 Craig Brown, Ph.D.
 Michael Schirripa, Ph.D.
 Natasha Mendez-Ferrer, Ph.D.
 Carrie Simmons, Ph.D.
 Peter Hood



**UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric
Administration**

National Marine Fisheries Service
Southeast Fisheries Science Center
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006891NOV2020

November 20, 2020

Dr. Carrie M. Simmons, Ph.D., Executive Director
Gulf of Mexico Fishery Management Council
4107 W. Spruce Street, Suite 200
Tampa, Florida 36607

Dear Dr. Simmons:

During the October 2020 meeting of the Gulf of Mexico Fisheries Management Council (the Council), the Council reviewed the report of the SSC meeting (Standing, Reef Fish, Mackerel, Ecosystem, and Socioeconomic SSC Webinar Meeting Summary, September 14, 2020) and the recently completed Gulf King Mackerel SEDAR 38U update stock assessment. On November 6, 2020, the Council requested additional information to facilitate comparisons between catch levels and sector allocations based on the use of MRIP-Coastal Household Telephone Survey (MRIP-CHTS) and MRIP-Fishing Effort Survey (MRIP-FES) data in the King Mackerel stock assessment. Specifically, the Council requested an analysis that would re-estimate the overfishing limit (OFL), acceptable biological catch (ABC) and annual catch limit (ACL) for the fishing years from 2016/2017 through 2019/2020. To accomplish this request the Center was directed to:

- 1) Replace the MRIP-CHTS landings and discard estimates in the SEDAR 38 (2014) base model with estimates derived from MRIP-FES in order to generate management advice in MRIP-FES currency.
- 2) Compare the original OFL, ABC and ACL in MRIP-CHTS currency to the revised estimates in MRIP-FES currency.
- 3) To facilitate comparison, the Council requested no further modifications to the SEDAR 38 base model.

The Center attempted the work outlined above but discovered that a simple replacement of the recreational time series resulted in a model that did not converge and produced unstable results. This is always a potential problem when making substantive changes to input data. Attempts to stabilize this particular model required changes that make invalidated the desired comparisons (i.e. between catch levels and sector allocations based on the use of MRIP-CHTS and MRIP-FES data). For this reason, the Center was not able to produce useful results using the methods outlined above. Although other approaches are possible, they require additional consideration as

to how to best proceed. The Center is willing to continue to work with Council staff to address this issue.

Sincerely,

A handwritten signature in black ink, appearing to read "John F. Walter, III". The signature is fluid and cursive, with a large initial "J" and "W".

John F. Walter, III
Deputy Director for Science and Council Services

cc: Clay Porch
Shannon Cass-Calay
Michael Schirripa
Peter Hood
John Froeschke
Craig Brown
Larry Massey

June 1, 2017

TO: Secretary Ross
FR: Earl Comstock
RE: Action to Address Recreational Red Snapper Fishing

As you recall, at the request of Majority Whip Scalise I met last week with Congressmen from all five states bordering the Gulf of Mexico (Florida, Alabama, Mississippi, Louisiana and Texas). They all were requesting that you consider action to extend the private recreational fishing season in Federal waters in the Gulf for red snapper. The present Federal regulations only permit a three-day season, which opens today and closes on Saturday.


Notwithstanding the significant increase in red snapper stocks in the Gulf over the past decade, the recreational fishing season in Federal waters has declined from six months to three days. In comparison, the commercial charter sector is allowed 49 days. You have heard directly from a broad range of interests that this short season will have devastating impacts on the multi-billion dollar recreational sport fishing industry, and in particular on marinas, restaurants, boat dealers, boat builders, and tackle manufacturers that depend on the recreational anglers in the Gulf. The White House has also been engaged and supports efforts to address this problem.

As you are also aware, there is considerable disagreement between the State fishery managers and the Federal fishery managers over the state of red snapper stock assessments and data collection on recreational angler catch, with the States asserting that NMFS is undercounting the fish and over-estimating the recreational catch. As a result, the States have each set different recreational angler seasons for red snapper that are considerably longer than the Federal season (ranging from all year in Texas to 78 days in Florida and Alabama).

At the meeting with the Congressional delegations they presented a unified request, which was a first. I said that if all five states were willing to consider aligning their State fishing seasons with the Federal season, you would consider taking action. All five States have now sent you letters affirming that they would consider making a change. A single unified Federal-State recreational fishing season in the Gulf would be a significant achievement. It would allow a reset in the acrimonious relationship and set the stage for Congress to adopt a long-term fix.

An action to extend the summer season to 46 days (three days a week through June, July and August with 4th of July and Labor Day included) would be very well received and would reset the relationship with the States. It would result in overfishing of the stock by six million pounds (40%), which will draw criticism from environmental groups and commercial fishermen. However, NMFS agrees that the stock could handle this level on a temporary basis.

Under the Magnuson Stevens Act a court can't issue a temporary restraining order, so your action would remain in effect for at least 45 days before a court could act. This action would demonstrate that the Administration is serious about addressing this long-standing problem. If you approve proceeding we would still need to negotiate an agreement with the States. If we succeed on that you could announce an extension. I did not want to start unless you approve.

Secretary said go with two days plus holidays
Ok to proceed. 

June 7, 2017

To: Secretary Ross
Fr: Earl Comstock
Re: Update on Private Recreational Fishing for Gulf Red Snapper

At the appropriations hearing this morning Senator Shelby may ask about the situation with recreational fishing for red snapper in the Gulf of Mexico. The Federal fishing season this year for private recreational anglers (those fishing from their own boats as opposed to charter boats) was only three days, from June 1 to June 3, so it has already closed.

At the request of the White House (Dearborn/McGinley) and a dozen Congressmen from all five States bordering the Gulf of Mexico for a three day a week Federal season throughout the summer, you authorized me to explore an extension of the Federal fishing season.

There are three reasons an extension is warranted –

- (1) the Federal season for recreational anglers has been reduced to only three days despite a significant increase in the stock, causing immense frustration to anglers and grave economic harm to businesses that depend on recreational anglers;
- (2) the States disagree with NMFS stock assessments and estimates of recreational catch, with the result that each State has been setting its own fishing season in State waters for red snapper, with seasons ranging from 68 days to all year; and
- (3) an extension provides an opportunity to reset the relationship between the Department, the States and Congress over management of red snapper and could lead to a long term solution by spurring Congressional action that is needed to fix this issue.

I have had two very productive conference calls with the directors of all five State fishery managers. They have all indicated that their States are willing and able to quickly change their rules to allow for an alignment of the open and closed days throughout the summer. They are presently getting angler feedback on two possible options:

- (A) a two day a week (Saturday-Sunday) summer season starting on June 17 and ending on Labor Day (with Monday and Tuesday, July 3 and 4, included), for a total of 27 days, with States that have a fall season (Florida and Texas) allowed to keep them; and
- (B) a three day a week (Friday-Sunday) summer season starting on June 16 and ending on Labor Day (with Monday and Tuesday, July 3 and 4, included) for a total of 39 days.
Under this three day option, States must give up their fall seasons.

As discussed, under either option the increased angler catch will result in the overall catch limit for this year being exceeded by 30% and 50%. NMFS has assessed the impact of such an overage and agrees it does not threaten the health of the stock. It may slow rebuilding of the stock, but so far the stock is ahead of schedule. Either option would mean that, absent Congressional action to modify the Magnuson-Stevens Act requirements for the Gulf, the recreational season next year would be significantly reduced. All the State fishery managers know this, but agree that coordinated action has the greater long term benefit.

At the meeting organized by Whip Scalise with a dozen Gulf State Congressmen, and based on preliminary feedback the State fishery managers have gotten, the preference is for a three day a week summer season. However, Texas said that it will be very unlikely their anglers will agree to give up the fall season (which while long results in a very small catch), so the two day a week season may be what everyone can agree to.

Proceeding with either option will be opposed by the commercial fishermen and the charter operators, even though neither of their seasons will be affected this year. Their concern will be that overfishing by the recreational sector will result in a reduction in the overall catch limit for next year, and hence a reduction in commercial and charter catch limits next year. The States believe that the NMFS stock assessments have been low for years, and we are going to work with the States and NMFS to see if an adjustment is warranted. If it is, then this concern of the commercial and charter sectors can be addressed or mitigated.

Either option will almost certainly draw a lawsuit, either by the commercial sector or the environmental community, or both. As discussed, they can not get a temporary restraining order (TRO) because the Magnuson-Stevens Act prohibits them. However, they might be able to get an injunction based on the argument we are violating a recent court order that stopped a 2 percent re-allocation from commercial to recreational that the Gulf Council had adopted.

We are scheduled to have another call on Tuesday at which the States will report back on which option they will support and we hope to make a collective decision. To do that I will need your authorization to go forward. At the meeting I will review the impacts of exceeding the catch limits and ask the States to reaffirm they accept the possibility of reduced seasons next year.

Approving either option would reset the debate, demonstrate DoC can work with the States, address a serious economic harm to businesses, reduce a major source of constituent frustration and benefit the fishery long term by aligning the State and Federal seasons.

Approval would also put the ball squarely in the court of Congress. Congress would need to act to prevent reduced catch limits for all fishing sectors next year. This problem will not be able to be addressed through the fishery management system without a change in law. The Congressional representatives know this, and are looking to DoC for leadership. By resetting the debate and building a strong partnership with the State fishery managers, which is what this action will do, we can provide the leadership Congress is asking of us.

Considering the above, I recommend you approve proceeding with either option if the States will agree to a coordinated summer season.

Agree *Per conversation w/Sec and Eric 6/12/2017*

Agree, but only option ____.

Disagree. Do not proceed.

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GULF OF MEXICO FISHERY MANAGEMENT COUNCIL

MEETING OF THE STANDING & SPECIAL REEF FISH, SOCIOECONOMIC & ECOSYSTEM SCIENTIFIC AND STATISTICAL COMMITTEES

WEBINAR

AUGUST 9-11, 2021

STANDING SSC VOTING MEMBERS

- Lee Anderson
- Luiz Barbieri
- Harry Blanchet
- David Chagaris
- Roy Crabtree
- Benny Gallaway
- Douglas Gregory
- David Griffith
- Paul Mickle
- Trevor Moncrief
- James Nance
- Will Patterson
- Sean Powers
- Steven Scyphers
- Jim Tolan
- Richard Woodward

SPECIAL REEF FISH SSC VOTING MEMBERS

- Jason Adriance
- Michael Allen
- John Mareska

SPECIAL SOCIOECONOMIC SSC VOTING MEMBERS

- Luke Fairbanks
- Jack Isaacs

SPECIAL ECOSYSTEM SSC VOTING MEMBERS

- Mandy Karnauskas
- Joshua Kilborn
- Steven Saul

STAFF

- Assane DiagneEconomist
- Matt FreemanEconomist
- John FroeschkeDeputy Director
- Lisa HollenseadFishery Biologist
- Jessica MatosDocument Editor & Administrative Assistant
- Ryan RindoneLead Fishery Biologist/SEDAR Liaison

1 Carrie Simmons..... Executive Director
2 Carly Somerset..... Fisheries Outreach Specialist
3
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5 Shannon Calay..... SEFSC
6 Jason Cope..... NMFS
7 Michael Drexler..... Ocean Conservancy
8 Tom Frazer..... GMFMC
9 Marian McPherson..... NMFS
10 Jay Mullins..... FL
11 Julie Neer..... SEDAR
12 Skyler Sagarese..... SEFSC
13 Katie Siegfried..... SEFSC
14 Matt Smith..... SEFSC
15 Andy Strelcheck..... NMFS
16 Brendan Turley..... FL
17 Nathan Vaughan.....
18
19 - - -
20

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30 Mexico Gray Snapper Operational Assessment 139
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TABLE OF MOTIONS

1
2
3 [PAGE 29](#): Motion to accept the edits as written: When the SSC
4 is acting as the peer review body for a stock assessment or
5 other study, an SSC member(s) should abstain from any motions
6 and voting on the issue of BSIA if they have served as the
7 analytical lead, or principal or co-principal investigator or
8 had any direct participation as a member of the analytical team.
9 or been otherwise directly involved in the development of the
10 stock assessment beyond the role of a workshop panelist. During
11 the BSIA deliberations the SSC member(s) is free to participate
12 in the discussion, answer questions, and provide pertinent
13 expertise and feedback to the SSC. After a decision has been
14 reached on BSIA, the SSC member(s) is at liberty to motion and
15 vote on remaining management advice (e.g., catch limits,
16 appropriateness of allocation calculations, decision tools
17 developed to inform management action). [The motion carried on](#)
18 [page 29.](#)

19
20 [PAGE 89](#): Motion that the SSC accepts the new mean weight
21 estimation methodology to estimate the weight of recreationally
22 caught red grouper. [The motion carried on page 93.](#)

23
24 [PAGE 113](#): Motion that the SSC accepts the updated methodology
25 and interim analysis results for red grouper and sets the OFL
26 at 5.99 million pounds gutted weight and the ABC at 4.96 million
27 pounds gutted weight using the three-year moving average for
28 setting the ABC relative to the OFL. These values are in MRIP-
29 FES units. [The motion carried on page 121.](#)

30
31 [PAGE 133](#): Motion to approve the edits to the Red Grouper
32 Operational Assessment Scope of Work. [The motion carried on](#)
33 [page 133.](#)

34
35 [PAGE 143](#): Motion to accept the Vermilion Snapper Operational
36 Assessment Scope of Work. [The motion carried on page 143.](#)

37
38 [PAGE 161](#): Motion that the SSC recommends a data triage report
39 be generated by the SEFSC for the tilefishes complex as a guide
40 to the selection of the model environment for the next stock
41 assessment. [The motion carried on page 166.](#)

42
43 [PAGE 259](#): Motion that the SSC concurs with the SEFSC
44 determination that the new methodology for estimating projected
45 catches is an improvement and acceptable as BSIA. [The motion](#)
46 [was withdrawn on page 275.](#)

47
48 PAGE : Motion that the SSC recommends that the current SEDAR

1 research track assessment for Gulf of Mexico red snapper
2 investigate alternative scenarios for stock structure. The
3 motion carried on page .

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- - -

1 The Meeting of the Gulf of Mexico Fishery Management Council
2 Standing and Special Reef Fish, Special Socioeconomic & Special
3 Ecosystem Scientific and Statistical Committees convened on
4 Monday morning, August 9, 2021, and was called to order by Mr.
5 Ryan Rindone.

6
7 **INTRODUCTIONS**

8 **ADOPTION OF AGENDA**

9 **APPROVAL OF VERBATIM MINUTES AND MEETING SUMMARY: MAY 3-4,**
10 **2021 MEETING**
11

12 **MR. RYAN RINDONE:** Good morning. My name is Ryan Rindone, and
13 I am the council staff lead for the Scientific and Statistical
14 Committee of the Gulf of Mexico Fishery Management Council. We
15 appreciate your attendance on this webinar and input into this
16 meeting, and we would like to welcome the reappointed and new
17 SSC members and thank you guys all for your participation.
18 Representing the council is Dr. Tom Frazer, and council staff
19 in attendance include Carrie Simmons, John Froeschke, and
20 Jessica Matos.

21
22 Notice of this meeting was provided to the Federal Register,
23 sent via email to subscribers of the council's press release
24 email list, and was posted on the council's website.
25

26 We have quite a few agenda items. Some of the non-clerical
27 things will include election of a Chair and Vice Chair,
28 discussing the SSC's best practices and voting procedures, a
29 review of the updated red grouper interim analysis, a discussion
30 of the research track and operational assessment process
31 guidance, determining topical working groups for the gray
32 snapper operational assessment, scope of work for red grouper
33 and vermilion snapper operational assessments, determining the
34 approach to assess the Gulf of Mexico tilefish complex, updates
35 for the interim analysis and SEDAR stock assessment schedules.
36

37 Then we'll discuss National Standard 1 technical guidance on
38 data-limited species, and we'll review king mackerel historical
39 harvest differences, greater amberjack historical harvest and
40 catch limits, greater amberjack projections, and we'll have a
41 presentation on using field experiments to assess alternative
42 mechanisms for distributing fish to the recreational sector.
43

44 Then we'll look at draft options for Generic Essential Fish
45 Habitat Amendment Number 5, and then we will discuss topic
46 leaders for agenda items, we'll have public comment, and then
47 Other Business.
48

1 The webinar is open to the public and is being streamed live
2 and recorded. A summary of the meeting and verbatim minutes
3 will be produced and made available on the council's website.
4

5 For the purposes of voice identification, and to ensure you are
6 able to mute and unmute your line, please identify yourself by
7 stating your full name when your name is called for attendance.
8 Once you have identified yourself, please re-mute your line. If
9 you're in the room, you can just press the microphone in front
10 of you, and it's tied into the webinar as well.
11

12 To signal you wish to speak during the meeting, if you're in
13 the room, just raise your hand, and I will be able to see you.
14 If you are on the webinar, use the raise-your-hand function,
15 and staff will display your name on the notepad on the screen.
16 Please remember to identify yourself before speaking and to also
17 to re-mute your line or, if you're in the room, your microphone,
18 each time you finish speaking. Jess, do you want to run through
19 it?
20

21 **MS. JESSICA MATOS:** Lee Anderson.
22

23 **DR. LEE ANDERSON:** Lee Anderson.
24

25 **MS. MATOS:** Luiz Barbieri.
26

27 **DR. LUIZ BARBIERI:** Luiz Barbieri.
28

29 **MS. MATOS:** Harry Blanchet.
30

31 **MR. HARRY BLANCHET:** Harry Blanchet.
32

33 **MS. MATOS:** Dave Chagaris.
34

35 **DR. DAVID CHAGARIS:** David Chagaris.
36

37 **MS. MATOS:** Roy Crabtree.
38

39 **DR. CRABTREE:** Roy Crabtree.
40

41 **MS. MATOS:** Benny Gallaway.
42

43 **DR. BENNY GALLAWAY:** Benny Gallaway, here.
44

45 **MS. MATOS:** Thank you. Doug Gregory.
46

47 **MR. DOUGLAS GREGORY:** Doug Gregory, here. I will note that I
48 didn't know that we could participate from a train.

1
2 **MS. MATOS:** David Griffith.
3
4 **DR. DAVID GRIFFITH:** David Griffith, here.
5
6 **MS. MATOS:** Paul Mickle.
7
8 **DR. PAUL MICKLE:** Paul Mickle.
9
10 **MS. MATOS:** Trevor Moncrief.
11
12 **DR. TREVOR MONCRIEF:** Trevor Moncrief.
13
14 **MS. MATOS:** Jim Nance.
15
16 **DR. JIM NANCE:** Jim Nance, here.
17
18 **MS. MATOS:** Will Patterson.
19
20 **DR. WILL PATTERSON:** Will Patterson, here.
21
22 **MS. MATOS:** Sean Powers.
23
24 **DR. SEAN POWERS:** Sean Powers, here.
25
26 **MS. MATOS:** Steven Scyphers.
27
28 **DR. STEVEN SCYPHERS:** Steven Scyphers is here.
29
30 **MS. MATOS:** Jim Tolan.
31
32 **DR. JIM TOLAN:** Jim Tolan.
33
34 **MS. MATOS:** Rich Woodward.
35
36 **DR. RICH WOODWARD:** Rich Woodward is here.
37
38 **MS. MATOS:** Jason Adriance.
39
40 **MR. JASON ADRIANCE:** Jason Adriance.
41
42 **MS. MATOS:** Michael Allen.
43
44 **DR. MICHAEL ALLEN:** Mike Allen.
45
46 **MS. MATOS:** John Mareska.
47
48 **MR. JOHN MARESKA:** John Mareska.

1
2 **MS. MATOS:** Luke Fairbanks.
3
4 **DR. LUKE FAIRBANKS:** Luke Fairbanks is here.
5
6 **MS. MATOS:** Jack Isaacs.
7
8 **DR. JACK ISAACS:** Jack Isaacs is here.
9
10 **MS. MATOS:** Mandy Karnauskas. Josh Kilborn.
11
12 **DR. JOSH KILBORN:** Josh Kilborn, here.
13
14 **MS. MATOS:** Steven Saul. Tom Frazer.
15
16 **DR. TOM FRAZER:** Tom Frazer.
17
18 **MS. MATOS:** Carrie Simmons.
19
20 **EXECUTIVE DIRECTOR CARRIE SIMMONS:** Thank you. I just wanted
21 to welcome everyone, and it's great to see some folks in the
22 room and hear some voices on the webinar. Carrie Simmons,
23 Executive Director, and I'm glad to have this group together
24 again. We have a couple of new members, and so I appreciate
25 your time and your attention to a lot of the different materials
26 that were put on your agenda, and I look forward to a productive
27 meeting. Thank you.
28
29 **DR. JOHN FROESCHKE:** John Froeschke, Deputy Director.
30
31 **DR. LISA HOLLENSHAD:** Lisa Hollensead, Fishery Biologist.
32
33 **MS. CARLY SOMERSET:** Carly Somerset, Fisheries Outreach
34 Specialist.
35
36 **DR. MATT FREEMAN:** Matt Freeman, Economist.
37
38 **MR. RINDONE:** All right. Thank you, everyone. We're going to
39 start with the agenda. There's a couple of items on the agenda
40 that have been struck through, and these are because these items
41 either weren't received in time to be posted or they were pulled
42 for other reasons, like they weren't going to be available at
43 all, but, outside of that, does anyone have any edits to the
44 agenda? All right. Does anyone have any opposition to the
45 agenda being approved? Seeing no hands, by acclamation.
46
47 The next thing is approval of the minutes for the May 3 and 4,
48 2021 webinar meeting, and these minutes have been posted to the

1 meeting materials page for the SSC meeting, and so you guys
2 should have had an opportunity to peruse that great reading.
3 Does anyone have any edits to the minutes? No hands in the
4 room. All right. Does anyone have any opposition to the minutes
5 being approved as written? Hearing no mutiny, the minutes are
6 approved by acclamation.

7
8 The next thing is Election of a Chair and Vice Chair.
9 Classically, the way that these positions have worked is that
10 they are one-year appointments, with the option to be
11 reappointed for a second consecutive year, but the Chair or Vice
12 Chair typically doesn't sit in that position for more than two
13 consecutive years. The last Chair was in that position for
14 almost three years, but, COVID being COVID, that was part of
15 the reason for that.

16
17 For doing this, if there is more than one person nominated, or
18 that puts their name forward for either position, we will have
19 a silent vote, where you guys will just put in the subject line
20 of your email "Chair", or, if it's for the Vice Chair, "Vice
21 Chair", and send me an email with the name of the person that
22 you are voting for. I will open the floor for nominations for
23 the Chair position for the SSC. The perk to this position is
24 you get to work with me.

25
26 **ELECTION OF THE CHAIR AND VICE CHAIR**

27
28 **DR. POWERS:** Ryan, a question. Does it have to be a Standing
29 member, or can it be Reef Fish or somebody else?

30
31 **MR. RINDONE:** It has to be a standing member of the SSC. That's
32 a good thing to point out, Sean. Thank you. Yes, it has to be
33 a standing member of the SSC, because the Standing SSC members
34 are the ones that are present for all SSC meetings, regardless
35 of subject material, and so this potato is hot, and I'm looking
36 to toss it. Luiz.

37
38 **DR. BARBIERI:** Thank you, Ryan. I would like to nominate Jim
39 Nance for Chair.

40
41 **MR. RINDONE:** Jim, do you accept?

42
43 **DR. NANCE:** I would be willing to do it.

44
45 **MR. RINDONE:** All right. Are there any other nominations for
46 Chair? All right. Seeing none, we'll go ahead and close
47 nominations, and, Jim, since you're the only name up there, you
48 win. All right. The Vice Chair position. Harry.

1
2 **MR. BLANCHET:** I hate to do this without having spoken to the
3 person first, but I would like to ask Paul Mickle if he is
4 interested in the Vice Chair position.

5
6 **MR. RINDONE:** Paul.

7
8 **DR. MICKLE:** Thank you, Harry. I appreciate it, but, just to
9 let you know, I'm eight months into a directorship at a new
10 position, and I am just truly overwhelmed. I would be honored
11 to catch it next time, the Vice Chair, but thank you for the
12 nomination.

13
14 **MR. RINDONE:** All right. Any other nominations for the Vice
15 Chair position? Will Patterson.

16
17 **DR. PATTERSON:** I nominate Luiz Barbieri.

18
19 **MR. RINDONE:** Luiz, do you accept the nomination?

20
21 **DR. BARBIERI:** Thanks, Ryan. I do. Thank you, Will, for the
22 nomination.

23
24 **MR. RINDONE:** All right. Any other nominations for the Vice
25 Chair position? No hands waving in the room. All right. Seeing
26 no other nominations, we will close nominations for the Vice
27 Chair position, and so, Jim and Luiz, you're at the helm.

28
29 **CHAIRMAN NANCE:** Okay. Well, thank you, Ryan.

30
31 **SCOPE OF WORK**
32 **SELECTION OF THE SSC REPRESENTATIVE FOR THE COUNCIL'S AUGUST**
33 **23-26, 2021 MEETING**

34
35 **MR. RINDONE:** Next up, Dr. Nance, will be the Scope of Work,
36 which I will go through item-by-item, as opposed to reading that
37 War and Peace all at once, and we'll just hit each thing before
38 each agenda item, and so, passing on that, next will be the
39 Selection of the SSC Representative for the San Antonio Meeting.
40 This meeting will be held in a hybrid fashion, and so the SSC
41 representative that attends would have the option of attending
42 either in-person or via webinar. The meeting is from August 23
43 to 26, and so if you want to find us a representative.

44
45 **CHAIRMAN NANCE:** Okay. Are there any that want to go to the
46 meeting? I would be happy to go, but, if there is someone else,
47 we can certainly consider that.

1 **DR. CRABTREE:** I think, given it's in your vicinity, that makes
2 sense for you to attend the meeting.

3
4 **CHAIRMAN NANCE:** Okay. I will be happy to attend that meeting
5 and represent the SSC there, and I really appreciate being able
6 to do that, because this committee has always functioned very
7 well together, and I think we can continue to do that, and just
8 remember that the Chairman is just representing the entire
9 committee and not myself there, but I would be happy to do that.

10
11 **DISCUSSION DOCUMENT: SSC'S BEST PRACTICES AND VOTING**
12 **PROCEDURES**
13

14 **MR. RINDONE:** All right, and so, Mr. Chair, the next item will
15 be the discussion document on the SSC's best practices and
16 voting procedures. I will be taking that one on, with some help
17 from Dr. Simmons, and so this is Item Number VI.

18
19 It's just a little two-pager, but I figured, to carve out some
20 time for you guys to talk about this, because this will
21 ultimately be -- How this is finally crafted will ultimately be
22 what we use moving forward, when we're talking about voting on
23 peer review items.

24
25 As you guys -- As many of you, probably most of you, likely
26 remember from the review of the Great Red Snapper Count report,
27 we tried to set up the voting for that to best follow the
28 National Standard 2 Guidance on peer review, in keeping with
29 the best scientific information available.

30
31 The two-page document that you have in front of you was developed
32 in consultation with the Southeast Regional Office and NOAA
33 General Counsel, to try to make sure that everything in there,
34 to the absolute best avenue possible, was in keeping with
35 National Standard 2 and the BSIA requirements in Magnuson.

36
37 These National Standards, obviously, are things that the council
38 has to follow in any amendment development and, with respect to
39 National Standard 2, that's the one that mostly falls upon the
40 SSC to make sure the SSC follows.

41
42 When we're talking about voting, and how that's going to affect
43 the decisions that are made by the SSC and the recommendations
44 that go forward to the council, there are certain participatory
45 things that SSC members need to have done in advance. Like you
46 have to have filled out your SOFI when you're asked to, your
47 statement of financial interest, and those are kept with the
48 NMFS Regional Administrator, and they are also available to the

1 public. They are posted on the council's website. That last
2 bit is a new requirement, and so you can see all of those on
3 the SSC page on the council's website.

4
5 If your financial interests substantially change, you have to
6 provide an updated SOFI within thirty days, and then that will
7 also be provided to the Regional Administrator and posted
8 online. When considering information for making informed
9 recommendations to the council, SSC members participating in
10 the decision-making process should possess relevant expertise,
11 demonstrate independence, and be free of conflicts of interest,
12 and that is just about plagiarized directly from the Act.

13
14 Per the NS 2 Guidelines, and this is directly from the Act, peer
15 reviewers, in this case you guys, the SSC members, must not have
16 any conflicts of interests with the scientific information,
17 subject matter, or work product under review or any aspect of
18 the statement of work for the peer review. For the purposes of
19 this section, a conflict of interest is any financial or other
20 interest which conflicts with the service of the individual on
21 a review panel, because it could significantly impair the
22 reviewer's objectivity or create an unfair competitive advantage
23 for a person or organization.

24
25 Further, peer reviewers, the SSC members, must not have
26 contributed or participated in the development of the work
27 product or the scientific information under review. For peer
28 review products of high novelty or controversy, a greater degree
29 of independence is necessary, to ensure credibility of the
30 process.

31
32 Peer reviewer responsibilities should rotate across a pool of
33 qualified reviewers or among the members of a standing peer
34 review panel, which is something that we already do through
35 SEDAR, and it's rare that you have the same person on all SEDARs,
36 or in all workshops, to prevent a peer reviewer from repeatedly
37 reviewing the same scientific information, recognizing that, in
38 some cases, repeated service by the same reviewer may be needed,
39 because of limited availability of specialized experts.

40
41 Where the rubber meets the road is this last paragraph here,
42 and I realize that I am reading all of this, and everyone here
43 is literate, but this is just to read it into the record.

44
45 When the SSC is acting as the peer review body for a stock
46 assessment or other study, an SSC member should abstain from
47 any motions and voting on the issue of best scientific
48 information available if they have served as the analytical

1 lead, as a lead investigator, or been otherwise directly
2 involved in the development of the stock assessment beyond the
3 role of a workshop panelist, and this is in keeping with how
4 SEDAR has operated since 2005. If you were a workshop panelist
5 at some point, you could still review the assessment in your
6 capacity as an SSC member when the assessment is complete and
7 comes to the council for review.

8
9 During the best scientific information available deliberations,
10 the SSC member is free to participate in the discussion, answer
11 questions, and provide pertinent expertise and feedback to the
12 SSC. After a decision has been reached on the best scientific
13 information available, which is the ultimate decision that says,
14 okay, this is good stuff, and we're going to look at using this
15 for management, and so that decision is now out of the way, the
16 SSC member, or members, are at liberty to motion and vote on
17 remaining management advice, such as catch limits,
18 appropriateness of allocation calculations, decision tools
19 developed to inform management action, et cetera.

20
21 The hurdle to get past, if you were the lead investigator of a
22 study that's being considered say for management advice, would
23 be the SSC, less the person that was the lead investigator,
24 declares that we think this is the best scientific information
25 available, and we think that this should be used for management
26 advice, and it will be on myself, the Chair, and the Vice Chair
27 to make sure that, when the motion making is occurring, that
28 that motion happens by itself, and so it's not we think this is
29 BSIA and the OFL should be this and the ABC should be this, but
30 it will just -- That motion will just be is this BSIA or not,
31 and then we'll go to the next thing.

32
33 When we go to the next thing, if you were the lead investigator
34 or whatever, that decision to use that information, that's done.
35 It's already been determined, and so the advice that comes next,
36 going to the council to inform management action, you can
37 participate in that full bore. That is what we're proposing
38 here, and we're trying to keep that in line with, again, National
39 Standard 2, with the peer review guidelines set forth for
40 Magnuson, and are there questions?

41
42 **CHAIRMAN NANCE:** Is this a change, or is this the way it's
43 always been?

44
45 **MR. RINDONE:** It's kind of the way that it's always been, but
46 we just haven't been so deliberate about outlining it. Some of
47 the other councils, for their SSCs, have these voting procedures
48 codified in their standard operating procedures and policies

1 for their SSCs, or for their council as a whole, and we haven't
2 had such language put into the council's SOPPs for the SSC, but
3 we have still more or less been bound to follow it, because the
4 council has to operate under Magnuson, which includes abiding
5 by the National Standards.

6
7 In this case, we're trying our best to clarify it explicitly,
8 so that it creates fewer gray areas for people, and they can
9 better understand when their participation, if they have a
10 conflict -- When they should abstain and when they can step back
11 in, and so, in the room, we have Trevor and David.

12
13 **DR. MONCRIEF:** Just real quick, I know it's probably difficult
14 to foresee all the motions that are going to come out of a given
15 meeting, but will the individual that fall under this be
16 notified prior to the meetings, should they have to be excluded
17 from a given vote?

18
19 **MR. RINDONE:** If it seems rather obvious that somebody should
20 be aware of this, I will reach out to them in advance, and,
21 obviously, if you are presenting a study to the SSC that is
22 being considered for management advice, this would absolutely
23 apply.

24
25 One that's coming up that comes to mind, that you guys will see
26 in September, would be the study by LGL and Associates for the
27 Louisiana Department of Wildlife and Fisheries, and so Dr.
28 Gallaway is a principal for LGL, and, Dr. Gallaway, I know I'm
29 picking on you right now, and so, in determining whether that
30 study constitutes BSIA, for the purposes of what it examined,
31 Dr. Gallaway should not vote on that particular motion, but,
32 once that motion happens, whatever happens after that -- Like,
33 once that vote happens, whatever happens after that, then he
34 can participate again. That would be a contemporary example.
35 Dr. Griffith.

36
37 **DR. GRIFFITH:** Just a point of clarification, and so, if you
38 are the PI on a study, you can participate in all the discussion
39 and stuff, and the only thing you can't do is vote, and that's
40 it?

41
42 **MR. RINDONE:** Yes, and your participation in the discussions is
43 probably pretty critical, because, if there are questions,
44 obviously, you want to hear it from the horse's mouth, and so
45 the only thing that you're really being recused from is on
46 whether it constitutes the best scientific information
47 available. You can't review your own manuscript for publishing,
48 that sort of perspective, and whether it's being used for

1 management advice.

2
3 Once the SSC has determined that we do want to use this for
4 management advice, then you have the opportunity to step back
5 in and vote on how it's going to be used for management advice
6 and what the catch limits might be, what the recommendation for
7 a closed area might be, if that was something that was being
8 examined, or whatever the circumstance might be. Online, we
9 have Harry and Jim, and so we'll start with Harry.

10
11 **MR. BLANCHET:** I have two kind of unrelated questions, and this
12 really has to do with what role we may serve as SSC members that
13 is beyond the role of a workshop panelist, which is defined
14 language right now, and I see two things that we can do regularly
15 in our everyday jobs, and one is as a data provider.

16
17 Our various agencies provide information sources that go into
18 stock assessments, and we may or may not be personally involved
19 with the collection, analysis, summarization, or whatever of
20 that data, but that is basically coming from our shop, and so I
21 would see that as something as being beyond the role of a
22 workshop panelist.

23
24 If we leave that as it is, that would exclude a fair number of
25 SSC members from those votes, especially something as complex
26 as red snapper, for instance, where we've got everything but
27 the baby in the bathwater in there, and sometimes we've got the
28 baby in there.

29
30 The other aspect is kind of related to the type of an issue that
31 you just mentioned with Dr. Gallaway, in that some of us may
32 have reviewed all or parts of a document, going into that
33 assessment, prior to it going into that assessment, and so,
34 again, that's beyond the role of a workshop panelist. I think
35 I would like some clarification about some of those other types
36 of roles that might either require or not require exclusion, so
37 that we can be clear, going forward. Thank you.

38
39 **MR. RINDONE:** Dr. Simmons.

40
41 **EXECUTIVE DIRECTOR SIMMONS:** Okay. I will try to start
42 answering, I think, some of that, Harry, some of your questions.
43 Just a couple of things to note. Other councils' SSCs do not
44 vote, and they operate by consensus, and so that's the first
45 thing that I wanted to tell you all.

46
47 We historically, in the Gulf, have voted, and so that's why
48 staff has drafted the suggestion this way, and it doesn't mean

1 you can't go back, Mr. Chair, to trying to have a consensus in
2 how you want to run the meeting, but we know sometimes that is
3 not easy to do, and so that's a different approach we could
4 take.

5
6 When we were drafting these, Harry, we weren't suggesting that
7 we would exclude the examples you gave in your scenarios from
8 voting on BSIA. From what I understand, an independent reviewer
9 that was reviewing a proposal that was put before your agency
10 to complete said work, you were not directly involved in the
11 work, correct, and are you a co-author, a co-lead, a co-PI, and,
12 to me, then you would exclude yourself from that first part of
13 that vote.

14
15 If you are an independent reviewer, you're kind of seeing --
16 You're kind of like a -- What do they call us when we're doing
17 the NOAA RESTORE? We're like the manager, and don't call us
18 co-PIs, and we're not co-investigators, but we're helping
19 facilitate, and so I don't see you as having to exclude yourself
20 from voting in that case. Technical monitor. There you go.

21
22 You're making sure that you're getting what you need, and so we
23 weren't intending that you would exclude yourself from that
24 vote, but, you yourself, if you feel like you yourself should
25 exclude yourself from voting on this, that's totally up to you.
26 I would consult with the Chair about that, make a decision and
27 consult with us about that and make a decision, but that was
28 not our intent when we drafted this.

29
30 **MR. BLANCHET:** Okay, and I was mainly concerned about that
31 statement that any -- It seems to be pretty definite about what
32 roles we can play, and those were two cases where I thought we
33 were going beyond the role of a workshop panelist, and so that
34 was my concern.

35
36 **DR. MICKLE:** Real quick, Dr. Simmons, you made a statement there
37 about consensus and how the other SSCs and councils require
38 consensus, I guess in other places, and, in the Gulf of Mexico,
39 we've always voted. If I am reading this correct, and you said
40 that it would be the Chairman's choice for consensus or not,
41 but, if I'm reading this correctly, in this document that Ryan
42 has presented here, it says, however, it is up to the regional
43 fisheries management council to determine the process for
44 administrative motioning and voting best practices, and it's
45 actually the council's decision of how -- If we do a consensus
46 or not, and not the Chair of the SSC. Am I reading that
47 correctly?

48

1 **EXECUTIVE DIRECTOR SIMMONS:** Well, I mean, the council has to
2 sign-off on this, and they saw a draft of it before we put it
3 before you, but I'm just telling you that other regional
4 councils do not necessarily operate their SSCs by voting. They
5 have a consensus process that they go through. If there are
6 panel members that can't agree with that consensus, they write
7 reports, I guess minority reports of sorts, saying why they did
8 not agree with that, but they don't vote like we do.

9
10 **MR. RINDONE:** Roy.

11
12 **DR. CRABTREE:** I believe, Carrie, and that was my understanding,
13 that this is the only SSC that doesn't really operate as a
14 consensus body. I mean, I think, if we had a consensus that we
15 wanted to operate as a consensus body, I suppose the council
16 could come in and say we don't agree with that, but I don't ever
17 recall the council engaging at that level in our business.

18
19 One of the benefits of consensus body is, when you receive
20 science advice, is this the best available science, and it comes
21 to you as an eight-to-seven vote, that's really not very
22 compelling, and, a lot of times, I think it's much more valuable
23 if you spend the extra time to see what can we all agree on,
24 from a science perspective, and then sometimes, if we can't
25 agree, what that tells me is the answer is really not in the
26 science, and we probably ought to lay out the pros and cons and
27 let the policy makers decide.

28
29 I have watched the South Atlantic and the Caribbean operate as
30 consensus bodies, and it seems like it works pretty well, and
31 it does avoid some of these issues, in terms of voting and split
32 decisions and those types of things, and so I think it is
33 something worth considering.

34
35 **CHAIRMAN NANCE:** I know that, even when we have voting though,
36 we do have a rigorous discussion, and, during that discussion,
37 we're doing the pros and cons and so forth, and all of that is
38 on the record. While the vote may be fifteen-to-one, and that's
39 pretty good, but, if it's eight-to-seven, that shows that it
40 was something that we were having issues with trying to come to
41 agreement on, for sure. I don't know if that's -- We still, in
42 the voting, have that discussion.

43
44 **MR. RINDONE:** Carrie.

45
46 **EXECUTIVE DIRECTOR SIMMONS:** Exactly. That's what I am
47 suggesting, and so I think, on a lot of issues, if the Chair
48 had a good feeling that we didn't have to go to voting, and

1 there was a solid consensus of the panel, of the committee, that
2 we wouldn't have to necessarily vote on every single issue. On
3 some things, it may require votes, and this is what we're
4 suggesting, but, if the committee would want to consider
5 something like, on some issues, we suggest that the committee
6 is primarily going to operate on a consensus.

7
8 In the cases where the committee can't reach a consensus, with
9 a few minority opinions, then we would follow this process, but
10 we want you to tell us if that's how you want to operate, is
11 what we're looking for.

12
13 **MR. RINDONE:** Online, we have Jim Tolan.

14
15 **DR. TOLAN:** I withdraw my comment. Thank you.

16
17 **MR. RINDONE:** All right. Doug Gregory.

18
19 **MR. GREGORY:** Good morning. I have been serving on the Caribbean
20 SSC since 2018, and they currently do vote, and they also
21 recently have been given advice from NOAA General Counsel that
22 anyone involved in the research cannot vote on any aspect that
23 involves that research, and so they have a more strict criteria
24 than what is outlined in this document. Personally, I think
25 people should be able to vote on all aspects of it, and we wear
26 different hats for different reasons, but there are differences
27 between the councils.

28
29 **MR. RINDONE:** Doug, you and I talked about this a little bit,
30 and it may be a more nuanced discussion for NOAA GC to have on
31 that issue. I did get a couple of them involved with the
32 crafting of what you guys have in front of you right here, and
33 so, anywhere where you guys want to add more explicit language,
34 that is something that we can certainly consider and put back
35 before the council. As Dr. Simmons said, the council ultimately
36 has to sign-off on whatever it is that this two-pager becomes,
37 and this will be included in the SOPPs. Dr. Anderson.

38
39 **DR. ANDERSON:** Thank you. I sit on the Mid-Atlantic SSC also,
40 and they use voting there, too. Sometimes they will come up
41 with a consensus, but voting is always possible. I just wanted
42 to make that clear.

43
44 **MR. RINDONE:** Lee, do they -- Just out of curiosity, do they
45 start at consensus and then determine a need to vote, or do they
46 start with a vote and then, if no one objects, then it's just
47 listed as a consensus statement? Like what's the order of
48 operations?

1
2 **DR. ANDERSON:** It's the second way. They will start with a
3 vote. No, I guess he will say, is there any objection, or
4 something like that, and then, if there is, then they would go
5 to a vote. Quite frankly, I like that way, and, if you've got
6 an eight-to-seven situation, it's going to be very difficult to
7 get to a consensus.

8
9 **MR. RINDONE:** That's essentially what we do now. We ask if
10 there is any objection, and then, if there's not, then the
11 motion will carry without opposition. If there is objection,
12 then, ultimately, it goes to a vote, the difference, I guess,
13 being that, if we were trying to operate via consensus, then
14 additional discussion would have to happen.

15
16 Kind of alluding to something that Dr. Crabtree said, sometimes
17 the solution might be in breaking down the decision being
18 considered into smaller components. Instead of having a very
19 large, sweeping motion that encompasses quite a bit, and, I
20 mean, you guys have really put forward some novels every now
21 and then, some pretty long motions with a lot of information in
22 them, maybe the solution would be to take things into smaller
23 pieces, and then that would help better identify where people
24 are having differences. Benny.

25
26 **DR. GALLAWAY:** When you get to the point where you know that
27 you've got at least two groups, two opinions, represented, I
28 think the consensus approach is really good, in that both a
29 majority report and a minority report, from my experience, is
30 required, and that enabled a clear presentation of what the
31 basis for the two opinions are that a decision-maker can look
32 at and form their own opinion, and so I'm really in favor of
33 the consensus approach, even if we use voting to determine what
34 level constitutes a consensus, et cetera. When we have more
35 than one opinion represented, a detailed report from each view
36 I think is critical and important. Thanks.

37
38 **MR. RINDONE:** We have Harry up next.

39
40 **MR. BLANCHET:** My primary concern was not with voting or not
41 voting, and I really did not think we were going down that
42 particular road with this item, and I was more concerned about
43 the role of the SSC as a peer review body, and I really would
44 like to see that line about what the roles are, or are not, more
45 precisely defined, so that it's something beyond this discussion
46 here about, well, if you were a principal investigator, you
47 should not --

1 On a document, you shouldn't vote, and so the document gets
2 provided to the Southeast Fisheries Science Center, and it
3 becomes a keystone of the next assessment, whether it's a growth
4 curve or whether it's a mortality rate or whatever, and then is
5 that something that is disqualified? I hope not, but I would
6 like to see those kinds of things better defined, and I agree
7 that this is really a discussion that General Counsel can
8 probably do a lot better than we can, but I just don't want to
9 leave that line as it is right now, because, five years from
10 now, it's going to look like we've basically got one role that
11 is allowable.

12
13 **MR. RINDONE:** Harry, I will take a swing at this. This language
14 here is obviously open to modification, and so, if there's
15 something in particular that you think that we need to alter,
16 by all means, let's work on that.

17
18 We tried to leave it as barebones and minimal as we possibly
19 could, to exclude as few circumstances as possible, to leave
20 more opportunity for voting, basically to the greatest degree
21 that we could, under National Standard 2.

22
23 If you think though that we need to add more language in here,
24 to be more explicit about when someone's involvement doesn't
25 preclude them from voting, then let's absolutely add that in
26 here. What you're describing, and like let's say -- I will pick
27 on John Mareska.

28
29 If John shows up to SEDAR 74 for red snapper with life history
30 information from Alabama, well, that shouldn't -- Based on how
31 SEDAR has operated under National Standard 2 for the better part
32 of sixteen years now, that doesn't preclude him from weighing-
33 in on the decisions at-large that are brought before SEDAR 74,
34 and it doesn't preclude him from being a reviewer of the
35 assessment when it ultimately comes before the SSC. Well, in
36 the case of a research track, it operates a little differently,
37 but you guys understand what I am saying.

38
39 As a member of the SSC, John would still be able to make
40 decisions with the rest of you on the assessment at-large,
41 despite couriering that life history information from the state,
42 that was likely collected by people other than himself, but
43 being able to speak from a position of expertise and authority
44 on it, because it comes from his state, and it's developed by
45 his people, and it falls within his line of expertise.

46
47 The only time, under those circumstances, that John would have
48 to just kind of fold his hands and let the discussion -- Well,

1 SEDAR operates by consensus, but just kind of like let the
2 discussion evolve is when the life history panel, in this
3 particular example, is trying to determine whether they are
4 going use that information for some component of an aspect of
5 the life history of the species within the assessment.

6
7 He should advocate for the data, to the extent that the data
8 are defensible for themselves, but, as far as whether or not
9 those data are going to be included at that stage in the data
10 workshop, he just kind of sits that out, and that typically
11 works pretty well in the SEDAR process, but, once that SEDAR is
12 completed, and it gets to the SSC, the cuffs are off, and there
13 are no restrictions on the advice that he can provide and when
14 he can vote. Does that make sense?

15
16 **MR. BLANCHET:** It does, and I absolutely understand the reasons
17 to not have a whole list of thou-shalt and thou-shalt-nots,
18 because there is always new roles and new issues that are not
19 included in that list, but it's just concerning to me, in terms
20 of how this is going to be seen five years from now, without
21 more guidance, and that's all.

22
23 **MR. RINDONE:** I think what part of this is coming from might be
24 this part of the sentence here that says, "beyond the role of a
25 workshop panelist", and so workshop panelist, in this case, is
26 a definable noun.

27
28 It means something as part of the SEDAR process, and a workshop
29 panelist is someone who is appointed by the SEDAR cooperator,
30 in this case, for you guys, the Gulf Council, to attend a SEDAR
31 workshop, and they can fill the role of data provider, provide
32 expertise on the data, provide analytical expertise for
33 examining the data, a number of different things, but workshop
34 panelists are data providers, and so, by function of the way
35 that this is written, and this is how I am personally reading
36 this, and perhaps you will read this a little bit differently,
37 now that I have said what I have said, but, if you're a data
38 provider -- Like using the example of John bringing life history
39 data from Alabama, you're filling the role of a workshop
40 panelist, to the definition. Does that give a little bit
41 different perspective, or do we need to further clarify it
42 somehow with some additional language?

43
44 **CHAIRMAN NANCE:** Well, let me throw this in. What if we just -
45 - When we go down the road of having a whole bunch of lists of
46 who can do things, what if we just cut it off at if they served
47 as the analytical lead or lead investigator, period?

1 That is really what we're talking about, is the individual
2 that's involved directly with the assessment or the
3 investigation of that project, and everything else is external,
4 I think, whether you're an initial reviewer or things like that,
5 and, I mean, we could go down and have a hundred different
6 things, but, if we cut it off at those two things, I think that
7 would serve us better.

8
9 **MR. RINDONE:** Carrie, do you recall anything specific about that
10 last part of that sentence that we were thinking about that
11 could be grounds for someone to recuse themselves from a vote,
12 the "or been otherwise directly involved in the development of
13 a stock assessment beyond the role of a workshop panelist"? I
14 am trying to like rapidly burn through my brain, trying to think
15 of different scenarios that would apply.

16
17 **EXECUTIVE DIRECTOR SIMMONS:** I can't recall right now. I think,
18 in the past, we might have had a state or a federal lead, but I
19 think it's covered there by analytical stock assessment lead,
20 or lead investigator, and so perhaps that would make it cleaner.

21
22 I mean, we can continue to look at this, and say, in two years,
23 if we feel like this doesn't meet our needs, we can bring it
24 back to the council and bring it back to the committee. I don't
25 know that we will put it in the SOPPs. We certainly will put
26 it on the website as our best practices and policies, and we've
27 got to talk to the council about whether it will go in the SOPPs
28 or not, because, every time we modify our SOPPs, it has to go
29 back up to Headquarters for review, and that seems to take a
30 long, long time, and so I'm not sure yet if it will actually go
31 in the SOPPs, but it will certainly go on the website, and we'll
32 be following this, after you guys concur.

33
34 **CHAIRMAN NANCE:** Doug.

35
36 **MR. GREGORY:** Thank you. With regard to the consensus
37 discussion, which is really not on the agenda, I would suggest
38 that we put that on a future SSC agenda, because there has been
39 a lot of interest in that in recent years, and I think it's
40 worthy of a discussion, and it's something that could be
41 helpful, if done right, and could be harmful if not done right,
42 and so I suggest we just kind of bump that to a future meeting
43 and really have an in-depth discussion of it. Thank you.

44
45 **MR. RINDONE:** We can do that, Mr. Chair. I will make a note.

46
47 **CHAIRMAN NANCE:** Yes, that would be good. Rich.

48

1 **DR. WOODWARD:** I mean, I think the point here is to eliminate
2 any potential conflict of interest, and, personally, I can
3 easily see that I would have a conflict of interest on a project
4 in which I was heavily involved, but was not the lead, and so I
5 am not -- Far be it for me to opine on matters about which I
6 know nothing, but I can easily see a potential conflict, even
7 if I'm not the lead.

8
9 **CHAIRMAN NANCE:** What would be an example of that, Rich?

10
11 **DR. WOODWARD:** If I was involved in a research project in which
12 I was intimately involved in the development of the analysis,
13 but I wasn't the leader of the research, I would feel emotionally
14 connected to the results, even if I wasn't the one at the top
15 of the bill, and so, I mean, that's why I don't review my own
16 papers, even if I'm not the first author. That's sort of my
17 perspective, but, as I said, I don't -- I have very limited
18 understanding of the specific issues about which we're talking
19 about here today, and so take this all with a very serious grain
20 of salt.

21
22 **CHAIRMAN NANCE:** I appreciate those comments, for sure, and I
23 think it's always been -- Anybody can abstain on any different
24 issue, for sure, and I think we've done that over the past, and
25 so I think what we want to do is, on this one, just clean this
26 up, because I felt like, when we did the red snapper review, it
27 was very -- It was hard to know what people could do and what
28 they couldn't do, and I think this really adds a tremendous
29 insight into what we're able to do, that you can vote on this,
30 and then you can talk about it and things like that, and so I
31 do appreciate this, and I would like to see this happen. Josh.

32
33 **DR. KILBORN:** I wanted to follow-up on Rich's comments, because
34 I am actually going to fall into that category, when it comes
35 into the Greater Amberjack Count. You know, there's a large
36 group of scientists that have been put together to work on that
37 project, and I am not one of the leads on that project, but I
38 will be intimately involved in that work, and so that's just
39 another example of the kind of thing that Rich was referring
40 to. Thank you.

41
42 **CHAIRMAN NANCE:** Will.

43
44 **DR. PATTERSON:** Thanks, Jim. I think one way that we could
45 suggest an edit to the text here that could get away from this
46 idea is just, instead of saying it's a lead investigator, just
47 say as the principal or a co-principal investigator, and I think
48 "lead" is meant here as somebody who has a significant input in

1 the construction of the project and analysis, but not
2 necessarily as the principal investigator, but, if we were more
3 explicit, then I think that would help clarify what folks are
4 talking about here.
5
6 **CHAIRMAN NANCE:** So what would you suggest as the wording for
7 there, Will?
8
9 **DR. PATTERSON:** I would say, "as the principal or a co-principal
10 investigator".
11
12 **MR. RINDONE:** How does that taste?
13
14 **DR. PATTERSON:** You could put it in parentheses, "i.e.,
15 principal or co-principal investigator", just so people
16 understand what you mean by "lead".
17
18 **MR. RINDONE:** Mr. Chair, I'm just kind of looking to see if
19 anyone has any general thoughts on that edit. Trevor.
20
21 **DR. MONCRIEF:** Will we still be removing that last part of the
22 sentence?
23
24 **MR. RINDONE:** I think we can do a strike-through for last part
25 of that sentence there, starting with "or been otherwise", and
26 just highlight "or been otherwise" all the way to the end of
27 that sentence. Just do strike-through there, and then, John,
28 you're helping with that, with Will's?
29
30 **CHAIRMAN NANCE:** Okay. Any discussion on those edits?
31
32 **MR. RINDONE:** Dr. Simmons.
33
34 **EXECUTIVE DIRECTOR SIMMONS:** As long as that includes any stock
35 assessment lead. I mean, we don't have, I don't think, someone
36 right now that would be presenting that that's on the SSC, but
37 that has occurred in the past.
38
39 **CHAIRMAN NANCE:** I think we need to keep analytical lead, or
40 maybe how to have it is if they serve as the analytical lead or
41 principal or co-investigator. Would that take care of that?
42
43 **MR. RINDONE:** So "as the analytical lead, or principal". There
44 we go.
45
46 **DR. KILBORN:** I am not sure how those are materially different
47 from one another, analytical lead or principal investigator.
48 Aren't those essentially synonyms?

1
2 **MR. RINDONE:** They are, but it's just a difference in how those
3 positions are described between when say academic research is
4 done for like a project that one of you guys might be on versus,
5 in the SEDAR process, the lead analyst is called the lead
6 analyst, or the analytical lead, and so they are synonyms, but
7 different places use different terminology, and so, by being
8 explicit about it in here, we can hopefully mop up some of the
9 gray area.

10
11 **DR. KILBORN:** I guess, once again, this would allow someone like
12 myself to vote on something that I was involved in, specifically
13 looking at this amberjack project coming up. I am involved in
14 that work, but I am not listed as a principal, a PI or a co-PI,
15 but I will be heavily involved in that work and the analysis,
16 and so I'm not quite sure that striking through the last part
17 of that sentence is the best idea, if we want to be explicit
18 about defining roles. I mean, I would still take it upon myself
19 to recuse, because I feel it's the right thing to do, but not
20 everyone may feel that way.

21
22 **CHAIRMAN NANCE:** Ryan.

23
24 **MR. RINDONE:** Thank you, and, like Mr. Chair said, like Dr.
25 Nance said, you can recuse yourself at any time, for any reason,
26 and you can abstain from a vote at any time, for any reason that
27 you feel is most appropriate. It's not to -- Nothing about this
28 is set up to prevent someone from recusing themselves or forcing
29 someone to have to vote on something, and it's always your
30 prerogative to abstain from a vote.

31
32 Mr. Chair, when we're looking at how we're going to develop this
33 language, I think, at this point though, we've still heard
34 arguments for getting rid of and for perhaps keeping that last
35 sentence, and so I don't know how you want to approach the
36 editing process on this. We certainly still have plenty of time
37 left to discuss.

38
39 **CHAIRMAN NANCE:** Let's hear Luiz and then Harry.

40
41 **DR. BARBIERI:** Thank you, Mr. Chairman. My thought, or
42 recommendation, here is exactly to that point, and to the point
43 that Josh just made, and so perhaps, instead of having that
44 sentence there, have something like "or had any direct
45 participation as a member of the analytical team".

46
47 What I am thinking about is, for example, in my case, where I
48 do not just work for FWC/FWRI, but I actually direct the Marine

1 Fisheries Research Program, and so a lot of the folks conducting
2 -- Not a lot, but all the folks conducting stock assessments
3 from our team actually are under my group, are members of my
4 group, but, if it haven't really been a member of the analytical
5 team, or participated in any of the analysis, that would not,
6 in my opinion, signify a conflict of interest.

7
8 I mean, that's to Josh's points directly. Even if he's not a
9 co-PI or a co-lead in that project, but he's going to be
10 participating in production of analytical products, that is
11 almost like being a co-author in a paper later on that he will
12 be therefore reviewing if he is a participant in that voting
13 process. How about that?

14
15 **CHAIRMAN NANCE:** So what would you add, so Jessica can add that?

16
17 **DR. BARBIERI:** After "co-principal investigator", perhaps "or
18 had any direct participation as a member of the analytical
19 team", at least as draft language that we can improve upon, but
20 you get the idea, and you could be the analytical lead or not,
21 be a principal or co-principal investigator or not, but, if
22 you're involved in any of the analytical products that are
23 coming out of that work, that would signify a potential conflict
24 of interest.

25
26 **CHAIRMAN NANCE:** Okay. Harry.

27
28 **MR. BLANCHET:** Luiz had a very similar comment to where I was
29 going, and so I'm good with that.

30
31 **CHAIRMAN NANCE:** Okay. Thank you. Jason.

32
33 **MR. ADRIANCE:** Thank you, Mr. Chair. My question, I guess, is
34 more at the ten-thousand-foot level, and any of these changes
35 we make, and to Josh's point of anyone is able to abstain, but,
36 if someone may choose, or choose not to, if they were involved
37 in something, based on how this is reworked, will NOAA General
38 Counsel give us some guidance on this, because what I would
39 hate, in the end, is for us to deliberate about something and
40 come up with our advice to the council and then someone turn
41 around and discredit that, because someone abstained, and
42 someone didn't, that may or may not have been involved. Thanks.

43
44 **CHAIRMAN NANCE:** Thank you for those thoughts. Any other
45 comments on this language? I would like -- Bob Gill is not here
46 anymore, and so we don't have motion makers, and so we're going
47 to have to take it upon ourselves to get a motion out, but I
48 would like to have a motion on accepting this, with those edits.

1
2 **DR. GRIFFITH:** I will move to accept the edits as written up
3 there.

4
5 **DR. ISAACS:** I will second.

6
7 **MR. RINDONE:** We have a motion by Dr. Griffith and a second by
8 Jack Isaacs.

9
10 **CHAIRMAN NANCE:** Paul.

11
12 **DR. MICKLE:** Just a point of clarification. What's the next
13 step, if this passes? Does it go in front of the council and
14 make its way into the SOPPs, or is it our little rule-following
15 document? Is it internal, or can we have some guidance, please?
16

17 **CHAIRMAN NANCE:** Carrie, do you want to address that question,
18 or Ryan?

19
20 **MR. RINDONE:** I've got it. The next thing that will happen is
21 we'll edit the document that you guys have in front of you, if
22 this motion passes, with the revised language, and it will go
23 back before the council, and we will put it on the council
24 website, under the SSC tab, as the standard operating procedure
25 for SSC voting. It won't go in the council's formal SOPPs, as
26 Dr. Simmons said, until there's a -- Probably unless or until
27 there is a larger change to the SOPPs, because that has to go
28 up to Headquarters, and that moves at a snail's pace uphill,
29 but we'll put this up on the council's website so that everybody
30 know that, under these circumstances, this is how this body is
31 going to respond to this situation.
32

33 **CHAIRMAN NANCE:** Any other discussion? Any issues with -- I am
34 trying to think of the term here. **Any opposition to this motion?**
35 **I don't see any opposition, and so it's been accepted.** Thank
36 you, and thanks for making the motion.
37

38 **MR. RINDONE:** All right. That brings us a little bit early to
39 the point that we were going to have a break, and, because of
40 how we have the schedule set up, Mr. Chair, we weren't trying
41 to move a whole bunch of things around. If you wanted to try
42 to tackle some things ahead of time, some of the things at the
43 end of today --
44

45 **CHAIRMAN NANCE:** For red grouper, we scheduled that for right
46 after lunch?
47

48 **MR. RINDONE:** That's correct, and so Dr. Sagarese will give that

1 presentation from the Science Center after lunch, and so I don't
2 think we should move that one.

3

4 **CHAIRMAN NANCE:** No, we don't want to move that one. Let's look
5 and see if there is --

6

7 **MR. RINDONE:** There's a couple of bits of low-hanging fruit
8 there on the backend of today, like Items X, XI, and XII, that
9 are all mine, if you wanted to tackle one or two of those before
10 our scheduled break, and I think we could definitely tackle X
11 and XII, if you wanted to.

12

13 **CHAIRMAN NANCE:** Let's go ahead and do those, Ryan.

14

15 **MR. RINDONE:** All right. Carrie.

16

17 **EXECUTIVE DIRECTOR SIMMONS:** Did you want Julie to go through
18 that process first, so everybody -- That it's fresh in their
19 minds about the topical working groups and the various
20 operational assessments and what's in those scopes of work?

21

22 **MR. RINDONE:** Well, if she's on, okay, but I think Dr. Katie
23 Siegfried had a few slides that she was going to be presenting
24 after Julie's, and so we kind of need both of them together.
25 If they're prepared to do that now, then we could do that now.
26 Julie.

27

28 **DR. JULIE NEER:** I need about fifteen minutes, because I'm
29 wrapping up something else, and then I would be ready.

30

31 **CHAIRMAN NANCE:** Is Katie on too?

32

33 **DR. KATIE SIEGFRIED:** I'm here.

34

35 **MR. RINDONE:** Yes, there she is.

36

37 **CHAIRMAN NANCE:** Okay.

38

39 **DR. NEER:** If you give me like ten minutes, I will be ready.

40

41 **MR. RINDONE:** Do you want to take a quick break for fifteen
42 minutes?

43

44 **CHAIRMAN NANCE:** Okay. We'll take a fifteen-minute break, and
45 then Julie and Katie can be on. Thank you.

46

47 (Whereupon, a brief recess was taken.)

48

1 **CHAIRMAN NANCE:** I think we're ready to start again. We're
2 going to go ahead, and I will turn it over to Julie for the
3 presentation.
4

5 **DISCUSSION OF RESEARCH TRACK AND OPERATIONAL ASSESSMENT**
6 **PROCESS**
7

8 **DR. NEER:** All right. Thanks, Jim. My name is Julie Neer, and
9 I am the SEDAR Program Manager for SEDAR here in the Southeast,
10 and I am also the SEDAR Coordinator for the Gulf SSC, for the
11 Gulf Council's assessments, along with -- I also work in the
12 Caribbean, and I work with the Florida assessments as well.
13

14 I was asked to give a pretty quick big-picture overview for
15 SEDAR. If any of the new members have even further questions,
16 which you might, you can always reach out to myself, or to Ryan,
17 who was the SEDAR coordinator before he became council staff,
18 and so we live and breathe this every day, and there is a lot
19 of details that you really don't need to know, but we want you
20 to have at least the big picture.
21

22 SEDAR operates under what we all know of as the limited resource
23 challenges, and you want to be -- That's not the next slide.
24 There should be a slide before that, and I think we skipped two
25 slides. There we go.
26

27 The SEDAR goals. Perfect. SEDAR was developed in 2002, as a
28 council process, and it was developed after an assessment --
29 There was an assessment that went through for red porgy, and it
30 went all the way through the end, and it got reviewed, and then
31 people discovered that some of the input data were incorrect,
32 because the people who collected the data were never looped into
33 the assessment process, and so this process was developed back
34 then to avoid those problems and to bring a more inclusive
35 approach to producing these assessments, with everybody brought
36 in at the appropriate stages where they are best suited to serve
37 and provide input.
38

39 The goal is to provide robust and transparent assessments, and
40 stakeholders are involved in the assessment process, which, as
41 I said before, was not part of the process previous to the SEDAR
42 program being developed. The attempt is to provide reliable
43 and scientifically-rigorous assessments.
44

45 At the research track stage, which we'll talk about in a minute,
46 we have an independent peer review of that assessment product,
47 that vehicle that comes out of that first-time assessment, or a
48 major, perhaps, re-look at an assessment. The goal is to provide

1 timely assessment products, thorough documentation of all the
2 methods used and the data that was incorporated, and to provide
3 appropriate consistency in the documentation, assessment
4 approaches, and treatments of uncertainty.

5
6 Anyone who works knows it's very difficult to be fully
7 transparent, be very thorough, and also be timely, because, the
8 most transparency you want to bring in, and the more
9 thoroughness, looking at every single question, obviously, that
10 takes longer.

11
12 We have been put in the situation where we have to sort of pick
13 two of those three, and that allows us to move forward in a
14 relatively functional fashion, without getting totally lost in
15 the weeds on every single thing, because, as we all know,
16 management goes on whether we have the science, a new
17 assessment, or not. The managers are required to manage these
18 fisheries every day, and they can't sit around and do nothing
19 while we're waiting eight years for the next assessment.

20
21 In response, SEDAR has two main assessment approaches. We have
22 a research track approach, which is very, very thorough and
23 completely transparent, and there's a lot of involvement at all
24 stages of development, and then we have thorough, but more
25 timely, approach, which is the operational assessments, which
26 are built on previous research or benchmark assessments, and
27 we'll talk about a little bit more details in a minute.

28
29 We're going to start off with the research track, and this used
30 to be called benchmarks, before we revised the process a few
31 years back, and they are still called benchmarks in regard to
32 the assessments that the State of Florida does, due to a little
33 detail that I am not going to get into here, but, if you want
34 to know, you can ask me.

35
36 Research tracks, this is the time where we develop this tool,
37 and we look at the models, and we come up with the methods, and
38 we really try and examine how this particular stock should be
39 assessed moving forward, and it's a stage where there could be
40 hypothesis testing, where we can look at options for what stock
41 ID should be, changing it from what was used last time, perhaps,
42 if need be, if new information is available.

43
44 It's a place to implement new methods and new data streams
45 across stocks, and so, if we have a new method in determining,
46 I don't know, whatever, natural mortality, that just came hot
47 off the presses, and we want to take a look at it, we absolutely
48 can review it under these circumstances.

1
2 Also, if there's a variety of new data sources, this would be a
3 good place. This is -- What's the big one right now in the Gulf
4 of Mexico, and it's the red snapper that we're getting underway
5 here for you guys, and we have a variety of new datasets,
6 particularly the Great Red Snapper Count, which is a lot of new
7 information that's going to be reviewed to see if it can be
8 considered, and how, in the upcoming research track assessment
9 for red snapper.

10
11 One of the keys about research tracks is that there's no status
12 or fishing level recommendations provided, and the point about
13 that is to say that, unless -- In the benchmark format we
14 produced, we produced management at the end of the timeframe,
15 and we had to have it done, because the councils were waiting,
16 and we had a very -- A much more strict timeline that we had to
17 meet, and, also, we were really bound by wanting to have the
18 most recent data rolled in, and sometimes trying to get the most
19 recent data, because different data streams came in at different
20 times, and it would bog down the assessment or cause issues,
21 where we thought we had the most recent data, but then an update
22 came in from perhaps a state, and we needed to redo landings or
23 something, and so there was a lot of pressure.

24
25 It removed this reliance on having to have the most recent data.
26 For example for the scamp assessment that's wrapping up right
27 now, the research track, the data went through 2017, to build
28 the model and the tool, and then, when we do the operational,
29 it will be up-to-date and provide the management advice.

30
31 While we say that we can look at a lot of things, and we review
32 lots of data, and we have a flexibility in schedule, it is not
33 totally open ended, and it can't become someone's PhD
34 dissertation and take seven years to get done, and we do still
35 need to get things wrapped up in a relatively timely fashion,
36 roughly two years or so, is what we're looking at, eighteen
37 months to two years, for the assessment proper portion of that.

38
39 If you have a stock ID portion, which I will talk about, that's
40 a couple more months in the frontend of that process, but we
41 are flexible to a point, but we still need to, as I said, provide
42 management advice, and so we need to get the research track
43 wrapped up, so we can do the operational and provide the
44 management to the councils who are waiting on that to take
45 management actions.

46
47 The schedule does allow us some flexibility, and it is much more
48 flexible than what a benchmark was, where we already knew where

1 the review workshop was going to be before we even started the
2 process, and we have some sort of drop-dead dates throughout
3 the research track schedules, if you ever look at one where
4 people weigh-in and say, yes, we're ready to move on to the next
5 stage, and, yes, we're ready to plan for this to go to a review
6 in three months, and there are checking points along the way,
7 and, if we're not ready, we can postpone the remaining portion
8 of that process, if need be, but we do have -- We have rough
9 timelines, but we have a little bit more flexibility than we
10 had under the previous benchmark approach.

11
12 Finally, the SSC is involved in all stages of the process, and
13 we have SSC members -- Well, they can be. I mean, usually, the
14 councils, the cooperators, do appoint some SSC members in all
15 stages, and we have SSC members who serve as data providers, in
16 the data stage, and we often have SSC members who serve on part
17 of the assessment panels, weighing-in on that stage, and, at
18 the review workshop, we have SSC members who serve as the chair
19 of the review workshop as well as serve as reviewers alongside
20 a panel of independent experts that we bring in, and so the SSC
21 is pretty heavily involved in the research track and the
22 development of this tool along the way.

23
24 One point we want to make in how SEDAR works is it's a sequential
25 recommendation-making process. There are decisions, or
26 recommendations, that have to be made at each stage so that we
27 can proceed to the next stage.

28
29 Most research tracks consist of four stages: a stock
30 identification process, a data review and preparation process,
31 the assessment modeling process, and the actual review of the
32 assessment product at the end. The reason I say most consist
33 of four stages is there are some stocks where stock ID has been
34 settled, and we're not revisiting it, and everyone is happy with
35 what was decided, and there's no new information to suggest
36 changing it, and so we may not always do that stock assessment
37 portion, but we do these other three stages as part of a research
38 track, to make sure that we can encompass and bring a variety
39 of people in.

40
41 One key point that I want to talk about next is that an
42 assessment development team, or ADT, is convened for each
43 research track, and the ADT is often made up of SSC members,
44 and so I want to talk about that, briefly, so you guys understand
45 what that is.

46
47 The assessment development team is a small group of people that
48 are appointed by the cooperator, and they attend both the data

1 and assessment portions of the process, and so, even if they
2 are a data provider without necessarily a great deal of
3 assessment experience, or they are assessment people, they still
4 listen in to all the deliberations at this data stage, but the
5 reason that this ADT plan was implemented, when we made these
6 changes to the SEDAR process a few years back, was to try and
7 help have a consistency of certain individuals that do go
8 through multiple steps of the process, to help aid in the
9 decision-making process and making sure that things are making
10 sense from one stage to another.

11
12 The ADT participates in the consensus decision-making steps
13 within the process, and so they are the ones who are really sort
14 of responsible for saying these are the recommendations, and we
15 agree, and let's move forward to the next process with them.
16 It is a long, drawn-out process with the ADT participating, but
17 it's incredibly valuable to have people see the entire process.

18
19 The ADT members contribute to analysis, as needed, and so, if
20 they have special expertise, they may be appointed to the ACT
21 because they have expertise in, I don't know, larval transport
22 modeling, and we might rely on them to help craft the
23 recommendations and craft the documentation that is needed, and
24 maybe produce analysis, working with the Science Center
25 analysts, to make sure that we're doing the best we can with
26 the products.

27
28 They can contribute to the report preparation, as need be, and
29 they certainly get to see drafts of it, and, again, if they have
30 certain expertise, they may be tasked to help flesh out the
31 initial draft to begin with, to make sure that the discussions
32 and the thoughts are being represented correctly, and they may
33 present at the review workshop, as needed.

34
35 Scamp, SEDAR 68, is our first research track, and it is our
36 pilot. We had planned to have that research track completely
37 finished before we started any more, but we had a variety of
38 delays going into scamp, and then COVID hit, which then made
39 further delays, and so the scamp review workshop currently has
40 not even happened, and it's happening at the end of this month,
41 and so we currently don't know if any ADT members will be
42 required. We don't believe so, but, since it's conveniently
43 being done via webinar, due to COVID, anyone who wishes to
44 participate may weigh-in.

45
46 Once I get that webinar link set up for that review workshop, I
47 will be sure to pass it on to Ryan to share with the SSC, and
48 so, if anyone would like to listen in, they are more than welcome

1 to, and it is August 30 through September 3, one week.

2
3 The first step in the research track, if it's needed, as I
4 mentioned, is the stock ID process, and so it's its own little
5 component of the research track as a whole, and we've set it up
6 to sort of have its own set of terms of reference and stuff,
7 because, as I said, not all research tracks may require a stock
8 ID process.

9
10 It is the first stage, and it has a terms of reference that it
11 follows to meet the needs of the process, to get the information
12 that we need out to move forward to the next stages of the
13 process. The stock ID panel consists of council and NMFS-
14 appointed personnel. For example, for both scamp and red
15 snapper, we had SSC members, and we had state and university
16 representatives, and we had Science Center representatives. We
17 had a pretty diverse panel brought together, with a variety of
18 different expertise in data, to discuss what stock ID should
19 be.

20
21 When we're saying stock ID, we're meaning what should be the
22 boundaries for developing the assessment, which data should be
23 included for -- An example for scamp, the question was should
24 they be -- The stock ID question was should it be one big stock
25 throughout the entire Gulf of Mexico and up into the Atlantic,
26 or should they be split, and, if so, where? The question with
27 scamp was it was decided to split it along the council
28 boundaries, and we came up with two assessments.

29
30 With regard to the red snapper assessment, the question was not
31 whether we should move into the South Atlantic, but more where
32 should the current status quo for stock ID in the Gulf of Mexico
33 -- It is split at the Mississippi River mouth, Shrimp Grids 12
34 and 13, and the stock ID panel was tasked with reviewing whether
35 it should stay there, if it should move, should it still be two
36 stocks, should it be three stocks, and that was what that group
37 focused on, and so looking sort of sub-structure, sub-stocks,
38 within the council region.

39
40 We usually handle stock ID via some sub-working groups, and the
41 standard ones we've been using, the last couple of times, have
42 been a group that looks at landings, and we had a group that
43 looks at CPUE, and we have a life history group that can be
44 sometimes broken into movement, versus age and growth and
45 reproduction information, and we have those groups that work -
46 - Depending on people's interests and expertise, they can be in
47 any or all of those groups, and then we would bring the entire
48 panel back together and discuss those on a publicly-noticed

1 public webinar, and then we make recommendations overall, and
2 so each working group presented their recommendations, and then
3 we came up with overall stock ID recommendations for the group.

4
5 The process usually has a data scoping webinar, a variety of
6 plenary webinars, to review the working group recommendations,
7 and then, ultimately, come up with a final recommendation, and
8 the panel is tasked to provide a stock ID recommendation for
9 the upcoming research track. Basically, it's how the data is
10 going to be divided, moving forward, and how the modeling will
11 proceed.

12
13 The data research process is the nitty-gritty, down-and-dirty,
14 let's look at all the data that we are aware of and see what
15 might be useful for assessment. Just because something gets
16 presented at the data workshop, it doesn't always mean that it
17 gets included, and sometimes we have datasets that overlap, that
18 represent sort of the same population, or the same information,
19 and the data panel might pick one or two of those.

20
21 We also operate in a working group format for data workshops,
22 and they are usually conducted in person over the course of one
23 week, and so you can imagine that we don't have time for every
24 single person to review every single discussion about every
25 single dataset, and so we often work in a working group format,
26 similar to what we do in stock ID, but we usually do it in-
27 person.

28
29 Life history, landings, statistics, indices of abundance, and
30 we also usually have some ad hoc groups. We usually have a
31 group that looks at discard mortality, and we do that as part
32 of an ad hoc group, because there is people in all the other
33 groups that also have information to contribute to that discard
34 group, and we want to get all the information together and give
35 everybody a chance to see it, and then we also come back and
36 meet in plenary, full plenary, and sort of each working group
37 presents its results as well, and the overall group discusses
38 it and asks questions and the like.

39
40 The individual data workshop groups often provide
41 recommendations, and they prepare report sections, and they
42 prepare working group working papers, and all the documentation
43 that comes through the SEDAR process, with regard to working
44 papers and reports and stuff, is always posted on our SEDAR
45 website, which is a ton of information for all the SEDARs, and
46 so, if you ever want to go back and look for things, there's a
47 ton of stuff up there, and, if you ever have any questions,
48 again, you can contact me, and I will help point you in the

1 right direction.

2

3 As I said, the working groups work and come together, and the
4 assessment development team members, as I mentioned that ADT
5 group, are the ones that ultimately are responsible for
6 developing these consensus recommendations, as needed.

7

8 A working group might come to the full panel and say this is
9 our recommendation of how to look at natural mortality, and the
10 ADT members might ask some questions, and other panels might
11 ask some questions, but it's ultimately the ADT that says, yes,
12 we concur with this recommendation, and this is what we think
13 we should move, and we should tell the analysts this is how we
14 would suggest that you do it.

15

16 The data workshop group of people is usually fairly large, and
17 it's one of the largest stages, and stock ID is getting to be
18 almost as big, and it consists, again, of state agency people,
19 Science Center folks, Florida agency people, if they're the lead
20 analysts, if they're the lead analytic agency, which they
21 sometimes are for some of the stocks that come to you guys in
22 the Gulf, academics, anyone who might have information.

23

24 We try and bring them into this process and take a look at that
25 data, because we strive to get a look at all the data in the
26 process and see if it's useful, as opposed to somebody coming
27 out two years at the end and saying, oh, I have a student who
28 did this research, and it would be really helpful.

29

30 When we come to you, as an SSC member, talking about what data
31 should be included, and do you know of anybody working on
32 anything, and, if you have any students that are working on
33 something, let us know early on. We would love to take a look
34 at it, even if it's not finished yet, so that we can try and
35 incorporate as much information early on in the process, so we
36 can see if we can roll it in.

37

38 The assessment stage of the process, the data group makes
39 recommendations of how all the data should be handled, because
40 they prepare all that data, and they say this is what we believe
41 is the best data available for this assessment, under these
42 constraints. They pass that information on to the assessment
43 team, whose key task is to develop the assessment model itself.

44

45 The analytical team works with the ADT to determine a base
46 configuration of that model, what we think is, given all the
47 information we know, what is the best way forward to describe
48 the dynamics of that population going on at this time.

1
2 They may also examine other hypotheses, using the data that were
3 prepared during the data process, and so sometimes we can look
4 at things like, well, we think these four indices are great,
5 and then, maybe at the assessment stage, they might say, well,
6 let's see if we take this one indices out, how would that impact
7 the model, and it doesn't seem to be contributing much, and
8 let's see what happens, and so those are the kind of hypotheses
9 we can examine at the assessment stage, using the information
10 that was recommended and passed forward from the first data
11 stage.

12
13 They also look at characterizing and evaluating uncertainty. As
14 we know, all of our data is not perfect, and all of our knowledge
15 is not perfect, and, if we knew everything, we wouldn't need to
16 model, and we would have the answer, but, since we know we don't
17 know everything, we have to look at this uncertainty and
18 characterize it and evaluate it, and the analysts do spend a
19 fair amount of time trying to do just that and provide that
20 information as we move through the rest of the process, so that,
21 when the assessment comes out at the end, the managers have a
22 good understanding of where some of these uncertainties might
23 lie.

24
25 They document the methods, the configurations, and what I say
26 is initial results, and remember that research tracks do not
27 produce management advice at this stage, but that doesn't mean
28 that we can't take a look at how things are trending and verify
29 that that trend seems to be realistic, given the data and the
30 modeling methods that are used.

31
32 The report is usually produced heavily by the analytical team,
33 but the ADT can certainly weigh-in, if they have expertise or
34 have questions and clarification.

35
36 Then we have a review process for research tracks that is
37 comprised of -- We use a group called the Center for Independent
38 Experts, and it's -- So, basically, when we produce an
39 assessment, we know we're producing one, we submit a request to
40 the Center for Independent Experts, saying we're having this
41 assessment done, and we are going to need it reviewed, and we're
42 going to need three reviewers for a panel review in January of
43 2023, and they put us on a list, and it's a NMFS-wide -- It's
44 an agency-wide call for a need, and then that group takes over,
45 and they provide the names of several, usually three, CIE
46 reviewers who are entirely independent from this process, and
47 they have not been involved in any of the stages.

48

1 We have those CIE reviewers, but we also still, as I mentioned,
2 have SSC reviewers come in and be involved as well, because,
3 during the course of SEDAR, we have learned that we didn't
4 really like having only external people who have no feel for
5 local factors and issues and that sort of thing, and so the
6 review process has changed over time since 2002, but we're
7 pretty happy with the current structure, where we have CIE
8 reviewers, and we have an SSC chair, who chairs the meeting,
9 and we have SSC reviewers, who also serve on the panel, to help
10 guide it, and then, occasionally, we might even have another
11 outside expert that a cooperator might choose to put on the
12 panel, and so it's a panel approach that reviews the assessment.

13
14 The goals of the review process are to evaluate the quality and
15 the applicability of the data, the modeling, the assumptions,
16 and the parameter values, and do they make sense, and they
17 recommend the most appropriate modeling scenarios, they provide
18 research recommendations, and we have been asking the CIE,
19 lately, or the review panels, to provide recommendations in a
20 format of short-term versus long-term, what are things that we
21 think we could realistically evaluate, perhaps get new data on,
22 stuff that can be done in the next three to five years and be
23 useful for the next assessment, and then more long-term -- Well,
24 actually, one to two years, and then more long-term, three to
25 five years or later, are the long-term goals, such as it would
26 be really great if we had a fishery-independent index that could
27 look at X, Y, and Z, and those are more long-term, lofty goals,
28 which we put in there as well.

29
30 The key about the review process is, again, they don't discuss
31 management implications, and they focus solely on the science,
32 whether the science is being conducted appropriately, using
33 current best practices, and so their whole goal is to address
34 and evaluate the assessment that was provided to them, and it
35 is not to rewrite the assessment. They often make suggestions
36 of, hey, let's try this, or let's try that, and they may come
37 up with a different approved base model, and we call it the
38 review workshop approved base model, as opposed to what came
39 out of the assessment process.

40
41 As they do the reviews, we often find additional things that we
42 didn't think about, but they don't redo the entire assessment.
43 It's not their role, and they are pretty good at it, and the
44 CIE has been around for years now, fifteen years, and most of
45 the reviewers are very, very good about their roles with regard
46 to what can we do now, what can we make recommendations on, and
47 what is outside the scope of our process. We are reviewing the
48 assessment that was given to us.

1
2 That's the review research track, and that's the full-bore, and
3 those are taking between two to three years, timeline-wise, when
4 we're scheduling these. As I said, we're doing scamp right now,
5 and we're wrapping it up, and scamp is a little bit longer even
6 than that, but we had a variety of issues getting it off the
7 ground, and then, also, COVID jumped in in the middle and caused
8 a three-month delay.

9
10 We have red snapper that just concluded the stock ID process.
11 In the Gulf, that will be the first research track that's being
12 done for the Gulf Council, and we have gray triggerfish is
13 what's in the planning stages right now for the South Atlantic,
14 and that will be the South Atlantic's first research track
15 assessment.

16
17 The other type of assessment we have are the operational
18 assessments, and these are closer to, if you've ever paid
19 attention before, the updates and standards. The goal of the
20 operational are to be thorough and timely, and they are more
21 along the lines of not revisiting everything, and we only focus
22 on very specific topics within that, and we'll talk about which
23 topics we focus on in a minute.

24
25 Their goal is to update the accepted research track or benchmark
26 assessment with the latest information. If we have a new
27 dataset, we want to look at it. If we have five more years of
28 landings, we want to include that. This is the step of the
29 process that does provide management information, and it
30 provides status and fishing level recommendations that come out
31 of it.

32
33 This is the default approach for any assessment that happens
34 after a research track, and so, when you finish a research
35 track, the next thing you should do is an operational, to get
36 that management advice, get that terminal year up to current,
37 and provide the information for the councils to make their
38 decisions.

39
40 SSCs may participate in topical working groups, if needed, and
41 so they don't have -- Operational don't have a series of
42 workshops, where we bring a bunch of people in. Operationals
43 focus on, as I said, basically updating the information. We
44 can look at a couple of topics that might come up, where we are
45 aware of new information and that sort of thing, and, to address
46 how that new information should be incorporated or utilized,
47 there are these things called topical working groups, which I
48 will talk about in more detail in a minute, and SSC members

1 often participate in those steps.

2
3 The review of an operational is conducted by the SSC, and so,
4 since we're working off of an approved model, we're essentially
5 -- When it comes to the SSC, your role, as the SSC, is to review
6 the assessment and make sure it still follows all those best
7 practices. If a new dataset was put in, do you think the new
8 data was applied appropriately, and then, obviously, to say how
9 you feel about the management advice that's being provided.

10
11 As I said, operational assessments are based on the previous
12 benchmark or research track, and so they've already undergone
13 this thorough peer review process, and so, therefore, unless
14 there is a justified reason for making changes to the model or
15 data, OAs should normally be limited to updating the existing
16 assessment framework with the most recent data and only minor
17 modifications in the framework and supporting information.

18
19 Operational assessments, how you determine what can be included
20 or not, that scope is defined by a statement of work, and you
21 guys are going to be preparing some of those later today, and
22 so that's why we're chatting about this now.

23
24 Topical working groups, as I had mentioned, are how we manage
25 looking at new data or data that needs a little bit of perhaps
26 a tweak, based on new information on how to handle said data
27 that might come. Maybe there's a new way for calculating discard
28 estimates, and we might have a topical working group to look at
29 something like that.

30
31 They are groups that are assembled to discuss and make
32 recommendations on specific topics that are identified in that
33 statement of work, and they are built on the same sort of panel,
34 the same sort of group, as the other processes, SSC members,
35 stakeholders, technical experts. They may meet via webinar or
36 in person, and we often try and get a handle on how we want to
37 handle that, get some information on that, in the statement of
38 work.

39
40 They can utilize a planning-team-style approach to facilitate
41 some of their discussions. Similar to how we've done some of
42 these other processes, they can meet offline, and it can be a
43 conference call, and do some work, like we did for stock ID,
44 and then they come back to these noticed webinars and discuss
45 everything, and the final recommendations are all made during
46 these public processes on these noticed webinars.

47
48 The topical working groups will produce a written report,

1 essentially a SEDAR working paper, documenting their discussions
2 and recommendations. Again, SEDAR strives to have great
3 documentation with regard to what we did. If we're not careful
4 -- The reports always say what we ended up doing, but, often,
5 sometimes, it's lacking on the why we did it, and, when you go
6 back and try and do something eight years later, you sometimes
7 can't remember, and so the documentation is key in figuring out
8 what the discussions were and what the rationale was, basically
9 building that record for why that recommendation was made at
10 the time.

11
12 The topical working groups are organized in the SEDAR process,
13 because we organize all these other meetings, and it's just as
14 easy for us to do it and make sure that the notices get filed
15 when we have these public webinars and all of this.

16
17 One of the things about topical working groups is the timing of
18 them. They need to be held in a fashion so that they fit in
19 the schedule to provide the information when it's needed, and
20 so the topical working group is meeting on something regarding
21 --

22
23 Maybe there's a new age study, and we're reviewing if that new
24 age study should be used, as opposed to the one that was used
25 last time, and, obviously, those decisions and recommendations
26 need to happen early in the process, before the modeling
27 happens, and so they might happen earlier in the process.

28
29 If we're looking at something about how selectivity might impact
30 something, that topical working group perhaps might meet after
31 the base model is constructed and they're ready to go, and then
32 we can evaluate it, and so the timing of the topical working
33 groups is a little bit more fluid, depending on what the topic
34 is that they're discussing.

35
36 Finally, not all operational assessments will have topical
37 working groups. There are some that we are simply updating the
38 data, and there is really no need to bring people in and have
39 these initial discussions, and so we just don't have them, and,
40 in that case, the SSC will just get the report when it's done,
41 at the end, for the review.

42
43 I just want to touch, very briefly, on the role the SSC plays
44 in operational assessments. It's pretty clear with regard to
45 research tracks, and you guys are involved in all the workshops,
46 all the data gathering, all that other stuff, but I want to make
47 sure that you understand your role in the operational,
48 especially since that's what you're stepping into right now.

1
2 The SSC has three main roles in the operational. It's to provide
3 guidance on the issues for consideration in the statement of
4 work. As I said, that is the scope of what will be looked at
5 at the assessment and so it's incredibly important that you guys
6 weigh-in on that at the beginning. Then participate in any
7 topical working groups we have, and then reviewing the
8 assessment report at the end.

9
10 Provide guidance on the issues for the statement of work. We
11 are required to produce -- The cooperators are required to
12 produce clear and detailed statements of work that are required
13 for operational assessments. They define the scope of the
14 assessment, and they are useful for clarifying expectations with
15 regard to what the council is expecting and what the Science
16 Center is expecting they are going to need to do with regard to
17 producing this assessment, and they are critical for scheduling.

18
19 It's easy for you guys to say I don't get it, and we're only
20 doing two assessments, and we're only getting two things this
21 year, and, well, that's the Gulf, but remember that the Science
22 Center actually provides assessments for the Gulf, the South
23 Atlantic, the Caribbean, and HMS, as well as provides support
24 for the Florida assessments and actually does the assessments
25 for the commissions, the Gulf and the Atlantic States Fisheries
26 Commissions, as well, and so they have a pretty heavy lift for
27 menhaden, and they have supported some of the other assessments
28 for the commissions as well, and not just menhaden.

29
30 If you ever want to listen to an interesting discussion, listen
31 into one of the SEDAR Steering Committee meetings, where we talk
32 about the schedule, and we have this big grid, and it's like
33 Tetris. You have to slide all the boxes around and make sure
34 that we can accommodate all the assessments across the entire
35 stock assessment enterprise that the Southeast Fisheries Science
36 Center is responsible for, and so knowing sort of what's going
37 to be expected is really important to this process, and that
38 also makes sure that everybody is on the same page.

39
40 When you're doing the topical working group discussion -- When
41 you're discussing the statements of work, you have to look at
42 whether you will need a topical working group, and that's
43 something you guys can weigh-in on. Is there new information
44 available? If so, then maybe we need a topical working group,
45 and you can also make suggestions regarding who might be good,
46 and like it might not be an SSC member, and it might be someone
47 like, hey, a colleague of mine at the University of Alabama
48 recently had a student who did this, and it would be great if

1 he could be involved, because SEDAR certainly does not know who
2 is working on every single thing everywhere in all these
3 regions.

4
5 We do rely on SSC members who especially may be a little bit
6 more tapped into some of the academic work that's being done to
7 speak up and say, hey, it would be great if we had this person
8 on it, and they have some great information, and so, again, we
9 want to bring the right people in, but sometimes we don't know
10 who the right people are, and so, if you have ideas with regard
11 to who should be on a topical working group, it would be great
12 to at least bring that information to our attention, and we'll
13 see if they can be accommodated.

14
15 Also, there might be topics that should be examined within the
16 frame of the operational, but they don't actually need a topical
17 working group to discuss them. We have some new methodology
18 for doing discard estimates, and it's fairly well tested at this
19 point, and it's been used on a variety of assessments over the
20 last couple of years, and so, if this assessment that you're
21 going to review for it didn't use that methodology, they should
22 probably update to that new methodology, but it's not
23 necessarily needed that they have a topical working group to
24 discuss it, but you guys would want to make sure that you put
25 in the statement work to update the discard mortality estimates
26 or discard estimates using the latest best practices developed
27 by the Science Center or something like that, and so not
28 everything that needs to be potentially included in an
29 operational requires a topical working group, is my point.

30
31 This is just a list of some possible things that could be
32 included, and I have said most of these already, and you guys
33 have the slide, and so we'll just move on.

34
35 Finally, as I said, you guys are the review body for operational
36 assessments. There is no CIE panel, there are no external
37 reviewers of any sort, and it relies on you guys to make sure
38 that the analytical team used the methods that were approved
39 the last time. If they changed those methods, that they fully
40 documented why, and you buy why they changed those methods, and
41 to provide the information with regard to those management
42 decisions.

43
44 I know I just said a whole bunch of information, and it might
45 be a little overwhelming, but you do have the slides, and so
46 you can go back and look at them, and, like I said, myself and
47 Ryan, and I am volunteering Ryan, but we are both available to
48 answer any questions that you may have on how the process works,

1 if you have any, and I'm sure you will, but I will take any
2 questions now.

3
4 **CHAIRMAN NANCE:** Thank you very much for that presentation. I
5 have just a real quick one. The topical working group, how do
6 you make sure that doesn't turn into a research project?

7
8 **DR. NEER:** Well, that's an excellent question. Part of that
9 comes back to the scope of work that are put together initially,
10 and we also have to sort of just use some best judgment.
11 Sometimes -- Again, we're new at doing these, and so we've only
12 done -- Well, really, within the SEDAR process right now, the
13 only one we've really done is in the Caribbean, and they are
14 structured around a series of very relatively small webinars,
15 sort of a data scoping, a webinar where we review the data and
16 we come up with questions that we would like the analytical team
17 often to look at and prepare data, or it might even be a data
18 provider, and like we would like to see the ages done this way,
19 this way, and this way, modeled three different ways, and we
20 have a second webinar, and we pick one, we make that
21 recommendation.

22
23 It can't be we're going to take nine months to do it,
24 unfortunately. Sometimes it's like this is what we can
25 accomplish now, and your other points are extremely important
26 and worthwhile, but cannot be handled within the scope of an
27 operational assessment. We do have to rein them in, because
28 the goal of the operational is to get you guys more assessments,
29 so the managers can do their job with more up-to-date
30 information on a more timely fashion, and more frequently too,
31 and so it's kind of nebulous, and we just have to all use our
32 best judgment and hope that we can keep it reined in a bit. I
33 hope that helps.

34
35 **CHAIRMAN NANCE:** Thank you. That answers it. Thank you very
36 much. Doug.

37
38 **MR. GREGORY:** Thank you. I noted that the presentation on the
39 website is an abbreviated form of what you actually presented,
40 and so we need to get your presentation put on the website.

41
42 **DR. NEER:** There was an issue, and I think they just updated
43 it.

44
45 **MR. GREGORY:** Thank you.

46
47 **CHAIRMAN NANCE:** Jim.

48

1 **DR. TOLAN:** Thank you, Mr. Chairman. Julie, that's a great
2 overview of SEDAR, and, unless I missed it, I think you left
3 out one of the pretty important sub-groups for the stock ID,
4 and that's the genetics sub-group, and that's for all of the
5 new folks.

6
7 **DR. NEER:** Thank you, Jim. I did forget that, and genetics is
8 always a component of the stock ID process. Sometimes it's
9 simply a component where we say we don't have any genetics
10 information, but we always want to make sure we're not missing
11 something. Thank you for correcting my oversight.

12
13 **CHAIRMAN NANCE:** Thank you. John.

14
15 **MR. MARESKA:** Julie, thanks for the presentation. I just wanted
16 some clarification on the hypothesis testing. Is that something
17 that's at the discretion of the lead analyst, or is that
18 something the assessment development team determines, or is that
19 a collaboration? That's my question.

20
21 **DR. NEER:** You mean within the assessment process?

22
23 **MR. MARESKA:** Yes, within the research track.

24
25 **DR. NEER:** Okay. Well, I think some of the hypothesis testing
26 -- I believe Katie, from the Science Center, has a presentation
27 to talk about some of this stuff, but, in general, it's sort of
28 a collaboration. We look at the ADT, with data that's available,
29 and we talk to the analysts, and we look at the timeline, and
30 we see what things can be examined in the timeframe that we have
31 available and the data that we have available, but it is --

32
33 There are some things that are always going to be unable to be
34 assessed in any particular process, but that doesn't mean that
35 they're not valid, but it just might be that we can't do them,
36 given the information, but it should be a collaboration among
37 the people involved in the process and have discussions about
38 what can and cannot be done. Ryan, do you want to go to Katie's
39 presentation, or do you want me to finish these questions,
40 because Katie's presentation might better address John's.

41
42 **CHAIRMAN NANCE:** We're going to have a question from Sean, and
43 then we can have Katie's presentation, and then we can kind of
44 answer -- We'll see if that leads us --

45
46 **DR. NEER:** Perfect.

47
48 **CHAIRMAN NANCE:** Okay. Sean.

1
2 **DR. POWERS:** Julie, I know that Katie will speak in a second
3 about an issue, but one of your bullet points said, for the
4 research track, this is not a research project, and that seems
5 counterintuitive, to me, because, I mean, for example, red
6 snapper, or any other species, we've been told for a decade that
7 we can't explore X, Y, or Z, because it's not a research track,
8 and now -- So can you expand on that point, because I understand
9 it's not somebody's dissertation, but, arguably, with some
10 species, it's more important than somebody's dissertation, and
11 so what do you mean by it's not a research project?

12
13 **DR. NEER:** Well, what I meant was that it does still have a
14 goal, and perhaps "research" should have not been -- That
15 wording should have not been -- Research project should not have
16 been the best wording, but the point is that we still do have a
17 goal to provide management information in a timely fashion, even
18 if we're not providing it at the end of the research track
19 process.

20
21 We still are not able to look at everything that everyone might
22 like to look at, because that would simply just take too much
23 time, number one, and, number two, some of these things would
24 be very difficult to make a choice at the end, when we don't
25 have good criteria to choose between multiple alternatives, and
26 so it's not -- We're not currently set up for a process where
27 we can look at five different assessment models, because we
28 don't have a way to choose, at the end, how that might be --
29 How you would pick, necessarily, which one, and so, as I said,
30 the hypothesis testing that we're looking at is within the
31 recommendations and within the data that was already sort of
32 approved in the earlier stages and that we have in hand and can
33 be done and objectively examined, I guess is sort of the
34 question.

35
36 We do have to be careful that the ultimate goal of the SEDAR
37 process is to produce an assessment, a product, that can be
38 useful for management at the end of this whole two-year or
39 three-year process, and so that's what we meant by it's not open
40 ended, and it's never been open ended, if you go way back when.
41 We never said you could look at every single thing in every
42 single form that you may wish to, because we still have a job
43 to do, essentially providing this information at the end that
44 the managers can use.

45
46 The research track has really only been in place for -- 2018 is
47 when we started rolling out to you guys the information on
48 research tracks, and our first one is scamp in 2020, and so the

1 talks went on a little longer than that, because it took quite
2 a bit of time, to be honest, to get what a research track meant
3 through the SEDAR process.

4
5 It took several years to even get to our pilot, which is what
6 we're doing now for scamp, and I will be honest that it's perhaps
7 still evolving, and scamp isn't even done yet, and so there are
8 things that we may need to do a better job explaining and things
9 that we may need to make modifications to, to make sure that
10 everyone is clear on the expectations, because there does seem
11 to be some confusion among a variety of different participants
12 in this process, and we strive to fix that, for sure.

13
14 **DR. POWERS:** Okay. Thanks. That helps a little bit. I
15 understand the point that all the research questions that we
16 have to look at ultimately have to have some management
17 implication in the end, and that's a logical boundary on that.

18
19 At the end of the research track, you said the review is the
20 independent review panel, which most of us are familiar with,
21 but isn't there an additional step? I mean, the SSC has to look
22 what the review panel said, and then we have to accept or ask
23 for modifications or anything, or is it your -- For whatever
24 the review panel's recommendation is, or are you saying that
25 the SSC doesn't have a role there and that we just have to --
26 If the review panel says it's acceptable, then we have to accept
27 it.

28
29 **DR. NEER:** No, and the SSC will review the overall SEDAR product,
30 like you do now, that final stock assessment report, and that
31 contains all the information on stock ID and data and assessment
32 and the review panel information. That will all come to the
33 SSC for your review and consideration.

34
35 Then, at that meeting, or shortly thereafter, the SSC's role is
36 a little different at this stage, because what will happen is
37 then you will produce the terms of reference for the operational
38 assessment that follows, and so you are supposed to sort of look
39 at the recommendations and things that the review panel might
40 have recommended that can be fixed, because, again, these short-
41 term versus long-term goals, and there are recommendations, and
42 there are some things that perhaps couldn't have been reviewed
43 or that the review panel might recommend that, hey, it would be
44 great if you could look at, and, I don't know, combining these
45 two rec fleets into one.

46
47 That's not something that could have been done in the three
48 weeks between when the review panel meets and the report is

1 finalized, but it could potentially be done in the next four
2 months or something, before the operational assessment is
3 completed, and so the SSC could say, yes, we think that's a
4 great idea, and we agree that that's a good thing to do, and we
5 would like to see that happen in the operational.

6
7 On the flip side, the CIE might recommend something that the
8 SSC will say that doesn't make any sense, given our local
9 fisheries and our understanding, and so we don't think you need
10 to do that, and so the SSC still has a role in producing those
11 terms of reference for that operational assessment, but, again,
12 it's -- Since it's following -- Assuming that the assessment
13 got approved and the methods were used, that it's making minor
14 modifications and requesting perhaps additional sensitivities
15 and such within the operational assessment, as well as,
16 obviously, updating all the data.

17
18 There will, obviously, have to be negotiations, if the SSC asks
19 for something that is going to take eight months, nine months,
20 ten months, to do, and the Science Center and the cooperator
21 will have to have those discussions and see what could happen
22 and how that would be handled.

23
24 Again, we haven't done one yet, and so I'm not sure, but
25 certainly the SSC does have a role in producing those terms of
26 reference that are going to be used for the operational that
27 follows this, but the expectation is that, if it's been approved
28 by the review panel, and the entire process was sort of signed-
29 off on by that review panel, then we would hope that the
30 modifications that were requested by the SSC would be more minor
31 in nature.

32
33 If they were quite a bit -- If they're extremely involved, and
34 I don't know what extremely involved means, but, if they're
35 going to take a good deal of time, then those discussions will
36 have to happen between the Science Center and the council,
37 regarding how important those things need to be and where we
38 could fit them in the schedule. I hope that helps, but, yes,
39 you're definitely -- You guys weigh-in before the operational
40 starts.

41
42 **CHAIRMAN NANCE:** Okay. Thank you. Will.

43
44 **MS. MATOS:** Will, you're unmuted, but we can't hear you.

45
46 **DR. NEER:** While Will is trying to figure out his audio, I guess
47 I neglected to say there are essentially two types of
48 operationals. There are the operationals that happen

1 immediately after the research track that produce -- That update
2 all of that data and finally provide that management advice that
3 doesn't come out of the research track.

4
5 There are also operational assessments that are stand-alone,
6 which means they're not happening immediately after a research
7 track, and so what I was describing in this presentation are
8 more for those stand-alone processes, where you develop a
9 statement of work, and you're involved in all of these things,
10 and there might be topical working groups, those sort of things,
11 and those are the things that you're sort of going to -- That
12 the SSC is going to weigh-in later today, or tomorrow, on those,
13 because operational is kind of an overriding term for anything
14 that's not a research track, but they have sort of a little bit
15 of a different function in how they are developed and the process
16 that they follow, and so a little difference between those two.

17
18 There are some more details on that in that Word document, the
19 research track operational topical working groups guidance
20 document, which I believe is in your briefing book, as well.

21
22 **DR. POWERS:** Okay. Thanks. That makes me feel better that the
23 operational is automatically scheduled after the research, and,
24 while we wait for Will, what is the cycle on the research? I
25 mean, for example, this red snapper one, I mean, are we not
26 likely to see another research track for a decade or more?

27
28 **DR. NEER:** That is difficult for me to say, but I will say that
29 our key species, and every council has a few of them, were
30 operating on a five to six-year cycle before you would see
31 another benchmark, when we were doing benchmarks, and research
32 tracks are probably going to be similar, or perhaps even more
33 lengthy, because the process itself takes longer.

34
35 Usually, you were -- The benchmarks/research tracks were
36 happening for those key species, like red snapper, king
37 mackerel, some of the others, that those were happening roughly
38 five to six years apart, with perhaps standards and updates put
39 in there -- Then you have the option, at least in the Gulf
40 currently, for those interim assessments, and I would bet that
41 you will see an interim assessment or operational before you
42 will see another red snapper research track, but, again, it is
43 entirely based on what the cooperators come to the Steering
44 Committee and say this is our high priority.

45
46 We have a lot more species, and we seem to assess about twelve
47 on a regular basis, and we try and stick other ones in, and so,
48 if the council thought it was necessary to do another research

1 track for red snapper in four years, because we're sort of
2 scheduled out through 2024 already, 2024 or 2025, they could
3 certainly request that, but it, obviously, means, with the
4 workload issues, something else doesn't get done for a longer
5 period of time, and that's always the balance of when they could
6 happen, but, on average, they were five to six years for -- I
7 am going to call them the most popular assessments that we do,
8 and I'm not sure that they're necessarily the highest priority,
9 but there are certainly species that we seem to do -- We were
10 doing repeat benchmarks, and there is others that we've only
11 ever done one benchmark and never repeated it, and so it's
12 pretty species dependent, too.

13

14 **CHAIRMAN NANCE:** Thank you, Julie. Will, are you able to come
15 on now?

16

17 **DR. PATTERSON:** I don't know what the issue was, and I didn't
18 change anything, but thanks, Julie, for the presentation and
19 overview of the process. Admittedly, when this was announced a
20 few years ago, that the process would change and have
21 operational versus research track assessments, I didn't fully
22 understand the shift, and I still don't really understand why
23 an eighteen month to two-year process for a research track that
24 doesn't produce management advice, but then you immediately go
25 into an operational, which might take another five or six months
26 to produce the management advice, but I also understand that
27 we're working through this, and it's still a new process, and
28 we're trying to figure it out.

29

30 What I kind of thought was the deal is that you would have the
31 research track, because it could be open-ended, and those of us
32 who have sat on various SEDAR panels, or have just had stuff
33 come up for review at the SSC, invariably, there is some process,
34 or assumption, that is discussed that couldn't have been
35 examined because of the nature of the assessment, and it wasn't
36 in the scope of work for that particular assessment, but then
37 we have the example -- I'm not sure if Sean was referring to
38 this or not, but, in the red snapper, the current red snapper
39 research track assessment, one of the issues that's been
40 discussed is whether we can examine multiple different stock
41 structure assumptions.

42

43 We've had discussions about that not being feasible within the
44 context of that assessment, but, earlier, in SSC deliberations,
45 that was like one of the number-one things, that we can't do
46 this until there is a research track assessment, and so I fully
47 appreciate the fact that this process can't be open-ended, and
48 you can't examine all the minutia of every single parameter that

1 you might want to explore, but it seems, to me, that there needs
2 to be some type of process then on the front-end that isn't as
3 prescriptive, perhaps, as an operational assessment, but the
4 idea that these things are fair game, and we maybe have a
5 priority list of things that can be accomplished.

6
7 If you're going to have a two-year process of a research track
8 assessment, then, to me, it seems like it does have to be kind
9 of open-ended, a lot more open-ended than an operational
10 assessment anyway.

11
12 **DR. NEER:** Again, this, I think, comes back to clarifying what
13 we mean by looking at things and examining things, and so we -
14 - From a SEDAR perspective, I actually believe that we did
15 examine stock ID, and we came up with -- We reviewed all the -
16 - There was a large panel that reviewed all the data, and you
17 guys came up with a couple of different stock ID alternatives,
18 various options that were all put forward with various pros and
19 cons to each one, and you then -- What we couldn't do is likely
20 move forward with all of them to the full modeling structure.

21
22 To say that we weren't allowed to review alternative stock ID
23 structures I don't think is a fair characterization. We did
24 look at alternatives, and, in fact, you guys -- The group didn't
25 settle on status quo, and you did actually make a change to what
26 stock ID structure is going to be used, moving forward, based
27 on the information that was provided.

28
29 I think I do agree that we need to do a better job on perhaps
30 the advertising of what it is, because I think we did address
31 stock ID, and there was a large group of people who weighed-in
32 on a variety of different options, and then one was selected,
33 recommended, to be used moving forward, and it, obviously, is
34 not as satisfying as some people I believe would have hoped we
35 would have been able to continue moving forward with this, and,
36 again, I think that's just some of that perhaps
37 miscommunication, or not being clear on how -- Again, like
38 you're saying, what can actually be accomplished.

39
40 We did have a several-month stock ID process, and we looked at
41 a lot of information, and multiple alternatives were considered,
42 and one was ultimately put forward as a way to move -- As a
43 recommendation for the next stages of the process, and so,
44 again, I agree with you that we need to do a better job with
45 sort of the advertising and being clear on what we mean by what
46 can be considered, and Katie's presentation will actually
47 address some of this as well, I believe.

1 **DR. PATTERSON:** Jim, can I respond to that, real quickly? I
2 would just like a chance to respond, before we move on.

3
4 **CHAIRMAN NANCE:** Absolutely.

5
6 **DR. PATTERSON:** I didn't mean to imply, or indicate, that we
7 didn't explore, in the current red snapper research assessment,
8 stock ID. There was a tremendous effort to explore stock ID.

9
10 What I'm talking about is that looking at sources of information
11 for stock ID is only one component, and different hypotheses
12 were put forward, and there was some discussion about the
13 structure of the model and actually moving forward with
14 competing stock structure assumptions and examining whether the
15 data better fit models that had different assumptions about two
16 populations, three populations, what have you.

17
18 That's the component that I felt a little bit let down that we
19 couldn't explore, or won't be able to explore, because simply
20 looking at the sources of information we have so far and trying
21 to, from the outside, propose what the stock structure might be
22 for red snapper is only part of the process.

23
24 Once you start fitting data to models, then you get a better
25 sense of what the empirical data and some of the parameter
26 estimates, what that actually supports, and so I thought that
27 is exactly what the research track assessment for red snapper -
28 - I thought it was actually the number-one issue, and something
29 that could be explored.

30
31 Again, I think, on the front-end, we just need to have clear
32 ideas about what's in the realm of possibility, so that we have
33 a clear sense, and, if really important things, and like some
34 of us thought that population structure for red snapper can't
35 be explored within assessment models, and not just in a workshop
36 on the front-end, then we need to have clearer ideas that when
37 we discuss these things at the SSC and put stuff on that we're
38 interested in potentially considering or that the data may
39 suggest exist.

40
41 **DR. NEER:** I agree with you, and perhaps -- I mean, I said this
42 might be something -- Part of it is being clearer in explaining
43 what can be done, and I agree with you on that, and perhaps
44 there needs to be even another stage, perhaps something clear
45 like this, and maybe it's something that needs to be done even
46 before we get to the assessment being scheduled, and perhaps
47 it's something that may need to be spearheaded through the SSCs
48 and the Science Center working on stuff prior to something going

1 on the schedule, if it's something that you would like to see,
2 and maybe there's a way to do it.

3
4 Certainly we're going to have to probably have some more
5 discussions on making sure that, one, we're clear with what we
6 can do within the assessment processes that we have in place,
7 and, two, perhaps have discussions on ways to accommodate some
8 of these things that SSCs may find are vital and important to
9 be part of the discussion, and how do we make that happen, and
10 do we change the process, or do we -- Is that done outside out
11 of the process, via a workshop method that's done by the
12 cooperators and the Science Center, and I don't know, but I
13 understand your point, and I understand your let-down of
14 thinking that this was something that was potentially going to
15 be able to be done as part of the assessment process, and it
16 doesn't seem that that's going to be the case.

17
18 I agree with you that certainly we're going to need to give this
19 some thought, on how we should approach some of these things
20 moving forward.

21
22 **CHAIRMAN NANCE:** Thank you, Julie. That was a good question,
23 Will, and thank you, Julie, because it's one of those things
24 where the research track is the only place you can have these
25 things, and so we need to do a little more thinking on how to
26 incorporate those things. David Griffith, you're next, and then
27 we're going to have Josh, David, and Jason, and then we'll have
28 Katie.

29
30 **DR. GRIFFITH:** I am a social scientist, and so I'm kind of
31 interested in the extent to which -- I see that you -- When I
32 look over these stock assessments, I see that you look at
33 landings and the difference between commercial fishermen and
34 recreational fishermen and discards and gear types and things
35 like that, which I guess could be considered social data, but I
36 was wondering if you try to incorporate other kinds of social
37 information, like fishing strategies or the uneven distribution
38 of effort across the Gulf for different species or how a certain
39 species fits into a whole pattern of fishing operations.

40
41 Say a person who switches between charter boating and commercial
42 fishing himself, during different times of the year, and so
43 there's all kind of seasonal dimensions that influence pressure
44 on stock and things like that, and I was wondering the extent
45 to which you try and incorporate, or even access, that kind of
46 information.

47
48 **MR. RINDONE:** I can take this one, Julie, if you want.

1
2 **DR. NEER:** Yes, please.
3

4 **MR. RINDONE:** Okay. David, when we're going through the SEDAR
5 process, we have involvement from fishermen and from council
6 staff, who help inform about changes to the management process
7 and also about some of the aspects of how the fisheries operate
8 and primary and secondary targeted species and how anglers,
9 whether they be recreational or commercial, may prefer some
10 things during certain times of the year.
11

12 We always lean to the fishermen first, whenever we can, on those
13 things, to let them speak for themselves, and, in the absence
14 of them, council staff or council members, who are listening
15 in, will also chime in and provide some of that information.
16

17 It's definitely considered, front to back, throughout the entire
18 process. Whether it's part of the stock ID process, or when
19 the data are being discussed, which is probably one of the most
20 imperative points in the process for those discussions to occur,
21 but they're also very fruitful in the more analytical parts of
22 the process, like during the actual building of the assessment
23 model.
24

25 If the assessment is predicting that a certain thing is
26 happening, but the fishermen know that to not be reality, based
27 on what they see on the water, they can voice those concerns,
28 and then you can take a deeper look into why the model might be
29 behaving in a certain way and make appropriate adjustments to
30 try to better represent what we're being told is the actual say
31 state of nature, if you will, for a particular parameter.
32

33 Then, of course, when it gets here, and you guys review it, you
34 guys will sometimes get input from fishermen that will try and
35 help explain why something is the way it is, and then, of course,
36 at the council level as well.
37

38 **DR. GRIFFITH:** So, the comments by fishermen, are those
39 incorporated into the reporting that goes to the SSC?
40

41 **MR. RINDONE:** They're included in the stock assessment reports.
42 Oftentimes, you will see something discussed about the data,
43 and I'm going to completely make up an example. If you see
44 something discussed about, oh well, we primarily are observing
45 juveniles in these areas at these times of the year, and
46 fishermen will say, well, that's not really where we see most
47 of them, and you might find them easily there, but usually where
48 we find them is in this other area, and then that might retool

1 some thinking about distribution by age class and size class,
2 and it might help better inform different aspect of life
3 history, as an example. You will see that outlined in the stock
4 assessment report, in the particular sections pertaining to
5 those specific data.

6
7 **CHAIRMAN NANCE:** Katie.

8
9 **DR. SIEGFRIED:** I just wanted to add on to what Ryan was saying,
10 and we have Mandy Karnauskas and Matt McPherson at the Science
11 Center who have been heading up the participatory workshops that
12 are asking these very questions, and they are sociological
13 questions, economic questions, fisher behavior questions.

14
15 Before COVID, we had a room full of stakeholders that
16 represented as many modes of fishing as possible for sets of
17 species, and we would -- I mean, literally, and Mandy is on the
18 call too, but we would throw up, on the wall, all of the
19 information that the fishers would provide to us and figure out
20 a conceptual model that we could then deliver to the analysts
21 doing the quantitative modeling.

22
23 I know that she and Matt, and I think they have an intern working
24 on it, are preparing the conceptual model for red snapper that
25 will be delivered in time for the data workshop, and so we are
26 trying to incorporate more information, and it hasn't been up
27 to par in the past, but I think that we're really getting rolling
28 on that effort, if Mandy wants to add anything, and I hope she
29 will.

30
31 **CHAIRMAN NANCE:** Go ahead, Mandy, if you have anything for that
32 specific item.

33
34 **DR. KARNAUSKAS:** Sure, and I can add to that. That was a great
35 summary, Katie, and thank you. I guess I will add that, from
36 the process that Ryan is talking about, making sort of
37 adjustments to the stock assessment process, based on input from
38 fishermen, is a little bit different than what Matt and I are
39 doing.

40
41 That, I think, is more in line with some of the questions that
42 David Griffith was asking, is what's the role of the species in
43 the wider system, how do fishers change behavior based on
44 regulations, and those sorts of questions, and so those are the
45 kinds of things that we're trying to get at in the participatory
46 workshops, but Katie did a great job summarizing. Thank you.

47
48 **CHAIRMAN NANCE:** Thank you. Josh.

1
2 **DR. KILBORN:** First, thank you for the presentation, and this
3 is actually pretty helpful, but maybe I missed it, and apologies
4 if I did, but how do things like ecological and ecosystem
5 covariates get introduced into this process? Where -- You know,
6 I see a lot of effort appears to be given, in the research
7 track, to stock identification and things like that, but what
8 about these other habitat considerations and ecosystem
9 considerations? How does that get injected into the process,
10 and where?

11
12 **MR. RINDONE:** I can take a swing at that. Typically, those
13 sorts of discussions about ecosystem covariates and how they
14 might be incorporated, those are initially talked about in the
15 data workshop and data preparation phase, trying to identify
16 what data are out there, how they've been developed, what
17 condition they're in, and where best to try to plug them in.

18
19 My mind is drawn to things like the red tide mortality indices
20 that are used for some of the grouper species, and those data
21 are usually talked about at the data workshop phase, and then
22 it's determined the best way to incorporate mortality from red
23 tide, and, often, it's like the discard fleet, 100 percent
24 discard fleet, and how to best align that mortality by size or
25 age, depending on how the data are provided.

26
27 Things are like that are then folded forward into the assessment
28 process, where they're incorporated into the model, and they
29 can also be incorporated as sensitivities, to see how the model
30 responds to the inclusion of those environmental covariates as
31 a separate addition to the model.

32
33 Then, if it looks like that it helps better explain what's going
34 on, and it helps represent a more plausible state of nature,
35 then it can be included in the final base case, and so that's a
36 very quick synopsis of how that process can go.

37
38 We usually try to identify these sorts of projects that can be
39 informative as far in advance as possible, because, like with
40 any new data, especially the more complex those data are going
41 to be, the more work that often has to go into trying to figure
42 out how to fold it in.

43
44 **DR. KILBORN:** Okay, and does that apply to less obvious things,
45 like maybe oxygen concentrations from dead zones and things like
46 that? I am just sort of thinking of just the less obvious
47 things that may influence stock success. As people are working
48 on that in the academic setting, does it translate easily into

1 this SEDAR process?

2
3 **MR. RINDONE:** Sometimes it does and sometimes it doesn't. It
4 just depends on -- It depends on the data and how they can be
5 included. I mean, we might have ample sampling of say the dead
6 zone at the mouth of the Mississippi River and changes in
7 dissolved oxygen levels emanating out from certain areas,
8 showing the changes in that dissolved oxygen in space and time,
9 but that, by itself, while interesting, may not, on its own, be
10 enough to help inform something that's being observed in the
11 model.

12
13 It might help with future hypothesis testing for future
14 research, and so, in those cases, oftentimes, suggestions for
15 the future research will be put into the research
16 recommendations of the stock assessment report, and it just
17 really kind of depends on what's been collected and how it can
18 best be applied to trying to determine changes in the trends in
19 total and spawning stock biomass.

20
21 Dave Chagaris is on, and Dave probably has, at least amongst
22 the SSC members, some of the most used application of ecosystem
23 tools that have gone into the assessment, outside of folks that
24 are in the Science Center, and so he might want to speak a
25 little more to this.

26
27 **CHAIRMAN NANCE:** David, why don't we go ahead and address your
28 questions?

29
30 **DR. CHAGARIS:** Okay, and I can respond to Ryan, first. You
31 described the process accurately, but I do think it could be
32 done better, and, if you think about like the red tide example,
33 I mean, there was a lot of precedent for that before it started
34 showing up in the terms of reference, but, if there are other
35 environmental drivers that maybe haven't been considered yet,
36 something that's not as pronounced, as Josh was referring to,
37 then that might not show up.

38
39 I am actually really glad that we're having this conversation,
40 because this has been a concern of mine, really since we went
41 to the research track, that it was really just shaping up to be
42 another benchmark assessment, and I think what's clear, from
43 this conversation, is that we definitely need to make space for
44 this somewhere upfront in the research track assessment.

45
46 This would be a space to talk about environmental concerns and
47 a space to talk about socioeconomics, and, also, the management
48 options. I mean, there's this disconnect between the stock

1 assessment models and the knobs that a manager might want to
2 turn, and so it's like the assessment stops at status
3 determination and F projections, but how you actually get to
4 that F, whether it's season closures or size and bag limits,
5 could require a different structure of the model or some
6 different projection models.

7
8 I think there's a lot of reasons, a lot of good reasons, to add
9 another stage to this research track assessment, something on
10 the front-end, and maybe you can fold it into the stock ID
11 stage, or maybe you want to have something separate, and how
12 well that could leverage the work that Mandy and her team is
13 doing -- I mean, keep in mind this is something that would need
14 to be done on a regular basis, or maybe you could have a single
15 meeting a year to go through multiple species, and I don't know
16 what it would look like, but, clearly, I think there is something
17 missing in this that allows the models to adapt to what is
18 happening in the environment and what's also maybe happening in
19 the management arena as well.

20
21 I'm not sure how we go about doing that, Julie, if that has to
22 be a motion from the SSC, or if it's something we can test drive
23 with red snapper, where I think it will be pretty critically
24 important to have those conversations upfront.

25
26 **CHAIRMAN NANCE:** David, is that your -- Are you done?

27
28 **DR. CHAGARIS:** Yes, I'm done. I've said my piece. Thank you.

29
30 **CHAIRMAN NANCE:** All good points. We're spending a little more
31 time on this than we have allotted time for, but it's good.
32 This SEDAR process is really critical to the things that we do
33 here. I'm going to take Jason next.

34
35 **MR. ADRIANCE:** Thank you, Mr. Chair. I won't belabor the point,
36 because I think Will and Sean covered a lot of my concerns, and
37 I think I went into this naively, looking at those points about
38 being able to explore new ideas, and I guess the thorough and
39 transparent for a research track has a little bit of a timely
40 component to it as well, but one thing I noticed in the process,
41 and I don't know if Katie will get to this in her presentation,
42 but, somewhere down the line, I guess maybe we need to explore
43 the ability to look at some of these data breakdowns, outside
44 of geopolitical lines, and I noticed that was one point of
45 contention, at least in the stock ID process, that we have
46 surveys and boundaries that are geopolitical, but parsing the
47 data can be difficult.

48

1 I don't know how we move forward in that, but I think it's
2 something to consider, as we do move forward, since these
3 research tracks are going to be our opportunity to change
4 things. If we don't do it then, we're stuck for the next cycle,
5 if we can even do it then. Thanks.

6
7 **CHAIRMAN NANCE:** Thank you. We're going to take Mandy, and then
8 we're going to have Katie's presentation, and then we'll get to
9 other questions that are from here.

10
11 **DR. KARNAUSKAS:** Thanks. I was just going to add one more bit
12 to the subject of environmental covariates in stock assessments,
13 and I'm going to steal a quote from John Walter. When we used
14 to talk about this stuff, and we've done a lot of research on
15 how you go about including the environment in stock assessment,
16 and John used to always remind us that the assessments are like
17 Prego spaghetti sauce. It's in there. The environment is in
18 there, and so I thought that was a great comparison.

19
20 A lot of the data, all of the data, streams are tracking the
21 environmental impacts, and we call it process error, but it's
22 already in the assessment, and so we do have to remember that
23 putting additional environmental covariates in the assessment
24 can often do a lot more damage than they do good, and so we
25 certainly have a number of cases, like red tide and recruitment
26 modeling, where we have included environmental covariates in
27 the assessment, but those have to be selected very carefully.

28
29 Going back to the participatory workshops that Katie talked
30 about, and as Dave Chagaris mentioned as well, not only do we
31 characterize the socioecological aspects of the fishery, but we
32 also ask the fishermen stakeholders what they think are the
33 major drivers of the biology of the species, and so I think, if
34 they were to point us toward certain mechanisms, those could
35 potentially warrant, or take priority, as further research
36 steps. Thanks.

37
38 **CHAIRMAN NANCE:** Thank you. Katie, let's go ahead and do your
39 presentation, real quick, here.

40
41 **DR. SIEGFRIED:** Okay. Thank you, Mr. Chair. We consulted with
42 council staff about setting up this short, but perhaps dense,
43 presentation for you all, after some consternation surfaced
44 during the stock ID process for red snapper, which you all have
45 heard some SSC members comment on this morning, and so we just
46 wanted to start to set what the expectations are for a research
47 track, potentially, and then this can complement the way that
48 the SSC prioritizes the research they would like to see.

1
2 First of all, as Julie stated, research tracks are meant to
3 incorporate current research and then determine which hypotheses
4 can be tested with those available data.

5
6 The research track assessments, they may begin with a stock ID
7 process, if it's identified in the TORs. Sometimes it's not
8 requested, and so it's not required, but, if a stock ID is
9 requested, then we have a panel then that gathers together and
10 reviews all of those relevant studies, all that research and
11 all of the relevant data, to decide on a stock structure that
12 then is required to build the model throughout the rest of the
13 assessment process, and it's kind of like our architecture, the
14 bones.

15
16 The stock structure is to be based on the best scientific
17 information available and to be based on first principles, using
18 the data, and it's to be arrived at by a consensus, through this
19 transparent and inclusive process that Julie outlined in her
20 presentation.

21
22 The Center wanted to set up this expectation, because we're
23 realized this, through trial and error, that, with scamp and
24 red snapper, that multiple stock structures just cannot be
25 carried through the rest of the research track, and that's for
26 two major reasons, and this may have been a miscommunication in
27 the past, and we're sorry about that, and we would like to make
28 that clear now, that we cannot support multiple stock
29 structures, with our current workload and staffing and
30 prioritization of other assessments.

31
32 This is for two major reasons. Most importantly, there is no
33 objective way for us to judge which model is best when the model
34 structure changes, and so, for example, our standard model
35 comparison techniques, like AIC, or any other information
36 criteria, require the same treatment of the data, and, by that,
37 we mean changing stock structure that tends to change the way
38 the data are used, using different likelihoods, like an index
39 configuration, et cetera.

40
41 Our research track data are also supposed to be preliminary. As
42 Julie stated, like for scamp, we don't have a terminal year that
43 is most recent, and we also don't expect all the data to be
44 perfect. We want them to be approximate and sort of what we
45 need to build those bones, but they may not be the most final,
46 most QA/QC'd data, and so, if we don't have that, we cannot
47 compare model diagnostics across varying stock structures.

48

1 We also have this hypothesis testing statement that's been made
2 repeatedly, but each stock structure may not be able to test
3 the same hypotheses, or use the same data, which also makes them
4 incomparable, and so that's the most important reason that stock
5 structure cannot be carried through, barring anything much more
6 intensive, like a simulation study or something where we have
7 multiple post-docs working on this before the research track
8 even begins, but, at this point, what we have are the panel
9 looking at the available data and coming up with one stock
10 structure and comparing across multiples, and it's just very
11 difficult if there is no objective, quantitative way to do that.
12

13 In addition, multiple stock structures creates a factorial
14 design for the modeling team and data providers, potentially
15 creating an infeasible workload for the timeline of a research
16 track, and so I'm sorry that I don't recall who just mentioned
17 it, but there is some timeliness required for a research track,
18 and we do need management advice at some point.
19

20 I tried to create just a pictorial to explain this factorial
21 experimental design, and so, if we carry that stock structure
22 through the process, we could potentially create an
23 exponentially higher workload for the analysts and our data
24 providers.
25

26 What I have put here is -- If you look at Model Structure A at
27 the top, we test just one hypothesis, looking at alternative
28 selectivities, and so we have four different competing
29 hypotheses about selectivities, and it creates four models from
30 that one model structure.
31

32 Then we test each of those selectivity hypotheses with a high
33 and low natural mortality, and, those of you who have followed
34 our assessment processes, this probably doesn't look that crazy,
35 right, because we probably test selectivities, high and low
36 natural mortality, and multiple other hypotheses in the process
37 of doing our sensitivities, as an example.
38

39 If we then carry all of these hypotheses say for the alternative
40 selectivities or high and low natural mortality through say two
41 more model structures, we create an exponentially higher
42 workload for ourselves, and we don't necessarily know if the
43 selectivity scenarios will require the same treatment of the
44 data, and so not only do we have different data, but we have
45 different assumptions, and it's a problematic scenario for us.
46

47 This is just a really simple example of why it creates such a
48 huge workload and how it's difficult to test across the

1 scenarios, and I hope this is clear that this is just meant to
2 be a cartoon, and that we're actually a lot more complicated in
3 our processes.

4
5 Once that stock structure is decided by a panel consensus, like
6 Option A in the last slide, we can test multiple hypotheses with
7 the data available at the data workshop phase, and we can look
8 at inclusion or exclusion of a variety of indices or the way
9 that those indices are standardized. They could include or
10 exclude information about hypoxia, say, in the index
11 standardization.

12
13 The age and length composition data can be weighted or not
14 weighted, or using different likelihoods to fit those, and we
15 have catch and discard data that can be taken back to a
16 historical period or not, and then how the discard data are
17 arrived at by a model is another sensitivity that we can
18 potentially look at, or hypothesis. Sorry.

19
20 We have different selectivity functions, retention assumptions,
21 and we can investigate different stock-recruit relationships,
22 generally data-weighting issues, and we can attempt to
23 incorporate published studies about topics such as larval
24 transport, depredation, density-dependent mortality, et cetera.

25
26 All of these hypotheses can be tested during the research track
27 assessment, but not necessarily during an operational, and so
28 we do have this expectation of hypothesis testing in a research
29 track, but just not necessarily the stock structure.

30
31 Just a little note at the bottom there is that the research
32 track framework allows for this hypothesis to be tested using
33 the data provided at the data workshop phase, based on the stock
34 structure decided during the stock ID, and it could also be the
35 status quo, if the stock ID was not specified in the TORs, but
36 this was meant to expand on the expectations and clarify the
37 expectations that may have been communicated in the past for a
38 research track, and I hope that this helps sort of create a
39 place to start the conversation about what can be included and
40 not included for future research track assessments, and I think
41 that's my last slide, if there are any questions.

42
43 **CHAIRMAN NANCE:** Thank you very much. I appreciate that
44 presentation. Paul, did you have something to add to this?

45
46 **DR. MICKLE:** I appreciate this information, and it does give a
47 lot of kind of background to what the research tracks can really
48 provide, and I really appreciate this actual slide, because this

1 gives the ability to look at the multiple hypotheses that you
2 can actually challenge and look at and see if you're going --
3 The path you're using, and the model design, and the stock
4 structure you've actually decided on has been tested through
5 these different things, and so I really appreciate that.

6
7 Just to jog my memory a little bit, I thought we would -- A few
8 years ago, there was a lot of discussion about gray triggerfish
9 and the ability to maybe look at some sort of new type of data,
10 research track discussion, because I think it has been updated
11 quite a bit, and benchmarked quite a bit, that particular
12 species, but the recruitment side and the sargassum component -
13 - I thought maybe there had been some direction and some research
14 funds spent to look at kind of maybe that relationship, and I
15 don't know whatever came of that, if anybody remembers.

16
17 I thought maybe that NOAA had funded a little bit to look at
18 it, and maybe Dr. Hernandez over at Southern Miss, and I think
19 a GIS satellite specialist, maybe down here at USF, had teamed
20 up, and I think I just lost focus, or I just didn't follow-up
21 on that, but whatever happened to that effort of trying to
22 understand maybe a habitat and ecological component to the
23 conversation we're having?

24
25 **CHAIRMAN NANCE:** Mandy, do you have something to that point?

26
27 **DR. KARNAUSKAS:** I'm actually the technical monitor on that
28 project, and so I could update a little bit. It is coming to a
29 close, and they are in the process of investigating satellite-
30 derived sargassum indices and the relationship with gray trigger
31 recruitment, and so that research is still in progress, but the
32 project is coming to a close, and they are actively working with
33 the stock assessment folks at the Southeast Center, and so they
34 are making those linkages.

35
36 **DR. MICKLE:** That's terrific, Mandy, and that's really great to
37 hear. We all understand that it's very difficult when
38 ecological data are very spatial in nature, and they're very
39 bound spatially by the study site, which creates issues in Gulf-
40 wide stock assessments and those things, and so I would just
41 like to highlight that that seems like a really wonderful
42 effort, where NOAA provided the data need of a new type of data,
43 and it was kicked off in a way that NOAA really outlined exactly
44 the way the research could allow data to be informative to a
45 stock assessment, because so much ecological data is not, for
46 various reasons, and so that's just a really great example of
47 how this provides benefit and pays dividends once the efforts
48 are in motion. I just wanted to highlight that.

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CHAIRMAN NANCE: Okay. Sean.

DR. POWERS: Thanks, Katie, for the presentation, and it is consistent with what we've heard from the Science Center during the stock ID workshop. I guess, getting back to your first point, and I totally agree that, if first principles agreed, and we could draw a definitive boundary, then that's, obviously, the best solution, but the issue with red snapper is that none of the bits of information were any overwhelming individually, and so we had a lot of places where we could have drawn that boundary.

I guess that's the point, is what happens, and I think this is the case for red snapper, and I hope it's the only species we have this problem with, but what if first principles don't give a clear answer? That's what we're facing here.

You know, while we did get consensus, the consensus wasn't overwhelming. I mean, basically, Option C was the consensus, which is the three-stock model, for those of you who aren't familiar with it, versus a new line at the Florida-Alabama line and a two-stock model.

I'm not sure which one is correct, because there is no overwhelming signal on first principles from the studies on where definitively to draw that line, and so I understand the concern about the workload, but, again, this was the priority that the SSC had for a research stock assessment on this, was deciding on the stock structure.

I realize that there is no objective measure, because there will be differences in the models and the data inputs, and it will affect sampling sizes and all of those things, but there is probably a way, short of doing a complete factorial design, that we can look at this question, and we can choose a couple of indices and then look at their fits, because, ultimately, since the genetic life history information isn't leading us to any definitive point, ultimately, we want to see what makes the most sense or, for lack of a better word, visual fits of the indices.

We have done that consistently in the SSC, actually looked at visual fits of the indices, when we can't get an objective way, and so I understand this list of hypotheses that you want to test, but part of -- Or that we think that we should test, but, for example, I would be willing to give on a few of these if we could look at the stock ID structure.

1 I understand it's a tremendous amount of work, but, arguably,
2 it is the most important species that we deal with at the SSC,
3 or at least public perception would say that, and so I guess
4 that's -- My question comes back to what if first principles
5 don't give us a clear boundary? I mean, there would be some
6 argument, according to Magnuson, that we should then, if there
7 is no clear thing, we should manage it as one whole stock, and
8 I don't think anybody is advocating for that, but what happens
9 when first principles don't lead us to definitive stock
10 boundaries?

11

12 **DR. SIEGFRIED:** Can I respond to that, Mr. Chair?

13

14 **CHAIRMAN NANCE:** Absolutely, Katie.

15

16 **DR. SIEGFRIED:** I think, without showing the SSC this whole
17 stock ID report at this point, it would be difficult to truly
18 debate all of this, Sean. I know that the Center and council
19 staff have discussed that we would like to present the stock ID
20 report to the SSC at the next meeting, and that, once the SSC
21 can see all of those details, it would be a heck of a lot easier
22 to debate this, at that point, at least the details of the red
23 snapper stock ID.

24

25 When you say that the first principles don't arrive at a clear
26 stock structure, then it has to be something where the panel
27 comes to consensus of what other best scientific information
28 there is. If there's not one clear answer, which seemed to
29 happen for the red snapper stock ID, then the panel discusses
30 it, which we did over multiple webinars, and we had to come to
31 some kind of compromise, based on what was available and what
32 we expected to see if we could rely on just first principles
33 alone.

34

35 I would ask if we could debate the actual details of the red
36 snapper stock ID at the next one, where the whole SSC can be
37 aware and educated about what the panel discussed.

38

39 **CHAIRMAN NANCE:** Ryan, is that possible to do?

40

41 **MR. RINDONE:** I would argue no, the reason being that the data
42 workshop, or the data preparation workshop, whatever it is that
43 anyone feels like calling it for the research track process,
44 and it's supposed to be the first week of November, and debate
45 implies that there's something left -- Something still to be
46 decided, and so, if this decision is not made, isn't already
47 made at this point and ready to go, I mean, it affects everything
48 downstream at this point.

1
2 If we wait until the next SSC meeting, which is the end of
3 September, then, at the end of that meeting, that leaves
4 essentially the month of October for everyone who is responsible
5 for data to put those data together in such a way that complies
6 with the hypothesis, or hypotheses, for stock structure and have
7 to do that in a month, and I would venture to say that you will
8 hear a lot of people say that's either highly unlikely or flat
9 impossible.

10
11 Then, for all of that to be prepared and ready to be discussed
12 at that data workshop in November, I just don't personally see
13 how that's possible, given my experience with the SEDAR process,
14 and so the possibilities, from there, would be that either we
15 would have to go forward with what we have, and try to think of
16 alternative ways of looking at things, as Sean alluded to, or
17 we would have to look at the schedule and see how we could
18 change the schedule to accommodate further consideration of the
19 stock ID process, and so I see Julie has got her hand up.

20
21 **CHAIRMAN NANCE:** Julie, do you want to respond, and then Katie,
22 or vice versa?

23
24 **DR. NEER:** I just want to step in with regard to the process.
25 As I said, we have a stock ID process that we went through and
26 we followed, and SEDAR is more than happy to make the report
27 available for you all to see, and it will be posted on the
28 website as soon as it's finished, in the next couple of weeks,
29 but SEDAR does not currently, in its format, come back to the
30 SSC in between each one of these steps to get them to sign-off.

31
32 It is an entire process that moves forward, and, as I said, it
33 is a sequentially decision-making and recommendation-making
34 process, and, if we are now going to have to get each stage of
35 this process reviewed and signed-off on by the SSC, that is a
36 fundamental change to how SEDAR functions, and it will require
37 a lot of discussion at the steering committee level, if that is
38 a path that we're going to go down, then that's -- I have a
39 feeling that we're going to discuss this topic in general at
40 the next meeting in October for the SEDAR Steering Committee,
41 but we have ADT members who are in this whole process, and some
42 of them were actually on stock ID, and some of them were not,
43 but we have SSC representation at each one of these stages for
44 a reason.

45
46 The whole product, at the end, comes to the SSC for their review,
47 but coming back and now taking this report and sending it to
48 the SSC for them to weigh-in on, without the benefit of seeing

1 all the discussions and all the -- We had fifty-two people
2 appointed to the stock ID panel for red snapper, and we had a
3 series of webinars and workshops.

4
5 For you guys to now just look at that condensed report and then
6 perhaps override the decision that was made by the panel is a
7 real problem for the process, and, if that's what you wish to
8 do, I guess the SSC can make that recommendation, and then we're
9 going to have to take that up to leadership and see if it can
10 be accommodated or not, because that is not how the process
11 works, as it is currently structured. Thank you.

12
13 **CHAIRMAN NANCE:** Thank you. Katie, anything on that?

14
15 **DR. SIEGFRIED:** Yes, and I'm really sorry that I used the word
16 "debate". What I thought we were doing, and had discussed
17 doing, is bringing it for awareness and not for approval, and
18 so what I meant was it's difficult to answer Sean's specific
19 questions about it, because the whole SSC is not aware of what
20 we're talking about, because there is no document, but I
21 certainly didn't mean to add in that the SSC needed to approve
22 that. The panel came to consensus, and so I apologize for
23 misspeaking.

24
25 **CHAIRMAN NANCE:** Thank you, Katie. Will.

26
27 **DR. PATTERSON:** Thanks, Jim. Katie, back to your original sort
28 of two points about why we couldn't explore stock structure
29 within the assessment model, or models, one is this factorial
30 issue, and the second is just the data requirements to
31 accomplish that.

32
33 As far as the factorial, anytime we change an assumption about
34 selectivity, or we change assumptions about high or low M, that
35 doubles the number of runs that are required, and so, by having
36 two stock ID assumptions, it would be no different than any of
37 those other parameters.

38
39 It seems to me what it really comes down to is the data, and I
40 understand the difficulties in trying to produce all the various
41 information, whether it's the age comps or the index information
42 for various indices, and that, if you have different geographic
43 boundaries between population groups, or stock sub-units, then
44 that causes problems, or it creates more work, but, to me, that
45 just argues for the process I think that's being undertaken, or
46 is attempted to be, in the region of more automation of the data
47 time series and the ability to pull data at the click of a
48 mouse, if possible, for these various different components of

1 what goes into stock assessments and not have it be a two or
2 three-month process to get data providers to get information
3 for a given index or a given source of information that goes
4 into an assessment, into a given assessment.

5
6 I know that's problematic now, and I'm hoping, in the future,
7 that, if this automation process is successful, at least to some
8 extent, then perhaps we can start to evaluate some of these
9 things, and, as far as an objective way to interpret the
10 information, if you ran a two-stock versus a three-stock
11 assessment, and then tried to figure out which one is the most
12 parsimonious, or the best fit, in some other respect, I think
13 we can do that, like Sean was alluding to, even without a formal
14 framework.

15
16 I mean, obviously, it's better to be as objective as possible,
17 but I think that could be done, and so I understand that it's
18 not going to happen for red snapper for this particular process,
19 this particular research assessment, but, right now, you have a
20 three-stock model moving forward.

21
22 What happens if you get to the end of two years and you're not
23 getting convergence, or there's something else squirrely, and
24 you have indices that just don't fit, because the population
25 structure that's assumed in that model just doesn't match the
26 fish, the biology of the animal, and you have bits of information
27 that may be suggested, but, in the end, it's not the best
28 approach, and what do you do at that point?

29
30 You've got two years invested into a process that doesn't
31 produce a result that maybe the SSC would recommend to be turned
32 loose into an operational assessment, and so, if the issue is
33 about efficiency and best use of time and how to accomplish the
34 objectives of the research track process, we could actually end
35 up in a position where you have -- By not running these multiple
36 scenarios, and, by multiple, I am suggesting two, but then you
37 could actually end up in that same situation, but for a different
38 reason.

39
40 **CHAIRMAN NANCE:** Thank you, Will. Trevor.

41
42 **DR. MONCRIEF:** I want to make two points, real quick, and so
43 the first one is on the document itself, and then I'm going to
44 call of follow -- I think Will was going down the route that I
45 was going, but I've got another scenario that I wanted to ask a
46 question about.

47
48 Paragraph 3 of the guidance document, and I think it's Sentence

1 4, says this would increase quality, because the research
2 assessments are not rushed to completion under the pressure of
3 needing to provide management advice. Then another sentence in
4 your bullet points, the last one, is, therefore, the frequency
5 of research track assessments should be tempered by the extent
6 of compelling new information and the resources available and
7 that there are no expiration dates on the assessment tool built
8 through a research track.

9
10 I feel like -- I think you all are going to provide the clarity
11 that was asked by multiple folks, but I think adding what you
12 all have in this last slide would provide a lot of clarity in
13 the document, and it would really clear it up, for anyone who
14 pulls this up, to be able to look at what the research track is
15 supposed to be.

16
17 The other one is I think we all have come to the consensus that
18 we want to explore multiple stock structures, and it would be a
19 great thing to do, but it might not be in the cards here, and I
20 guess my question is, is there concern from you all's staff, or
21 anybody at this table -- Basically, what I am thinking is this
22 is going to come up again for a research track in a few years,
23 and the same question is going to arise, and we have the
24 possibility that we're going to have basically a previous
25 assessment that had a stock structure, a research track
26 assessment now that's going to have a different stock structure,
27 and then the new one, when it comes out, the next research track
28 could have a potentially different stock structure altogether.

29
30 Is there any concern about comparability or changing these stock
31 structures over time for each one of these assessments, because
32 that's a fundamental change, in my mind.

33
34 **CHAIRMAN NANCE:** Katie, go ahead and address that, please.

35
36 **DR. SIEGFRIED:** We did -- To Trevor's question, we did talk a
37 little bit about comparing stock structures, where we couldn't
38 collapse back to status quo, and I think that's what you're
39 getting at, is that it's difficult to compare when the stock
40 structure may change from research track to research track.

41
42 That was one of the appealing options, but one of the things
43 that made the option seem appealing is that, potentially, if we
44 ran into issues like what you're saying, or what Will was saying,
45 where we had convergence issues, or problems with the data not
46 being enough to support another region, that we could then fall
47 back on status quo, which is something that I think is outlined
48 in that document as well, that if the data aren't sufficient to

1 move into the different stock structure that we would have to
2 fall back on that. Can I also comment on Will's point, Mr.
3 Chair?

4
5 **CHAIRMAN NANCE:** Absolutely.

6
7 **DR. SIEGFRIED:** Okay. So then, as far as automation goes, we
8 have some staff who are dedicated to the automation side of it,
9 and we are going just about as fast as we can on those, and
10 we've made some big strides, but a few of the things that we
11 haven't fully automated yet are key points to the stock
12 structure discussion, the indices and the age and length
13 composition data weighting, and those are much more difficult
14 to automate, when it comes to changing the stock structure.

15
16 We are open to suggestions and further discussion about that,
17 as well as any academic studies that are of interest to those
18 on the SSC, or their collaborators, to look into something like
19 a simulation study for stock structure, and our staff,
20 unfortunately, just have such a high operational workload that
21 we can't pursue all of the types of research that we would like
22 to pursue outside of our SEDAR and operational workload.

23
24 The other thing that I wanted to mention about this slide that's
25 on the screen here, it certainly is not all-inclusive, and I
26 hope that that was understood, and there's plenty of other
27 things that we can test. Natural mortality comes to mind, and,
28 also, we can incorporate hypothesis testing in the operational
29 assessments and not just research track, and so I hope that was
30 clear.

31
32 I wish we were farther along with the automation and that there
33 was an easier way to move forward with stock structure,
34 something where we had some sort of decisional framework with
35 all the available data, but we're just not there yet.

36
37 **CHAIRMAN NANCE:** Thank you. I think this research track is one
38 of those things where it's the first attempt, and it's a good
39 learning experience on how these things need to proceed. Any
40 additional comments on this topic? Okay. Julie and Katie,
41 thank you very much for those presentations, and I appreciate
42 all the comments.

43
44 We're going to break for lunch, and we'll come back at 1:00
45 Eastern Time, and we'll go into the red grouper. Thank you much
46 to all those who participated.

47
48 (Whereupon, the meeting recessed for lunch on August 9, 2021.)

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3
4 August 9, 2021

5
6 MONDAY AFTERNOON SESSION
7

8 - - -
9
10 The Meeting of the Gulf of Mexico Fishery Management Council
11 Standing and Special Reef Fish, Special Socioeconomic & Special
12 Ecosystem Scientific and Statistical Committees reconvened on
13 Monday afternoon, August 9, 2021, and was called to order by
14 Chairman Jim Nance.

15
16 **CHAIRMAN NANCE:** Welcome back, everybody. Our next agenda item
17 is we're going to review the updated red grouper interim
18 analysis. Skyler, I guess you're up for that.
19

20 **REVIEW OF UPDATED RED GROUPEr INTERIM ANALYSES**
21

22 **DR. SKYLER SAGARESE:** Thank you so much, and I'm going to
23 basically be giving a run-through of the updated interim
24 analysis for red grouper. I know there are some new folks on
25 the SSC now, and so I'm going to try to maybe add a little bit
26 more background as I go through it than I normally would have,
27 but, if you've looked at the materials online, there is quite a
28 few new documents that we've posted, and there's been a lot of
29 updated work on red grouper since we had our last presentation.
30

31 I am going to just start, quickly, by going through a brief
32 history of the interim analyses for red grouper. Red grouper
33 was the first stock that we did do an interim analysis for, and
34 I'm also going to spend a lot of time, on this call, talking
35 about some updated methodologies that we proposed at the Science
36 Center to move forward with for red grouper, and so I will kind
37 of go in detail in terms of why we're proposing those approaches
38 and talk about some of those specific issues with red grouper,
39 and also talk about another issue that's come up.
40

41 From the allocation standpoint, when we started digging into
42 landings time series and assessment predicted outputs,
43 basically, we ended up coming back to our projections and kind
44 of doing a little analysis for the interim before another full
45 assessment can be done, and that helps out with the predicted
46 assessment recreational landings, and so we've done sort of a
47 little adjustment to the OFL and ABC that we'll see later on,
48 and I did want to highlight here that there's a lot that's in

1 this presentation, but there is also --
2
3 We've tried to break it up into pieces, and, where we need SSC
4 decisions to be made, we're kind of going to approach it that
5 way, and so we'll talk about through the first issue and then
6 kind of stop and discuss. You know, number one is that
7 recreational weight adjustment, and are those results accepted,
8 and then number two, because the interim is dependent upon that
9 decision, then we'll jump into the interim analyses results.
10
11 Of course, with red grouper, with the groupers and the ongoing
12 red tide, there's been quite a bit of concern that we've been
13 hearing, and so we wanted to try to provide a little bit of
14 input there, and I'm hoping that Brandon Turley will be able to
15 chime in, and he's been leading some of those results, and so,
16 when we get to that point, I'm hoping he can jump in with some
17 additional background, and so there's a lot to cover.
18
19 Basically, the take-home for red grouper, SEDAR 61, was
20 finalized and presented at the September 2019 SSC meeting and
21 then at the October 2019 council meeting. At the time, while
22 that assessment was ongoing, we had the red tide that had
23 occurred in 2018, and there was some concern that was raised,
24 in terms of the ACL wasn't being met, and so the first interim
25 analysis that was conducted at the Science Center was for Gulf
26 red grouper.
27
28 I highlight here that all the interims we've done so far from
29 red grouper have been projection-based interims, and I will go
30 into more detail in a few slides on what that means, but that's
31 really important to keep in mind, and that's one of the themes
32 of this presentation.
33
34 After that first interim analysis, it was -- The SSC suggested
35 that it could be useful for setting a new ACL, and that was
36 about 4.6 million pounds at the time, but, ultimately, it wasn't
37 used, because the 2019 ACL that was put into place by an
38 emergency rule, and then later by framework action, actually
39 used the 2017 landings value, which was, I believe, 4.16.
40
41 The first interim produced advice, but, ultimately, that advice
42 wasn't used, and then, more recently, at the end of -- All my
43 years are jumbling together, but, at the end of 2020, when we
44 produced another interim analysis, using the 2019 data, we were
45 able to kind of get a gut-check on what the SSC had agreed upon,
46 in terms of the assumption of the red tide mortality, and so
47 one thing to note here is that the SEDAR 61 stock assessment
48 had a terminal year of 2017.

1
2 At that time, 2018 was the first year of our projections, and
3 we knew that there was a very bad ongoing red tide, and so we
4 had to make some assumptions in our projections to allow for
5 some sort of event, and so, for example, in the figure on the
6 right, what we ended up showing for that assessment, the output
7 that followed throughout much of the reviews, was a -- That's
8 just the time series of the projected yields out of our
9 projections, which started -- So the first year of projected
10 yields was in 2020, and then through 2035.

11
12 We ended up putting fixed catches for both recreational and
13 commercial in 2018 and then in 2019. In 2019, because we did
14 not have final data, we made the assumption that the commercial
15 ACL would have been landed and that recreational landings would
16 have remained similar to 2018.

17
18 The first thing to highlight is, and as we document in our
19 reports, there's a lot of assumptions that go into our
20 projections, but, ultimately, what that 2020 interim analysis
21 showed was that our assumption was pretty good that there was a
22 red tide, and it looked like it did have a bad influence on the
23 stock, based on the trend and the relative index.

24
25 Then, in 2021, and so, in this past December of 2020 and then
26 in March of 2021, we put out two different interims, using the
27 index of abundance that we'll go through, essentially a full
28 index and then an index that was based on a reduced spatial
29 footprint, because of 2020 and COVID and other reasons that the
30 survey wasn't able to sample the whole region.

31
32 There's been -- Just to kind of put it in perspective, there's
33 been a lot of interims that have occurred for red grouper since
34 that first one, but, at the end of the day, none of them have
35 actually been used yet to set catch advice, and much of it had
36 to do with the results of SEDAR 61 being tied into the allocation
37 issues, and so allocations had to be finalized before we could
38 finalize the projections and get out the new OFL and ABC.

39
40 Basically, the most important thing, with all the work that we
41 did projection-wise, was that the big assumption for our 2018
42 red tide was that it would have been similar, and had a similar
43 impact to the population, as the 2005 event.

44
45 Previously, as I mentioned earlier, kind of foreshadowing, all
46 of the interim analyses that we've done for red grouper focused
47 on a forecasted index, and so they were projection-dependent,
48 and so what this figure here is showing is you've got relative

1 abundance on the Y-axis, over time, and, in this case, this was
2 for the full NMFS bottom longline survey.

3
4 The index of abundance is in red, and then the reduced spatial
5 area index is in green, and what the previous interim approach
6 that was applied for red grouper, we would take the assessment
7 forecasted, and so the dashed-blue line is essentially the
8 expected trend for that index that the stock assessment was
9 projecting forward, based on all the assumptions we made in our
10 projections, and so the fixed landings, the red tide assumption,
11 and that is the trend that the assessment had expected would
12 have happened if all the conditions we made in the projections
13 were constant, and so selectivity, retention, and everything
14 was assumed to be the same as 2017.

15
16 Many of you that looked through those SEDAR documents, you know
17 that the projections have a lot of assumptions built into them,
18 and so that's how that previous interim analysis worked, is we
19 were comparing what the current index, the actual observed
20 index, was doing in relation to where we thought we were from
21 the forecast.

22
23 I have highlighted those strong assumptions in red, because all
24 of the work that's been done was based on the assumptions, and
25 now, with the terminal year of 2017, we're already into 2021,
26 and all those projections that we presented are really assuming
27 that the assumptions we made about the red tide, which, again,
28 was just an assumption, sort of a placeholder, in the absence
29 of any other information, that those may not represent -- A
30 couple of years later now, we have better data streams, and we
31 don't really have to rely on those forecasted relationships that
32 we thought were the truth at the time. We did the best that we
33 could, but there's been some new research that we want to
34 incorporate for the interim.

35
36 Just to kind of bring the where is the red grouper fishery at
37 to-date, and so we've seen this plot in the past, and this is
38 just looking at the -- Over time, the red-grouper-specific
39 quotas for commercial on the left-hand panels and then
40 recreational on the right, the landings are the dashed lines,
41 the realized landings are the dashed lines, and then the quotas
42 are the thick line, and, at the bottom, it's just plotting the
43 percentage of the quota that's been landed.

44
45 In 2019, the ACL was dropped considerably, and so, in 2019, the
46 commercial fishery caught about 70 percent, and then, in 2020,
47 they caught about 80 percent of the quota, and then, in both
48 2019 and 2020, the recreational fleet caught just over 80

1 percent for both years, and so, even with the change in the ACL,
2 currently, neither fishery is actually realizing the entire ACL.

3
4 I do want to point out that this was based on the available data
5 that I had at the time. Because we're currently halfway through
6 2021, the commercial quota, I believe, right now is about 60
7 percent, and I'm not quite sure about recreational. I didn't
8 see new data, and so there's still some concern that we're not
9 seeing as many fish, although I do think that, very recently,
10 that has changed, and I think that we're starting to see the
11 cohort that the assessment had predicted in 2013.

12
13 We're starting to get some reports that red grouper fishing is
14 really good, and that's promising, and I think that's -- These
15 are the kinds of reasons why we want to apply these interim
16 approaches in between full-blown stock assessments, because it
17 will allow us to have a bit more of a handle, real-time, on
18 what's going on, and so, as I mentioned, with the terminal year
19 of 2017, the SEDAR 61 assessment is already quite old, and it
20 still really has not been used yet, until now, luckily, but
21 there is still quite a bit to discuss.

22
23 What we're proposing with the new approach, and the working
24 paper that's now posted on the website kind of goes through this
25 in detail as well, is essentially switching to an index-based
26 approach that does not rely on the projections, and so this
27 approach was used for red snapper and gray triggerfish, but
28 that's not the only reason why we want to switch to this
29 approach. We think that this is a more defensible management
30 procedure that has been used and has been simulation tested.

31
32 In this case, it was tested in the Huynh paper for vermilion
33 snapper, and we still don't have a red-grouper-specific MSE that
34 has been used to test all the different combinations and
35 management procedures, and it's something we're hoping to work
36 towards at the Science Center, but, for now, in this case, we
37 did feel that the additional peer review of this approach by
38 Huynh was justification for putting forward this sort of an
39 interim approach, a harvest control rule that does not rely on
40 the projections.

41
42 Again, this removes the reliance on what I talked about with,
43 number one, we had to make an assumption about the 2018 red
44 tide, and now we're a few years past that, and we're already
45 kind of getting into the midst of another red tide, and so how
46 good were those assumptions in the first place, as well as the
47 landings, and so the benefit of removing the reliance on the
48 forecasted index is that we can use the index of abundance we

1 have from the reference period and from our recent period and
2 get an idea of what's going on and be able to adjust the catch
3 there.

4
5 That's one of the biggest -- The biggest change from what we've
6 presented in the past, is we are no longer comparing the observed
7 data that we're getting more recently to the forecasted index
8 of abundance, and, again, as I mentioned, the reason for this
9 move, or this shift, was because this approach has now been
10 simulation tested for another Gulf stock, and I need to
11 emphasize here that the approach we had used in the past has
12 not yet been simulation tested, and so we feel more comfortable
13 moving forward with an approach that has.

14
15 Again, it has been presented and accepted for red snapper and
16 gray triggerfish, and so, from that 2018 first interim, a lot
17 has changed, in terms of how we approach interim analyses for
18 red grouper, and it wasn't until very recently that we
19 reevaluated all of the different steps, the approach, that we
20 took, as well as some of the other modifications that we needed.

21
22 Just to kind of give you an idea of how this approach works,
23 and I do want to point out that the approach we presented follows
24 from what was done I think a few months ago for red snapper,
25 where it takes a modification of the Huynh approach, where we're
26 now using a moving average, and, essentially, what we're getting
27 is our catch in year Y-plus-one, and so that would be the year
28 we're trying to produce, and so, for example, 2021 in our case,
29 and the C reference is essentially the reference level of catch
30 that would come out of the recommendation for the assessment.

31
32 Normally, it would be the year following the terminal year, and
33 so, for example, our terminal year was 2017, and so,
34 technically, we would have seen this advice go into play in
35 2018. Now, of course, we've had a pretty large lag from SEDAR
36 61, but, just for the purpose of this analysis, we wanted to
37 stay strict to that thinking that this really was a case where
38 there was a much larger time lag than there really should have
39 been, and so, for this presentation, we're going to look at the
40 results that looks at a three-year or a five-year moving average
41 for both the recent mean index and the reference mean index.

42
43 The reference mean index is just the average index value that
44 was before and after, and so from 2017 to 2019, or for the five-
45 year period, and, basically, we just kind of anchor that catch
46 level that came out of the assessment, and you anchor it to the
47 index value during that reference period, and that's what you
48 compare with more recent data, so you can see where you're

1 getting.

2

3 Just kind of going back into this, the adjustment -- We would
4 essentially be recommending catch levels that could be
5 implemented starting in 2022 from this analysis, and what I want
6 to now talk about is this -- So the reference catch level that
7 we're going to adjust, and we ended up going back and re-doing
8 our projections using the Amendment 53 final preferred
9 allocation ratio of 59.3 percent commercial to 40.7 percent
10 recreational.

11

12 After kind of going back and forth with some very keen eyes, in
13 terms of comparing ACL monitoring landings with what the SEDAR
14 61 assessment was predicting, we ended up going back and looking
15 at our projections and coming up with an approach that allows
16 us to scale up our recreational weights, and so what was
17 happening in the SEDAR 61 assessment, and, specifically, the
18 steps we took, and we do have a paper, a working paper, online,
19 or on the website, that kind of talks through the steps of why
20 we had to do that.

21

22 I wanted to now take a few slides and basically talk through
23 the issues, and then, number one, the first thing we provide in
24 this presentation is our recommended adjustments to the OFL and
25 the ABC, and, from there, we would apply the interim on that
26 approach.

27

28 For SEDAR 61, a couple of years of back-and-forth and kind of
29 digging into the data, and the first thing that I do want to
30 caveat with red grouper is SEDAR 61, I think, was the first
31 assessment where we really had to dig into recreational landings
32 in weights. Traditionally, in the Gulf, we have always modeled
33 recreational landings in terms of numbers of fish, and that's
34 how we put the data into the model, and we fit to the numbers,
35 and so everything looked fine when we were going through SEDAR
36 61.

37

38 It wasn't until afterwards, when you started looking at the
39 derived recreational landings in weights, and so the stock
40 assessment predicts the recreational landings in weights that
41 it expects with what's actually in the ACL monitoring dataset,
42 and we noticed a pretty large discrepancy.

43

44 What was causing, or what's behind, that discrepancy is
45 essentially just a pretty large difference in terms of the mean
46 weight of red grouper that were landed by the recreational fleet
47 from what comes out of the ACL monitoring data versus what the
48 assessment thought, and so some of the reasons behind this, in

1 the assessment model, is that we generally estimate the growth
2 curve externally to the assessment model and then fix it in the
3 stock assessment, giving it a variability around age, to kind
4 of get at where we think the fish would be.

5
6 We put in retained age compositions, and we put in discard
7 length compositions, and, in the case of red grouper, the model
8 was converting those age compositions into length compositions
9 and then into weights, but it really didn't have any weight
10 information, in terms of the size of fish, to anchor those
11 estimates, and so the way the model was fitting is just what
12 we've done in the past, but it wasn't noticed until you started
13 digging into the outputs.

14
15 The first thing, for this figure, and so this is just comparing
16 the mean weight of red grouper landed by the recreational fleet,
17 and so, for SEDAR 61, it's a single recreational fleet that
18 combines headboat, charter boat, and private, and the thick line
19 here in the assessment expected mean weight, and so the mean
20 weight of landed red grouper predicted by the assessment model
21 is much smaller, and so you can see it's about four pounds
22 gutted weight. That was what the model thought.

23
24 When you look at the ACL monitoring data, you can see that that
25 mean weight is pretty variable from year to year, but it
26 generally bounces between about four and seven pounds, and, in
27 2019, it was about six pounds, in gutted weight, and all of
28 these metrics have been in gutted weight, for consistency.

29
30 Where this plays is, when you look at the assessment -- Again,
31 we fit to numbers, and we didn't see any major discrepancies,
32 when it came to reviewing the assessment model, and that's what
33 you see on the top here. This is what we saw with the
34 assessment, and the numbers were fitting to millions of fish,
35 and the dashed line is the ACL monitoring numbers, and the solid
36 line is the assessment-predicted numbers.

37
38 Now, remember that, for recreational landings, we assumed fairly
39 large error estimates, and so, for red grouper, we had a CV of
40 about 30 percent, or 0.3, and so the model doesn't have to fit
41 those numbers exactly, and that's kind of what we're seeing
42 here. In some years, it fits fairly well, and, in some years
43 it doesn't, particularly in the late 1980s. There are some big
44 differences there.

45
46 When it came time to compare the assessment-predicted
47 recreational landings in weights, in the bottom, on the panel,
48 that's the black line, and so that's what the assessment thought

1 the recreational landings, in weight estimates, would be, but,
2 when you compare that to the dashed, the ACL monitoring weights,
3 you can see a pretty large difference.

4
5 What we ended up doing first was saying, okay, well, we know
6 that the assessment model underestimated the mean weight of a
7 landed red grouper, and what we wanted to do then is take a --
8 Basically, just find a ratio of the mean weight that the model
9 thought was happening to what we actually saw in the ACL
10 monitoring data, and, for that, we used that 2019 value.

11
12 The reason why we chose the 2019 is, if you remember, 2018 had
13 the big red tide that occurred, and so we were concerned that
14 we had this big event that hit the fishery, but the assessment
15 model kind of made an assumption, but we didn't have the facts,
16 in terms of how severe it was and what the effect was, and so
17 we didn't want to use the mean weight from 2018, thinking that
18 it wouldn't be representative.

19
20 Then, in 2020, we had COVID, and we had reduced sampling and
21 other issues with that, and so, for the purpose of this analysis,
22 we chose to use the ratio of the mean weight for 2019 from the
23 ACL monitoring to what the assessment thought, and so that's
24 what we used to get this blue line here, is basically -- If we
25 had taken the assessment-predicted numbers and multiplied that
26 by the mean weight from the ACL monitoring data, these are the
27 trends in the weights that we would have gotten, and so, in many
28 of the years, you see it's a lot better, or a lot closer, to
29 what you would think, but there is still some differences,
30 again, because we do have considerable uncertainty for the
31 landings for this stock.

32
33 That is kind of where -- We just wanted to demonstrate that this
34 was the issue, and, when we adjust for that issue, given what
35 we can do in the time allotted for trying to reevaluate some of
36 this, we are able to get better -- Fit better to the expected
37 weights that are shown in the ACL monitoring, which, again, are
38 used for management, and so that was the big concern, was that
39 there was such a divergence between the weights that are used
40 for management and then what the assessment was putting out.

41
42 Then what we end up having is, if you remember from Amendment
43 53, and so the Preferred Alternative Number 3, based on the
44 allocation that I discussed earlier of 59.3 commercial and 40.7
45 recreational, what comes out of that analysis would have been
46 an OFL of 4.66 million pounds gutted weight, but, once we have
47 gone back and we essentially redid all of our projections to
48 ensure that the allocations would be maintained throughout the

1 projection period, and we recalculated the OFL, using the same
2 decision rule that was used for the SEDAR 61 review, which the
3 OFL was defined as the retained yield from -- The average
4 retained yield from 2020 to 2024, and so, for that initial
5 original value of Amendment 53, it was 4.66 million pounds
6 gutted weight.

7
8 Once we took our projections and we adjusted the recreational
9 landings in weights up, because we knew that our model-predicted
10 weights were an underestimate, what that would lead to now would
11 be an OFL, and so we're calling it the adjusted OFL, of 5.99
12 million pounds gutted weight, and, again, the only thing that
13 we did there was we basically took the recreational landings
14 that were projected by the model and just bumped up a little
15 bit, based on that ratio of mean weight that we knew was
16 underestimated in the assessment.

17
18 That's what we would propose, for moving forward, an updated
19 OFL of 5.99, and then the ABC, following what was done from the
20 September 2019 meeting, the ABC was defined as the catch level
21 that would have a 30 percent probability of overfishing, and so
22 what that would translate to, in this case, would be an ABC of
23 5.57 million pounds gutted weight.

24
25 Essentially, for our interim, we would propose to move forward
26 with this C_{ref} of 5.57 million pounds as the ABC value to be
27 adjusted in the interim analysis.

28
29 With that, here's kind of the first place where I think we can
30 take any questions on -- Really, the first issue is that
31 adjustment. Does the SSC accept the new projections, as well
32 as the updated OFL and ABC that we have made based on scaling
33 up the predicted recreational landings to better match what is
34 seen in the ACL monitoring dataset? That, here, would be the
35 ABC of 5.57 million pounds gutted weight. I am happy to take
36 questions on anything I have talked about until now and open
37 the floor to questions or comments or even SSC discussion.

38
39 **CHAIRMAN NANCE:** Doug.

40
41 **MR. GREGORY:** Thank you, and thank you, Skyler. That was really
42 good. The new approach to just using the index, isn't that
43 equivalent to us choosing a beta of one with the old approach?

44
45 **DR. SAGARESE:** You're correct that, yes, it's similar, because
46 the length of -- The number of years you would select for the
47 moving average -- Basically, selecting a moving average gets us
48 away from having to specify that beta, and so it is one way to

1 kind of rein-in how variable that catch advice would be, but
2 you are correct in that, yes, it is very similar to having to
3 select that beta.

4
5 **MR. GREGORY:** In 2019, which is the only document I had in front
6 of me, we chose beta equals one, and so, even though the approach
7 is totally different, that's not a major of a change for us to
8 consider as initially I thought. My other question, or concern,
9 is aren't we kind of going out on a limb to use the new
10 allocations that have not been implemented? What if those
11 allocations get rejected? What happens then? That may not be
12 to you, but the SSC itself.

13
14 **DR. SAGARESE:** What I can say, and I will certainly defer to
15 Katie or anyone else on the call, but we approached this analysis
16 under the assumption that the allocations in Amendment 53 would
17 be finalized. Katie or anyone -- Does anyone else have something
18 else to follow-up with?

19
20 **DR. SIEGFRIED:** We would have to reevaluate this if the
21 allocations change, but this set of allocations that she's going
22 to go over, or that Skyler has been assuming in this presentation
23 and analysis, was arrived upon after several dozen attempts at
24 figuring out allocation, and so it can still change, I suppose,
25 but they did take final action on Amendment 53, as far as I
26 understood.

27
28 **MR. GREGORY:** Right, but it still has to be approved and
29 implemented by National Marine Fisheries Service. One other
30 comment is, going forward, I hope the assessment teams look at
31 a similar issue with weights between projected or the von
32 Bertalanffy curve, versus what's used in the ACL monitoring
33 dataset, and it may not be as significant as it is with grouper,
34 but it could be.

35
36 Since the last meeting where we discussed this, Will raised the
37 issue of trying to incorporate uncertainty in this index, and
38 what if we had an index that changed OFL only, and then we used
39 some uncertainty approach to calculate ABC? That would address
40 Will's concern about us not incorporating some uncertainty,
41 because it doesn't make sense to have uncertainty buffered below
42 ABC, and it's contrary to what we usually do. Thank you very
43 much, again, and so far, so good.

44
45 **DR. SAGARESE:** Thanks, Doug. Just in relation to your first
46 comment, we are absolutely adding in checks within our
47 assessment process, to make sure that we're comparing the mean
48 weight of the landed, or even discarded, fish that we have. I

1 strongly encourage everyone on this call -- So scamp is
2 currently the ongoing research track, and we've made some
3 changes to the report, and so, if you want to just quickly
4 peruse the current assessment report that's up there for Gulf
5 scamp, and we've added in some information there.

6
7 We definitely see this as one of those -- As we kind of -- One
8 of the growing pains, at least that I have experienced, being
9 here now for almost six years, is we're continuously learning
10 and figuring out better ways to show what we need and other
11 validations that we need to do, and so we're hoping that our
12 reports, as we get more towards an automated process, will have
13 that kind of information, and so please take a look at the scamp
14 assessment report, and I am happy to -- Please email me any
15 comments or questions or things you would love to see, and I
16 would really, really appreciate that, because we are trying to
17 address that, moving forward.

18
19 Then, yes, your second question about -- For red grouper,
20 basically, what I did, for now, is just kind of do what was done
21 in the past, where we did the interim analysis on the ABC level,
22 and we're recommending an adjusted ABC.

23
24 I believe that red snapper, for that interim, that there was
25 also discussion about why we don't use the OFL, and so I think
26 that's a good point, and maybe Katie has more thoughts from the
27 Science Center perspective on whether we want to move forward
28 with that, but it's certainly something that could be done,
29 where we run the interim on that OFL value, and then share those
30 results, as we move forward.

31
32 **MR. GREGORY:** I am not asking to do that, but it's just a thought
33 and thinking of what Will said at the previous meeting, and so
34 thank you.

35
36 **DR. SIEGFRIED:** Can I address that, Mr. Chair?

37
38 **CHAIRMAN NANCE:** Yes, Katie. Please do.

39
40 **DR. SIEGFRIED:** Doug, that's a great point, and I do think there
41 are better ways to incorporate uncertainty, and we're looking
42 into other ways, including updating our projection methodology,
43 where we could carry some of the uncertainty through.

44
45 I'm not sure that that would be the best way, to just use the
46 interim to update the OFL, but we -- Like Skyler said, we are
47 open to participation from SSC members when we get farther along
48 in our projection methodology discussions, and so we can put

1 you down, if you're interested.

2
3 **CHAIRMAN NANCE:** David.

4
5 **DR. GRIFFITH:** Skyler, thanks a lot for that presentation. I
6 did appreciate it, and I was wondering about this discrepancy
7 between the projected and the real weight, and I was just
8 wondering if you had any ideas about why that might be, and I
9 am not really familiar with recreational side of this fishery,
10 and I'm more familiar with the commercial side, but would you
11 think there's any like high-grading going on, that people are
12 keeping larger species and throwing back the smaller ones, or
13 anything like that, because they do that in the commercial
14 fishery, where they keep a certain size fish that they know that
15 the dealers are going to like.

16
17 **DR. SAGARESE:** That's a great question, and I can provide a bit
18 more insight into what's actually going on, and so my expertise
19 with this, of course, is red grouper. What happened with the
20 configuration -- This is how we specified the model, and it was
21 just an inconsistency that we didn't catch in time, because we
22 weren't comparing all of the outputs, and so we've always fit
23 to recreational landings in numbers, and so we've always looked
24 at the fits from the expected and the observed, in numbers, with
25 some error, and you don't expect a perfect fit, and so that
26 looked fine.

27
28 When we reviewed the SEDAR 61 assessment as well, as I had
29 mentioned earlier, what we ended up fitting to, the input data,
30 were age compositions of our retained fish, but length
31 compositions are our discarded fish, and so, normally, you would
32 have length compositions of your retained fish as well, and so
33 the model would have a lot more information, in terms of the
34 length-to-weight relationship and then using the growth curve
35 to convert ages to lengths and such.

36
37 There would be a lot more information, and you would be able to
38 check things, and what happened with red grouper is one of the
39 changes we made in the base model was we switched from an age-
40 based selectivity pattern for each of the fleets, including
41 recreational, into a length-based selectivity pattern.

42
43 What I think happened, and what we'll see when we revisit this
44 assessment in the future, is that that -- Because we did not
45 include retained length comps -- In this case, we often have -
46 - We have to be concerned that we're not using the same data
47 for length and ages. Otherwise, we're double-dipping, but, in
48 this case, that not including all of the length information we

1 had led to that issue, and so it led to that disconnect, because
2 the model knew that there were 100,000 fish that it was removing,
3 but trying to convert those numbers then into lengths and into
4 weight, or from ages into lengths and to weight, is where this
5 issue happened.

6
7 For this, what we're currently -- Because we've got the scamp
8 assessment ongoing, we've been looking a lot at different ways
9 to model recreational landings, looking at different inputs,
10 and this is something that is one of the top topics we want to
11 discuss when the upcoming review workshop at the end of the
12 month occurs, just to kind of make sure that, in the future, we
13 don't see this again.

14
15 I can only really speak to red grouper, but I know, for a fact,
16 that this is something that we will be reevaluating for the next
17 assessment, and we'll talk about that later, I guess, when we
18 talk about the scope of work for the next red grouper assessment.

19

20 **CHAIRMAN NANCE:** Thank you. Rich.

21
22 **DR. WOODWARD:** On the -- How do discards enter into the setting
23 of the OFL, and I would think that the average weight for
24 discarded fish is going to be below that for the retained fish,
25 and so how does that come into it? Again, I am very low on the
26 learning curve, and so help me out here.

27
28 **DR. SAGARESE:** You are correct in that the mean weight of the
29 discarded fish will likely be much smaller, because, oftentimes,
30 it's undersized fish that are discarded. The OFL, and so the
31 way we set the OFL in the assessment, is the OFL is based on
32 the retained yield, and so we project forward the retained
33 yield, and so discarded fish do not play into the actual OFL
34 estimate that we provide, and so the OFL that we provide, in
35 terms of recreational fish -- Recreational landings are defined
36 by the Type A and then Type B1, and so recreational fish that
37 we treat as landings are those that were observed dead by
38 observers from the MRIP program, or by -- Not observers, but
39 port agents.

40
41 They are observed dead or that were said to be discarded dead
42 by the fishermen, which would be B1, and so, recreationally,
43 the B2s, which are normally those fish that are released, those
44 are not included in the definitions of the OFLs or how we
45 calculate the OFLs. I hope that answers your question.

46
47 **DR. WOODWARD:** But, clearly, if you -- I mean, discards are
48 going to enter into your modeling, in terms of the general

1 impact on the fishery, no?

2
3 **DR. SAGARESE:** Yes, correct, and so the model does estimate dead
4 discards. We estimate it within the model, but so, for example,
5 the B2s with the discard mortality rate applied is not -- It
6 does not feed into the OFL estimate that we produce currently,
7 and so, yes, the model accounts for dead discards, but the
8 actual OFL -- We're not really trying to optimize discarding,
9 but we're trying to optimize -- We project forward and report
10 the retained yield.

11
12 **DR. WOODWARD:** Okay. Thank you.

13
14 **CHAIRMAN NANCE:** Tom Frazer.

15
16 **DR. FRAZER:** Thank you. Skyler, I've got a quick question with
17 regard to the figures that are on page 5. You might want to
18 pull them up, real quick. The question has to do with the
19 panels, the recreational panels, and, in particular, the bottom-
20 right panel that has the percent of the quota landed, and so we
21 have information provided for the recreational sector from 2014
22 to present, and do those estimates -- Do they use six pounds
23 per fish? Do they use that readjusted weight, or do they use
24 the weight at the time that the data were reported?

25
26 **DR. SAGARESE:** That's a great question, and so this table -- I
27 have all my sources on the left, and this is table is summarizing
28 and plotting all the data that's been reported in the ACL
29 monitoring datasets, and so commercial landings shown in this
30 table are out of the IFQ portal, the website, and then the
31 recreational landings come off of the SERO website for --

32
33 I believe the units here would be the CHTS units, because that
34 is how the fishery is currently monitored, and so I would not
35 be able to say, specifically, that they're using the 6.22,
36 because, the way that the Southeast Fisheries Science Center
37 develops their estimates of recreational landings in weights is
38 they actually use a mean stratified approach, and so they find
39 the mean weight over the different strata, and I think we've
40 shown that those kind of slides in the past, from year, region,
41 species, there's a whole bunch of strata to get to, and so these
42 data are showing those that are used from the ACL monitoring
43 dataset.

44
45 This has nothing to do with the assessment, and this is strictly
46 from the monitoring perspective, and this is how the fishery
47 has been operating in the units that it is currently managed.

1 **DR. FRAZER:** Sure, and using the data that were collected during
2 the in-season monitoring to kind of estimate the weights.
3 That's right.

4

5 **DR. SAGARESE:** Yes, exactly.

6

7 **DR. FRAZER:** Okay, and we can get those data from SERO?

8

9 **DR. SAGARESE:** Well, there is -- You can find the Gulf of Mexico
10 historical recreational landings and annual catch, yes, and so
11 the HTML -- The second from the bottom is essentially the site
12 where I went for recreational landings, and then they have more
13 recent, normally preliminary, for example, here, for that 2020
14 and 2021. That's where I went to get the data for the
15 monitoring, because that's what I believe is used for the
16 management.

17

18 **DR. FRAZER:** I'm not trying to pin you down specifically, and
19 I'm just trying to figure out -- I appreciate that I can get
20 the landings data there, and I just really want the weight data
21 for each of those years that went into the conversion, and so I
22 will follow-up with SERO.

23

24 **DR. SAGARESE:** Yes, and I should also mention too that this is
25 red-grouper specific, and so, of course, there were quotas for
26 shallow-water groupers prior, but this just kind of focuses on
27 the recent, to highlight some of the concerns that were raised,
28 in terms of not being able to meet the quotas, and so this is
29 not a complete, comprehensive time series of red grouper, but
30 this is really just red grouper.

31

32 **DR. FRAZER:** Right. I get it. Thank you.

33

34 **DR. SAGARESE:** Thanks.

35

36 **CHAIRMAN NANCE:** Jason.

37

38 **MR. ADRIANCE:** Thank you, Mr. Chair. Jason Adriance. Thanks
39 for the presentation, Skyler, and I apologize if this is in the
40 documentation, but is this FES or MRIP units, for the
41 recreational data?

42

43 **DR. SAGARESE:** Everything for SEDAR 61 used MRIP-FES, and so
44 all of the outputs of the assessment and what we've talked about
45 is comparing FES to FES. When I talk about the ACL monitoring
46 dataset, for example in that working paper, the recreational
47 adjustment, yes, that is all strictly using the FES data, so
48 that it is apples-to-apples, and I will add a caveat to that

1 slide that I just was on, Slide 5, because that's how it is
2 monitored, and that's previous CHTS, but everything else you
3 will see from me is using FES.

4
5 **CHAIRMAN NANCE:** Okay. Thank you. The question is do we as
6 the SSC accept the new projections? We need a motion, and do
7 we want to discuss it first, or do we want somebody to make a
8 motion?

9
10 **DR. GRIFFITH:** In the interest of moving forward, I will move
11 that the SSC accept the new projections and updated OFL and ABC
12 from the adjustment that scales up assessment predicted
13 recreational landings in weights using the mean weight from the
14 ACL monitoring dataset.

15
16 **CHAIRMAN NANCE:** Thank you. Do we have a second?

17
18 **DR. ISAACS:** I will second.

19
20 **CHAIRMAN NANCE:** Thank you. Any discussion? John, go ahead.

21
22 **DR. FROESCHKE:** Just for my own edification, are you bundling
23 Decision Point 1 and 2 at this time, because, the way it's
24 written, there is two decision points. There is Decision Point
25 1 to just accept or not the weight adjustment, and then Decision
26 Point 2 is to subsequently apply the interim analysis, and then
27 there's a decision point whether you would use the three or
28 five-year moving average.

29
30 **CHAIRMAN NANCE:** Okay. So we could say, in this one, for my
31 own knowledge here, we could say that we accept the new
32 projections and updated OFL and leave the ABC, because that's
33 the one that is going to change with the different years.

34
35 **MR. RINDONE:** Mr. Chair, it would be my recommendation that you
36 take these things in smaller bites, and so perhaps the first
37 motion would focus mostly on whether or not to accept the new
38 methodologies that are being used for the interim analysis as
39 the best science and as the best approach, moving forward, for
40 that purpose. Then, after that, talk about what to do as far
41 as the actual catch limits, the OFL and then the ABC, bearing
42 in mind that there is more than one option available to you for
43 the ABC, and so just smaller bites.

44
45 **CHAIRMAN NANCE:** Okay, and so let's back up then. Do we accept
46 the new methodology, and I guess we need a motion for that one.

47
48 **MR. RINDONE:** Well, the original motion maker and seconder,

1 David and Jack, can modify their motion, if they like,
2 considerate of this smaller-bite approach.
3
4 **DR. ISAACS:** I think the smaller-bite approach, as you said,
5 has some merit, and maybe we could consider the weight change
6 adjustment separate from the OFL and the ABC.
7
8 **CHAIRMAN NANCE:** I think that would be the wise thing to do.
9
10 **DR. GRIFFITH:** I don't have any objection to doing that either.
11
12 **MR. RINDONE:** Okay. Can you guys help Jess with your new
13 language there? Based on the discussion that you guys have had,
14 it could be something to the effect of that you accept the new
15 projections using the updated recreational weight estimation
16 scaling procedure.
17
18 **CHAIRMAN NANCE:** I'm not sure we -- Don't we want to have that
19 we accept the new methodology?
20
21 **MR. RINDONE:** Whatever you guys think best details --
22
23 **CHAIRMAN NANCE:** Because the methodology, and then we can go
24 with the projections in a separate one. John.
25
26 **DR. FROESCHKE:** I guess I would advocate for the motion to say
27 that you accept a new methodology to estimate the weight of
28 recreationally-caught red grouper, and then, subsequently, deal
29 with -- I don't even know that I would call them projections,
30 because it's really just a fixed value of OFL and ABC. We don't
31 really have a year-by-year projection, based on this.
32
33 **CHAIRMAN NANCE:** Well, it's a fixed value for OFL, but then ABC
34 can be based on either a three-year or a five-year adjustment.
35
36 **DR. FROESCHKE:** Correct, but it doesn't change year-by-year.
37
38 **CHAIRMAN NANCE:** That's right. Absolutely. **So the new motion**
39 **reads: The SSC accepts the new methodology to estimate the**
40 **weight of recreationally-caught red grouper.** Any discussion
41 on that motion? Paul.
42
43 **DR. MICKLE:** A point of clarification. Should we identify what
44 the new methodology is in the motion or not? Is it specific
45 enough the way it is?
46
47 **MR. RINDONE:** You guys can craft this to be as specific as you
48 want it to be.

1
2 **CHAIRMAN NANCE:** Paul, go ahead and put that in.
3
4 **DR. MICKLE:** Just the new mean weight estimation methodology.
5 That's fine.
6
7 **CHAIRMAN NANCE:** John, did you have another comment?
8
9 **DR. FROESCHKE:** I was just going to add that if you wanted to
10 add -- It's based on the landings from the ACL database, but,
11 if you've got it covered, then don't mind me.
12
13 **CHAIRMAN NANCE:** Okay. Doug.
14
15 **MR. GREGORY:** I have no comment on this, and my hand has been
16 up for quite a while.
17
18 **CHAIRMAN NANCE:** We will let you put it down then. No, go
19 ahead, Doug.
20
21 **MR. GREGORY:** My original question was the reference to the
22 simulation methodology references a journal called "FishFish",
23 and I assume that's a typo, and so I was wondering what journal
24 that came from.
25
26 **DR. SAGARESE:** That's the abbreviation for *Fish and Fisheries*.
27 Sorry. I will write out the full journal names next time. Good
28 eye there.
29
30 **MR. GREGORY:** My hand is down.
31
32 **CHAIRMAN NANCE:** Okay. Thank you, Doug. David Chagaris.
33
34 **DR. CHAGARIS:** I think this new mean weight estimation is
35 acceptable as sort of a stock approach, but we still have the
36 underlying issue of this discrepancy between the mean weight in
37 the assessment and what the ACL is using that I think needs a
38 lot more attention, and hopefully we'll learn more about it with
39 the scamp, but I am just trying to think through, and maybe,
40 Skyler, if you all had any discussion on this.
41
42 For example, the assessment model is either predicting that the
43 recreationally-caught red grouper are much smaller in size or
44 they're catching smaller fish, and so, if that model and the
45 reference points are all tuned to a certain selectivity pattern
46 and size-at-weight, and then, on the backend, we just adjust
47 that weight up, what sort of implications or consequences might
48 that have, just in general?

1
2 I am just trying to think through that, and then, of course,
3 the other issue is trying to reconcile -- Because, just looking
4 at the fits to the composition data for the recreational fleet
5 and the SEDAR 61 document, it does look like it is predicting a
6 few more younger fish than the data would show, and just that
7 small discrepancy could be leading to these differences in mean
8 weight over the -- In total.

9
10 I am just wondering, and did you all explore any kind of
11 selectivity adjustments or anything to try to fit those before
12 doing this, and what are your thoughts on potential implications
13 moving forward with this back-end-adjusted heavier size red
14 grouper?

15
16 **DR. SAGARESE:** Dave, those are some great insights, and what I
17 can say, at this time, is we have only really tried to find an
18 interim approach to adjust the catch advice, and we have not
19 gone back and done sensitivities, because we're currently in
20 the middle of the research track for scamp, and so we have been
21 kind of -- We haven't had as much time as we would like to
22 devote to this, and so, at this point -- It's hard really to
23 say what the implications would be, because I would not feel
24 comfortable saying something until have thoroughly evaluated
25 all the different options and kind of highlighted the tradeoffs.

26
27 From that perspective, until we have another red grouper
28 assessment, where we can actually dig into the details and see
29 what were the implications historically of these changes
30 throughout the model, and throughout the other time series, and
31 all the inputs, we really can't make that many changes right
32 now, outside of the SEDAR process.

33
34 I think what I would say is we have to really stay tuned, and,
35 if this is a priority by the SSC, which this is -- As you
36 mentioned, this kind of is just an interim way to move the catch
37 advice forward, but there is quite a bit more work that will
38 need to be done at the next assessment, during the SEDAR process,
39 so that this can be evaluated and reviewed by a panel.

40
41 **DR. CHAGARIS:** Okay. Thank you for that, and, I mean, at least
42 from my perspective, I would see this as being a priority,
43 because these discrepancies in the ACL units and the stock
44 assessment units is something that we see quite a bit, and so
45 it would be good to have that resolved.

46
47 **CHAIRMAN NANCE:** Yes, I agree. Harry.

48

1 **MR. BLANCHET:** This is kind of along those same lines,
2 recognizing that this is not something that is going to be
3 capable of being done right now. What this really highlights
4 for me is it's not just the retained catch, but also, if the
5 harvest is such a bigger fish, that also probably has some
6 implications for what the release sizes are and what those
7 discards might look like, in terms of ages, and so it concerns
8 me, in terms of where we may be with regard to stock status
9 overall.

10
11 I hate to talk about P* and uncertainty, but this is a perfect
12 example of uncertainty that we're certainly not taking into
13 account when we're looking at what the difference between ABC
14 and OFL was going to be for red grouper. Thank you.

15
16 **CHAIRMAN NANCE:** Thank you, Harry. Any other questions on this
17 one motion? **Is there any opposition to this motion? If there**
18 **is, in the room, please raise your hand. Seeing none, it looks**
19 **like the motion has passed without opposition.**

20
21 Skyler, I think it would be good -- I think this Decision Point
22 1 for accepting the new methodology -- I think what we want to
23 do is go through maybe the rest of the presentation, and then
24 we can discuss OFL and ABC together at the end.

25
26 **DR. SAGARESE:** That sounds great. What we're going to go through
27 now are the interim analysis results for using that Cref of
28 basically starting with an ABC value of 5.57 million pounds
29 gutted weight, and what would the outcome of the interim be
30 using that adjusted catch advice that we just discussed. Again,
31 really emphasizing that in the interim, until another red
32 grouper assessment is on the books and underway, so that we can
33 really dedicate the review and the details and all of that
34 during the SEDAR process, where this needs to be done, but
35 highlighting that we are doing it for scamp, and that hopefully
36 you will be seeing those results in the near future.

37
38 Looking at the results, here, what I am showing is the results
39 of the interim analysis using the three-year average, and, as
40 Doug alluded to earlier, one of the control points is the number
41 of years that you find in your average, and so, of course, the
42 fewer years that you're using the mean from -- You will have a
43 bit more variability in there, and so, the more years you use
44 in the average, the closer the -- I should say the more similar
45 the advice will be from year to year.

46
47 In this case, for the three-year average, what we're showing is
48 this the plot of the relative index of abundance for the NMFS

1 bottom longline survey, and I do want to highlight that this is
2 now -- All of the interim analysis, as we saw in the last
3 presentation, this is using the reduced spatial area, and so,
4 because of COVID, the bottom longline survey didn't reach their
5 furthest northern sites, where they often sample, and so the
6 entire bottom longline index was run on a subset of data that
7 only sampled fish in that same area, and so this is now comparing
8 apples-to-apples.

9
10 The concern with the full index was that the value was
11 artificially high in 2020, because it didn't sample that
12 northern-most region, and so what we're using here is the
13 reduced area index, which we call it throughout the
14 documentation, and you can see that, basically, the index is
15 very high in 2011 and 2012, and SEDAR 42 had a terminal year
16 right around there, and so, at the end of SEDAR 42, things
17 looked great, and then we had SEDAR 61, with a terminal year of
18 2017, and we started to see a decline, and then we had the red
19 tides, and so the red tide in 2018 and, honestly, a red tide
20 going on right now that is really in its infancy.

21
22 What we end up seeing, for the three-year average, is our
23 reference period would have been the years 2017 through 2019,
24 and so we have a I reference value of 0.68, but our current
25 reference is actually the last three years, and it would have
26 been 2018 to 2020, is about 0.61, and so it's only a ratio of
27 0.89, and so, because the recent index is lower than the
28 reference index, we would actually see a drop in the recommended
29 catch, which would become 4.96 million pounds gutted weight.

30
31 Remember our reference, in this case, was 5.57, and the interim
32 analysis shows that that would be dropped to 4.96, using that
33 three-year moving average, and, in the case of the five-year
34 moving average here, we would have been using the index, the
35 reference index, values from the average of 2019 back to 2015,
36 and it would be about 0.72, and then, more recently, from 2020
37 to 2016, it would have been 0.65, and so, here, still, even with
38 the five-year average, we're a bit lower than we were during
39 that reference period, but, in this case, the ratio is a little
40 higher. Here, it's 0.91, instead of 0.89.

41
42 If you were to adjust the 5.57, with this approach, in this
43 case, the adjusted -- The output of the interim would be 5.07
44 million pounds gutted weight, and so the -- Kind of trying to
45 summarize everything, this has been a lot of material.

46
47 There's been a lot of documentation out in the past about the
48 old approach and the new approach, but what we really want to

1 highlight, and the take-homes from all the work we've done to
2 now, is that using this index-based approach that does not rely
3 on the projections is a better way to go, because the whole
4 point of being able to do the interim analyses is being able to
5 adapt to what's going on out on the water.

6
7 For example, the issue of the red tides, the red tides are a
8 fairly large issue for the groupers, and so red grouper is a
9 perfect example, where we had an assessment, and the terminal
10 year was 2017, and we had an idea of what stock status was in
11 that year, and then we had a really bad red tide, and we did
12 not have the data, at the time, to kind of inform how bad was
13 that for the population and what did it do to the size of the
14 population and the age structure.

15
16 One of the benefits of this approach, that has been simulation
17 tested, is that it performs pretty well when there is episodic
18 natural mortality occurring, and that's exactly what we have in
19 the case of the red tides, and so, in this case, working with
20 that observed index, and being able to get it fairly quickly
21 and run this approach, we're able to better adapt to changes
22 that are ongoing, and I think that's one of the strengths of
23 the interim approach, period, but not having to --

24
25 In the case of red grouper, not having to rely on that forecasted
26 index of abundance, again, with all those assumptions that we
27 talked about earlier. This really seems like a much better
28 approach to move forward with, and, again, this is all stuff
29 that we'll look at further when we do have a full MSE working
30 for the red grouper, to be able to test all these different
31 decision points and other issues, such as the beta. For example,
32 using that, instead of looking at the average-type index-based
33 management procedure, to potentially look at that buffer, where
34 we use that type of approach that's been done in the past.

35
36 The old approach for red grouper has not been simulation tested,
37 and we do feel more comfortable moving forward with something
38 that has been simulation tested and can be updated very quickly
39 as we move forward, and so I think the -- For this decision
40 point now, I guess the options here are -- Number one would be
41 for the SSC to consider for acceptance the results we've shown
42 for either the three-year or the five-year moving average, which
43 would be -- For the three year moving average, it would be an
44 adjusted ABC of 4.96 million pounds gutted weight, or, for the
45 five-year moving average, it's 5.07 million pounds gutted
46 weight.

47
48 Now, that is strictly just kind of showing what we have provided

1 and coming forward and taking those numbers and accepting them
2 or not, but, because we're talking about red grouper, we have
3 an ongoing red tide that has just kind of started to creep up
4 now, and --

5
6 **CHAIRMAN NANCE:** Skyler, Roy has a question, if you would take
7 that, please.

8
9 **DR. SAGARESE:** Sure.

10
11 **DR. CRABTREE:** I think I'm good with what you guys are proposing
12 here, and it seems to me that 4.96 or 5.07 is not much
13 difference, but I am trying to get a feel for what this means
14 relative to the fishery, and so the allocations all changed,
15 and they haven't been catching their quotas in recent years,
16 and so, if we did put in place an ABC of 4.96, would we expect
17 that that would be caught, and, if so, would it be caught
18 relatively quickly, or would it be close, because a lot of this
19 is showing CHTS versus FES, and I am having a hard time piecing
20 it together.

21
22 **DR. SAGARESE:** Roy, that's a great thing to bring up, and so we
23 are -- All of these results that we're now showing are in MRIP-
24 FES units, because SEDAR 61 used MRIP-FES, and so I believe,
25 with Amendment 53, the 2017 landings that were used to set 2019
26 emergency rules were converted into FES units, and I believe it
27 was 5.62 million pounds, and someone might want to just double-
28 check me on that, and so, if that emergency ACL was in FES
29 units, it would have been 5.26, and that would have been
30 accounting for FES.

31
32 What we're currently proposing, and remember that the ABC that's
33 coming out of Amendment 53 for the preferred alternative was
34 4.26 million pounds, and so that's a bit lower than what that
35 emergency ACL would have been, but you're right in that these
36 numbers are still lower than what was on the books for that
37 emergency rule, but, again, based on the data we've looked at
38 for complete years of 2019 and 2020, the ACLs have not been met
39 yet.

40
41 What I can say is I am hearing that there's a lot of positivity
42 coming from red grouper fishermen that they're catching a lot,
43 and it seems that they may be able to get closer to that quota
44 this year, and I'm not -- I can't, for 100 percent certainty,
45 say that they will meet that, but it does, to me, seem like
46 there has been some issues, and then we have this ongoing red
47 tide again, and, as I will kind of talk about in the new few
48 slides, that's a potential reasoning for -- Maybe if we're not

1 -- Maybe if the ACL is not being reached, maybe we don't want
2 to jump the gun too much and kind of get the next interim and
3 see what, if any, damage has been done with the 2021 red tide.
4

5 **DR. CRABTREE:** I just know we've been criticized, on and off,
6 for the last, I don't know, five or six years, of not doing
7 enough with red grouper, and, when you look at it, it is a case
8 where the catches don't appear to be constraining the fishery,
9 and it's almost like we've been behind, and catches have just
10 dropped, because of, I guess, red tide and a whole host of other
11 things, and that is what is tough to figure out here.
12

13 We've got so many things going on with red grouper, and it's
14 hard to tease out what management can do versus what, because
15 of red tides and things, that we can't really control, but it
16 does seem to be a case where being careful here would be wise.
17

18 **CHAIRMAN NANCE:** Benny.
19

20 **DR. GALLAWAY:** I just needed to get unmuted. I was late getting
21 back, and so I'm sorry that I interrupted. I'm done.
22

23 **CHAIRMAN NANCE:** Okay. Rich.
24

25 **DR. WOODWARD:** I just wanted to follow-up with the last
26 discussion, and it seems like the catches have been falling
27 pretty fast over most of the last decade. I mean, recreational
28 fish have been falling since like 2011, and is this related to
29 -- Is it all red tide, or is it stock, or it is just people
30 don't want to catch red grouper? What is behind the decline in
31 harvest?
32

33 **DR. SAGARESE:** That's a great question. The one thing that I
34 can say here, for red grouper, is what we've seen in the past
35 is we seem to see these huge cohorts that come through, and so
36 there's a lot of -- You will have very low recruitment, and then
37 you will get a huge pulse, and those pulses that move through
38 the population tend to sustain a lot of the landings, and I
39 think we -- You know, we do often, after red tide, see big
40 blooms in recruitment, if there's been a big mortality event,
41 and we saw that with gag, and we've seen that with red grouper
42 as well.
43

44 You're right in that the population was dropping, and I guess
45 it was after 2017, when this terminal year was, and we were
46 still below the target, but we were not in a negative stock
47 status state. In terms of this population, there's a lot of
48 things that we're hearing on the water going on, that, for

1 example, it's hard to catch red grouper, but there was -- During
2 the SEDAR 61 assessment, there was a lot of positive, and it
3 was, oh, we're catching lots of undersized, and so maybe, in a
4 few years, we would start to see those pulses come through.

5
6 I think that's kind of what we're hearing about right now, and
7 it could be that the 2013 recruitment event that the assessment
8 predicted, that we're starting to see that come through the
9 fishery, and some catches are going up now, but the thing that
10 I can highlight here, and one of the uncertainties we have, and
11 it's a bit topic for research tracks, in my opinion, is that we
12 have these red tide events.

13
14 Yes, we've incorporated red tide mortality into the stock
15 assessments, but we made assumptions that the mortality was
16 constant across ages, and that may not in fact be truthful. As
17 you get more data -- For example, the work that Dave Chagaris
18 is doing with his RESTORE work is -- You know, it might be that
19 those kinds of assumptions have to be revisited in our stock
20 assessments, and so what we've done is we've made assumptions
21 about the red tides, but we really don't -- Until we get a few
22 more years of data, to be able to look at what happened to the
23 indices and what happened to the age structure, we really can't
24 get a handle on the exact magnitude of those events and what it
25 did to the stock.

26
27 I think it's really important too to mention that, with red
28 grouper, we don't have a lot of data on the juvenile red grouper,
29 and so we don't have an age-zero index. I believe red grouper
30 are fairly infrequently caught by FWRI in the surveys, and so I
31 think the concern with red grouper that I certainly see is the
32 red tide, because we just don't know exactly what's going on
33 and how it's affecting juveniles and how it's affecting the
34 adults exactly.

35
36 I think that, the more that we look into some of the ecosystem
37 approaches, because these red tides don't just affect red
38 grouper, and they affect forage and predators and other species,
39 that I think, as we learn more, that we're going to have to keep
40 adapting to how we model these types of ecosystem events in our
41 assessments, because we've done what we can, given the data we
42 have, but I am definitely concerned, given the 2018 event that
43 occurred, and now the 2021, that may be ongoing, that we'll talk
44 about in a little bit, but I think, as Roy alluded to, there's
45 just a bunch of factors going on as to why they're not landing
46 what they can.

47
48 Then you talk about some of the things we've heard at some of

1 the stakeholder workshops that I've been to, and, for example,
2 the interspecies competition and that it's hard to get the hooks
3 down to red grouper, because of all the red snapper, or aspects
4 like that, and so there's a lot going on right now.

5
6 **CHAIRMAN NANCE:** John, you had a comment?

7
8 **DR. FROESCHKE:** My comment was just in reference to Roy's
9 question about the landings, and so just a couple of things to
10 think about. One, when comparing these landings to what's
11 currently on the books, remember the old landings, or what we
12 have now, is in the CHTS units, and so, essentially, in the FES,
13 the recreational landings are going to accumulate about twice
14 as fast.

15
16 We did, in Amendment 53, which was the management documented
17 based on SEDAR 61, we do have a closure analysis in there, based
18 on the current landings in 61, which are, again, lower than
19 this, and we could look at that, and it's Table 2.1.1, if you
20 wanted to bring that up.

21
22 That was only on the recreational, and I don't believe there's
23 an equivalent for the commercial, but, under some scenarios, we
24 were predicting a closure analysis for red grouper on the
25 recreational side, whereas, in recent years, we have not.

26
27 That's something to think about, and it is a different system,
28 and we do provide, in the actions and alternatives, the FES,
29 what we thought the old estimate would be perhaps equivalent to
30 in FES.

31
32 The other thing that I will just mention, real quickly, is we
33 did, in I guess -- All the months go together here, but, in
34 June, early June, we went out to public hearings on that
35 amendment, and so we went to like seven locations all throughout
36 the Panhandle, and we had a lot of comment about that there are
37 more red grouper, and it's coming back and things, and that was
38 a big push to do this interim analysis, and, based on the earlier
39 results that we saw in January and things, it showed this big
40 increase, and so it does seem to at least suggest that there is
41 some recruitment coming through, not withstanding whatever
42 happens with this red tide, which has been quite severe, in our
43 area at least.

44
45 **CHAIRMAN NANCE:** Steven Saul.

46
47 **DR. SAUL:** Thank you, Mr. Chair, and thank you, Skyler, for the
48 presentation. I do find good merit in this approach, but I did

1 have a question regarding cohort strain, and so, when you pull
2 projections from the stock assessment model, like Stock
3 Synthesis or whatever you use, the sort of cohort strain, size
4 structure, et cetera, is sort of baked into the projections, at
5 least in terms of defining what they should be, whereas, in this
6 approach, using the index, although indices do pick up cohort
7 strains, there is usually like a lag, in a sense, and, I mean,
8 the same with size data, I suppose, but you cannot always see
9 the same effect in an index that you do when you look at size
10 composition or age composition data.

11
12 Given that it seems that this population for red grouper seems
13 to be kind of cohort driven, boom and bust, whether it's due to
14 red tide or whatever, or just the biology of the animal, I guess
15 I'm wondering if you can sort of comment on what -- On whether
16 you feel that that is sort of a limitation with this index
17 approach, in sort of properly setting the ABC and the OFL.

18
19 **DR. SAGARESE:** Thanks, Steve. Again, those are great questions,
20 and so, for projections, what we assumed was that the
21 recruitment would -- We basically assumed average recruitment
22 from 2010 to 2017, and so that average value is what the
23 assessment model predicts throughout the projection period,
24 which I will note does include that 2013 spike, but I would have
25 to go back to my notes, but I believe, when we had the SSC
26 review of SEDAR 61, that that spike was noted in the recruitment,
27 and I think I did some sort of sensitivities excluding it, but
28 I would have to double check.

29
30 You're absolutely right in that the index that we've chosen
31 here, the bottom longline survey, is an older red grouper --
32 It's tracking the older individuals.

33
34 What I didn't show for this presentation, and I'm glad you made
35 me remember this, is that, for red grouper, we also have the
36 index from the summer SEAMAP groundfish survey, and, in this
37 case, I would have presented the updated results, because those
38 red grouper are younger, and they're not exactly age-zeros, but
39 that index tracks the younger population, and it was recommended
40 for use in the stock assessment.

41
42 That survey was not active in 2020, because of COVID and other
43 reasons, but what I would say with the -- I think that's
44 potentially -- While that index is not used exactly in this
45 management procedure, because we're focused on the adult
46 population, I think that's where there is value in other data
47 streams, to kind of bring the whole picture when these analyses,
48 as we can, to say, oh, well, here is what also going on in the

1 groundfish survey at the moment, and we're seeing really low
2 numbers here too, and so maybe that would be indicative of poor
3 recruitment as well, or maybe we're seeing different trends.

4
5 I'm hoping that that index will be out now and will be available
6 for when we present the 2022 interim analysis, and we'll be able
7 to present the trends in that index as well, because I think
8 you're right in that we're not really putting a lot of -- We're
9 not specifically tracking the recruitment, and that's one option
10 that these interim procedures --

11
12 They're not set in stone, where, if there was a lot of interest,
13 that you could develop a composite index, or you could develop
14 a multi-indicator approach, where you're interested in what's
15 going on with the juvenile index and what's going on with the
16 adult index or with the size compositions, and so I think you're
17 right that that's something to consider moving forward, but I
18 do think, with red grouper, that, because we have those issues
19 -- That's my one concern with when we do projections.

20
21 We are making a bunch of assumptions, and so everything that we
22 run is based on those assumptions. I think, in this case, given
23 what we're hearing from some of the testimony from fishermen,
24 it seems like they're doing fairly well, and, to me, it seems
25 like that 2013 is turning out to be more representative, and I
26 know there were a lot of concerns, at the time, of that spike
27 and whether it would be realized.

28
29 Again, we have the red tide, and we don't quite know exactly
30 what those red tides -- How much mortality on each class it's
31 having, and we've just assumed that it's going to affect each
32 age class in the same proportion, and so my caveat with the
33 science with red grouper is the red tides.

34
35 What has happened, and how are we going to account for that in
36 these assessments, and that's certainly one of those
37 uncertainties that -- I always think that incorporating more
38 environmental aspects into the assessment -- It's certainly what
39 I am a proponent for, but it also can add to the complexity,
40 and red grouper shows exactly that. We have answered one
41 question, but we've come up with ten more, and so I really hope,
42 later, that a research track could be dedicated to red grouper,
43 to try to tease out some of those aspects that we've seen.

44
45 **CHAIRMAN NANCE:** Thank you. Mandy.

46
47 **DR. KARNAUSKAS:** Thank you, Mr. Chair. I wanted to go back
48 Roy's question, and I had raised my hand a while ago, but,

1 regarding the factors impacting the ability to meet the catch
2 limits, I'm not sure about the recreational side, but, on the
3 commercial side, I think we've also heard about lack of access
4 to allocation, in particular trying to lease allocation, and
5 so, in areas where red grouper might be plentiful, it can be an
6 issue of folks not being able to get the allocation to actually
7 catch those red grouper.

8
9 This came up in the last SSC meeting, I think in our discussion
10 of the IFQ review, and I'm not sure if SERO has some analysis
11 on this, but I just wanted to throw that out there, that that
12 can be a factor of the commercial side for why we're not seeing
13 the industry take full advantage of the quota.

14
15 **CHAIRMAN NANCE:** Thank you. Ryan, did you --

16
17 **MR. RINDONE:** Thank you, Mr. Chair. I was just going to speak
18 to a question about why people or may not be catching red
19 grouper, and it certainly does vary by fleet, by and large,
20 especially for the recreational fleets.

21
22 They're multispecies trips, almost all the time. When
23 recreational fishermen go fishing, they fish for what they can
24 catch, and they specifically try to target the things that they
25 can keep, and so, if the season is open for a particular species,
26 more or less, it should be considered fair game that that
27 recreational fishing trip either directly, or secondarily, is
28 going to try to target those particular species.

29
30 With the commercial sector, especially for red grouper, because
31 it's under an IFQ, there are other things that could be at play,
32 and, depending on the price per pound of fish, that could
33 influence the desirability of trying to expend the effort to
34 land that species at that time.

35
36 For fishermen that don't have the ability to retain those fish,
37 if they don't have -- If they're not a shareholder in the IFQ
38 program, and they're leasing their shares, the ability to lease
39 those fish from somebody else -- If they can't find someone to
40 sell them those fish to be able to land, then they can't retain
41 them, and so, in those cases, it may be market forces that are
42 driving commercial retention more so than recreational
43 retention, which is, usually anyway, driven largely by what's
44 open and what's not.

45
46 That's just a glimpse at a couple of the things that could
47 influence whether or not a particular fleet endeavors to retain
48 red grouper.

1
2 **CHAIRMAN NANCE:** Thank you. Luiz.

3
4 **DR. BARBIERI:** Thank you, Mr. Chairman. Actually, my hand had
5 been raised a while back, and Mandy has already addressed the
6 comment that I was going to make for the last SSC meeting, and
7 so I'm good to go. Thank you.

8
9 **CHAIRMAN NANCE:** You're welcome. Sean.

10
11 **DR. POWERS:** Just to clarify, are we doing this for 2022, or
12 we're trying to change for 2021, is the first question I have.

13
14 **DR. SAGARESE:** We are presenting catch advice that could be
15 implemented started in 2022 from this 2021 interim analysis.

16
17 **MR. RINDONE:** We don't have any illusions of being able to get
18 something done before the end of the year.

19
20 **DR. POWERS:** I am just checking on that. Second, in your Figure
21 1, I am just trying to get it clear, and the recreational
22 landings in that figure are in what currency?

23
24 **DR. SAGARESE:** Can you clarify? Figure 1 in which document?

25
26 **DR. POWERS:** Figure 1 in the report, the interim analysis report.
27 It's the one you had in the slide show.

28
29 **DR. SAGARESE:** That's Slide 5. This Slide 5 is strictly the
30 MRIP -- This is the CHTS, and this is how all the data are
31 monitored, and this is not factored into the assessment. This
32 is just to give you a snapshot of how the fishery has operated,
33 based on the data from SERO's website.

34
35 **DR. POWERS:** Like Roy, a lot of us, I'm concerned that they're
36 not coming close to the ACL, and I know I have anecdotal reports
37 from fishermen, and I realize this is an interim analysis, but
38 is there any commercial effort data that we could see, to see
39 at least if the effort is increasing while the ACL is not being
40 reached, or if it's the effort is decreasing? That would make
41 me feel a little better.

42
43 **DR. SAGARESE:** I would have to follow-up with Science Center
44 staff on whether there is commercial effort information
45 available. I am not so sure.

46
47 **CHAIRMAN NANCE:** We have some from the council here.

1 **EXECUTIVE DIRECTOR SIMMONS:** I think, just roughly, the
2 commercial landings, I guess in the last four years, have
3 increased about 10 percent per year, and so I think they're at
4 80 percent, but Matt has some more information to show for both
5 sectors, and I think with estimates of the recreational landings
6 in the FES currency.

7
8 **DR. FREEMAN:** Sure, and so I'm waiting for staff to pull open
9 Reef Fish Amendment 53, and, when they do, Table 2.1.2 has the
10 recreational landings available in MRIP-FES, and so I could
11 discuss that, in terms of what the rec ACL would be from the
12 two options that the Science Center has presented. It's Table
13 2.1.2.

14
15 That very last column shows rec landings in MRIP-FES. If you
16 look all the way to the right, that last column, you see
17 landings, and 2015 was like 3.8 million pounds, and, again,
18 that's in MRIP-FES, down to 1.6 in 2019. In comparison, looking
19 at the two options that the Center has presented on, I did some
20 math last week, just so I would have them prepared, and the rec
21 ACL -- We're looking at either 2.02 million pounds gutted weight
22 or 2.06 million pounds gutted weight, and so, at least compared
23 to relatively recent years in those rec landings in MRIP-FES,
24 it does seem feasible that they could reach that, and so I will
25 pause there.

26
27 **CHAIRMAN NANCE:** Thank you. Andy, did you have a comment to
28 this point?

29
30 **MR. ANDY STRELCHECK:** I can't speak to the effort data. What I
31 can say, and Carrie mentioned it, is we have been seeing an
32 increasing trend in commercial landings. Two-million pounds
33 were landed back in 2019, and we saw 2.4 million, I believe,
34 landed last year.

35
36 Right now, we're seven months into the commercial season, and
37 they have reported 1.8 million pounds, which is roughly 60
38 percent of the quota, and so we're expecting landings to
39 continue to go up, and, at least based on the alternatives that
40 are before you, they would at least be coming closer than the
41 80 percent that they've been landing in recent years, probably
42 closer to 90 to 100 percent of the overall commercial quota.

43
44 In terms of the recreational harvest, I think Matt has covered
45 it, but, because of the conversion to FES, we're likely to see
46 the recreational sector, if trends continue, bumping up against
47 the revised catch limits.

1 **CHAIRMAN NANCE:** Roy.

2
3 **DR. CRABTREE:** Can someone tell me -- If we set the catch level
4 at 4.96, what would the commercial quota then be?

5
6 **DR. FREEMAN:** I can answer that. I was just about to. You're
7 reading my mind. The commercial -- Again, for folks who might
8 not be familiar, the rec sector catches to their ACL, and the
9 commercial catches to their ACT, and so, under the two options
10 presented by the Science Center, the commercial ACT would either
11 be 2.79 million pounds gutted weight or 2.86 million pounds
12 gutted weight.

13
14 Under 53, and, again, we're kind of using that as the benchmark,
15 the rec ACL is 1.73, and the commercial ACT is 2.40, and so,
16 relatively speaking -- Again, as an economist, I cranked out
17 all the numbers, and the differences would be, for the rec ACL,
18 an increase either of 0.29 million pounds gutted weight or 0.33
19 million pounds gutted weight. For the commercial side, with
20 the ACT, it would either be 0.39 million pounds gutted weight
21 or an increase of 0.46 million pounds gutted weight.

22
23 **CHAIRMAN NANCE:** Thank you, Matt. Will.

24
25 **DR. PATTERSON:** Thanks, Jim, but my question has been answered.

26
27 **CHAIRMAN NANCE:** Okay. Carrie.

28
29 **EXECUTIVE DIRECTOR SIMMONS:** Thank you, Mr. Chair. Skyler, I
30 had kind of a different question. In the first part of the
31 presentation, you were suggesting that the ABC could be changed,
32 based on the recreational landing weight estimates, to that 5.57
33 million pounds. What is the concern with that versus the -- We
34 could use that as a reference, with the three-year or five-year,
35 and is that equivalent to I think what Doug asked earlier? Is
36 that 5.57 million pounds that essentially is being corrected
37 from the stock assessment, is that equivalent to that beta of
38 one that we talked about? Can you go into that a little bit?

39
40 **DR. SAGARESE:** Sure, and so the way that I approached the weight
41 adjustment is I had to redo the projections from the SEDAR 61
42 assessment model that accounted for that weight adjustment for
43 the recreational landings, and so, as SEDAR 61 was reviewed,
44 the SSC determined the OFL as the mean catch from 2022 to 2024
45 of those five years of the projections, and so, for this
46 analysis, I redid the projections, and I took the projected
47 retained yields that came out, and that was the estimate of the
48 OFL, was -- I am starting to jumble my numbers, and I'm not

1 going to say, but maybe 5.99 million pounds gutted weight.

2
3 At the time of SEDAR 61, what I put on that slide where I say
4 that the ABC is 5.57, that is making the same assumptions that
5 the SSC, when they set SEDAR 61 -- Basically, all of the
6 assumptions and decisions that they made to set the probability
7 of overfishing of 30 percent, that defined the ABC, and so, on
8 that slide, I presented what would have been the OFL and the
9 ABC, using this adjustment approach to the SEDAR 61 projections.

10
11 The way that we've worked with the interim is we take whatever
12 ABC the SSC gives us and adjusts that ABC value in the interim
13 analysis, and that's where I am adjusting the 5.57 million
14 pounds gutted weight, taking that as that would have been --
15 The same decision would have been made that the OFL and the ABC
16 that we've basically updated with this weight adjustment would
17 have been used, or would have been recommended, and then we have
18 adjusted that ABC.

19
20 The whole interim works off of the ABC value that I assume that
21 same approach would be taken, because, if, for example, the SSC
22 did not accept the OFL and ABC from the adjustments that we've
23 shown, we would have conducted the interim analysis on the ABC
24 value of 4.26 million pounds gutted weight out of Preferred
25 Alternative 3 from Amendment 53. That's where that 5.57 comes
26 from, and that's how it feeds into the interim.

27
28 **CHAIRMAN NANCE:** Okay. Thank you. John.

29
30 **MR. MARESKA:** I guess this is just a comment, and so I like the
31 information as it's presented, but what's giving me pause is
32 the fact that if that relative abundance -- If that jumps up to
33 say 2.6 in 2022, and, all of a sudden, our OFL, or ABC, is
34 estimated to be 12.6 million pounds, are we still going to feel
35 that same about it then, just because that's a tremendous
36 difference, and, when I look at the -- Is that 2011 and 2012,
37 and it looks like it only took about three years for the fishery
38 to knock that back down to where it was closer to one, and so
39 it's just giving me a lot of things to think about, whether I
40 choose a three or a five-year average.

41
42 **CHAIRMAN NANCE:** Ryan.

43
44 **MR. RINDONE:** Just more food for thought on whether you choose
45 a three or a five-year average, and, granted, the circumstances
46 can always vary as to why, but, at this point, we're looking at
47 having had two not insignificant red tide events in the Tampa
48 Bay region within the last five years, and, obviously, we can't

1 predict when the next one will occur, and it may be next year,
2 or it may be eight or ten years from now, but certainly the
3 variability of when those things can occur is unknown, and the
4 scope of mortality that could be put upon the red grouper stock,
5 which has already been pretty well demonstrated to be pretty
6 susceptible to episodic mortality from red tide, and the
7 severity of that is going to be unknown until afterwards, and
8 so that's just something to think about.

9
10 Long ago, we had a workshop that examined incorporating episodic
11 mortality into stock assessments, which was one of the starting
12 points for a lot of the efforts that have since gone into this,
13 and, of course, there could also be other things, like I touched
14 on briefly with Dr. Griffith about, like with reasons for why
15 the commercial sector may not be landing its red grouper, and
16 it may have absolutely nothing to do with the health of the
17 stock. There are multiple things that could be at play that
18 you guys have to think about.

19
20 **CHAIRMAN NANCE:** Thank you. Luiz.

21
22 **DR. BARBIERI:** Thank you, Mr. Chairman. John, to that point
23 about the three versus the five-year moving average, I mean,
24 besides everything that Ryan just said, in terms of the more
25 recent red tide events, there is also the fact that the main
26 purpose of this interim analysis is to be more reflective of
27 recent conditions, to be more like a quasi-real time assessment
28 of what's going on and updating the assessment catch advice in
29 between full assessments.

30
31 To me, when you use the five-year, you're spreading that time
32 period over time, and, of course, you get something that perhaps
33 is a bit more stable over time, but the idea here is to reflect
34 the most recent conditions, and so, with that, I would go with
35 the three-year, if I had to make a choice.

36
37 **CHAIRMAN NANCE:** We're going to go to the end of the presentation
38 before we make motions, but it's good to have this discussion
39 right now, and then we can -- Harry.

40
41 **MR. BLANCHET:** My comment is pretty much to that same point as
42 Luiz, but, not unsurprisingly, I come out on a different side.
43 We're trying to balance responsiveness versus stability, and
44 the thing that struck me was the Figure 2 in the document 08(b),
45 which is showing the variability, or the precision, of the NMFS
46 bottom longline, on an annual basis.

47
48 We don't really have a measure of how precise these indices of

1 abundance are on a three-year basis, and we do see what they
2 are looking like on an annual basis, and it would be 8(b).

3
4 What brought me to that was really the discussion about the
5 difference between 0.89 and 0.91, and is that really a true
6 difference, or is it just spurious, just random, within that
7 noise, and, honestly, I don't know, but I kind of like the
8 three-year for its -- In this particular case, because we are
9 dealing with these relatively infrequent, but highly
10 consequential, events. If we were dealing with something like
11 yellowedge grouper, I would think -- I think I would be more
12 inclined to go for something with a longer time period. That's
13 all my comments.

14
15 **CHAIRMAN NANCE:** Thank you. Go ahead, Doug.

16
17 **MR. GREGORY:** Thank you. I also support the shorter moving
18 average, because it does give us a lower quota. I feel a strong
19 need to be precautionary. We've been precautionary with red
20 grouper, and we have not been proven wrong yet, and the
21 reallocation of red grouper actually increases the overall
22 fishing mortality for any given OFL or ABC, because it shifts
23 more fish from the commercial to the recreational, where there
24 is a higher discard mortality, and so that makes me even more
25 cautious, and so I am supporting the three-year moving
26 average, or anything we can do to be as precautionary as
27 possible. Thank you.

28
29 **CHAIRMAN NANCE:** Okay. Thank you. Skyler, let's go ahead and
30 finish the presentation, and then, as the SSC, we'll have a
31 discussion on next steps.

32
33 **DR. SAGARESE:** Okay. Thanks. I think that's a great idea,
34 because we did want to try to emphasize -- What we've talked
35 about is a lot of uncertainty. We've got environmental
36 uncertainty with red grouper, with the ongoing red tide right
37 now, and so, for the presentation, if you caught it when we
38 uploaded it about a week ago, the other option, in addition to
39 using the numbers we've shown so far, would be to wait until
40 the 2022 interim analysis comes out.

41
42 We tend to complete our interims for red grouper in December,
43 and so, in December of 2021, I would anticipate having the new
44 interim completed, assuming that the survey -- That the index
45 of abundance comes to us on time and we don't have any sampling
46 issues, but I would imagine that we will be presenting that,
47 and I would guess that it would be reviewed by the SSC at the
48 January 2022 meeting.

1
2 The reason why we bring this up is because of the ongoing red
3 tide. We have certainly started to hear more and more concerns
4 being raised around the Tampa Bay area, and so the figures that
5 I am showing here I pulled from the FWRI website, just kind of
6 highlighting what the status was, even as of three weeks ago,
7 but, basically, you can see that this current red tide is from
8 the Tampa peninsula down to about -- It hasn't hit Fort Myers
9 yet, but the concern is that we have this event that's brewing,
10 and so these events tend to get more severe as the year goes
11 on, and they generally really peak later in the summer.

12
13 The fact that we're starting to see such a strong red tide in
14 July, it really remains to be seen how severe it's going to get.
15 Currently, it's really been focused on the inshore regions, and,
16 while that might be good from a perspective of we're not seeing
17 much offshore yet, that is a cause for concern, and so I'm not
18 sure right now if we can -- If you can unmute Brendan Turley,
19 and so he's currently working as a post-doc with Mandy at the
20 Science Center, and he's been doing a lot of detailed analyses
21 on the red tide data and the satellite data. If we can get him
22 to kind of just chime in for the next couple of slides, I think
23 that the SSC would really benefit from kind of seeing where we
24 are right now, with some on-the-ground sampling that's been
25 going on.

26
27 **MR. BRENDAN TURLEY:** Skyler did a good introduction, but the
28 background behind what I've been doing is we are interested in
29 learning more about how red tide is associated with hypoxia,
30 because hypoxia is really bad for the environment, and the
31 research that I have been working on is finding that there is a
32 fairly strong association between bad red tides, like 2005, and
33 2014 was similarly bad, but in a different way, and then, in
34 2018, we found that there were pretty large areas of hypoxia.

35
36 There's been a real limitation in our ability to sample these
37 events, just because research cruises take time to plan, and
38 they're expensive, and there are gaps between, and so what was
39 kind of borne out of 2018, in discussions with the fishermen,
40 who are really impacted by these red tide events, is some had
41 taken up the mantle of starting to do sampling to fill in those
42 data gaps.

43
44 It's been a really important collaboration to help us better
45 understand what's going on, not just during red tide, but
46 between red tides, which is really a limitation, because, when
47 there is an event, people sample, but, kind of between them, we
48 kind of forget, and there's not as much sampling, and there is

1 always sampling, of course, for various surveys, but it's been
2 really important to work with the fishermen, who are on the
3 water every day.

4
5 The brief overview of the data that I'm going to show you is
6 that there's a commercial fisherman who is working with the
7 Florida Commercial Watermen's Conservation Group, and it's a
8 non-profit out of Pine Island, Florida, and they take these
9 hand-held sondes and collect water column data at various
10 locations, wherever they happen to be, but we got one of them
11 to agree to take some samples just off the coast of Tampa Bay.

12
13 What you're looking at is a map of the overview of where he
14 sampled, and the black and red lines was his zig-zagging up the
15 coast, and then he did a line outwards towards the continental
16 shelf break, and he then worked his way southward, collecting
17 data all along the way, which has been tremendous in helping us
18 understand what conditions are going on right now.

19
20 The data were binned and smoothed and interpolated, and I will
21 show you various plots to help you understand what we are
22 actually seeing offshore. He did report pretty good water
23 conditions, and pretty good fishing too, at least north of the
24 27.8 line.

25
26 I will say, kind of as like a take-home, right off the bat,
27 there weren't any real areas of concern that might be related
28 to red tide, and what this is not designed to do is to give you
29 ready-to-use data for intake in any sort of stock assessment or
30 process, but, rather, this is just helping to provide some
31 environmental context for what we are seeing offshore during
32 this really bad red tide event.

33
34 This is that first segment that's closest to the shore, and all
35 you're looking at is the same profiles, depth versus latitude,
36 with the south being on the left-hand side, for temperature,
37 salinity, chlorophyll, and dissolved oxygen, and, like I said,
38 we really were looking for like hypoxic areas, which is
39 typically considered below two milligrams per liter, and so this
40 segment -- We don't really see anything that is really cause
41 for concern, and I would call it pretty normal conditions, and
42 there might be a little bit of salinity stratification in the
43 northern reach.

44
45 This is that segment that's just offshore of that. Similarly,
46 there's not a whole lot to report, which is good. I mean, this
47 is pretty close to shore, relatively speaking, and so it seems
48 that at least the conditions that we are interested in don't

1 seem to really be affected by the red tide that's onshore
2 currently.

3
4 This is that line that he took directly offshore, and you start
5 to see that it gets deeper, and you start to see some more
6 thermocline, as you get further out towards the shelf break,
7 and a little bit of decrease in salinity that might be probably
8 related to the plume coming from the Mississippi River, a little
9 bit of a chlorophyll signal on the bottom, but nothing really
10 concerning to us.

11
12 If we look at the profile going southward, again, there's
13 nothing really concerning to us. There's a decrease in salinity
14 in the north, probably associated the river plume, a little bit
15 of some chlorophyll on the bottom, which some have suggested
16 might be associated with red tide, but take that with a grain
17 of salt.

18
19 There is a little bit of increasing chlorophyll, but, again,
20 there's nothing really that pops out at us that might be a cause
21 for concern that might be associated with the red tide onshore,
22 and so, overall, things look good right now, and it's hard to
23 say, without sampling again, what the conditions will turn out
24 to be, but that's pretty much all I had to say. I will take
25 any questions, if you want, now. That way, I don't have to stay
26 through all of this, and I have other things to do.

27
28 **CHAIRMAN NANCE:** Any questions on these last few slides? I
29 don't see any questions, but thanks for that presentation.

30
31 **MR. TURLEY:** All right. Take care.

32
33 **DR. SAGARESE:** Thanks, Brendan.

34
35 **CHAIRMAN NANCE:** Go ahead, Skyler.

36
37 **DR. SAGARESE:** I will keep plowing away. Now we're at the point
38 where we've kind of given you -- We've gone through the new
39 interim approach, what the results would be, as applied, again,
40 for implementation starting in 2022, but then we've also kind
41 of highlighted the potential concern with the ongoing red tide
42 event and kind of given a snapshot of what the conditions looked
43 like a few weeks ago, of course noting that those conditions
44 can change at any time, and it's something that I think everyone
45 will be watching very closely offshore, to see if this plume
46 starts to move further offshore and become an issue for the
47 offshore fisheries.

1 Now we're up to the second decision point for the SSC, which
2 is, essentially, number one, would you accept this results that
3 we've shown for the interim, and, if you do, which would be the
4 moving average, and would it be three years, five years, or
5 potentially another, and I know Harry mentioned something about
6 more years.

7
8 The one thing that I will point out is -- In that Huynh article,
9 they talk about -- Of course, all these different decision
10 points should really be simulation tested in some sort of
11 approach that is -- In a simulation that is specific to red
12 grouper. We have not yet had the ability to do that at the
13 Southeast Science Center yet for red grouper.

14
15 Of course, it's on the list of research that we would like to
16 conduct, but there are certain drawbacks of -- The benefit of
17 the moving average is it's kind of a continuous -- As I think
18 Luiz said, a quasi-tracking. We're kind of getting a closer
19 look at what's going on with the stock and then what's happening
20 with that index, and we're going to adjust the catch advice
21 based on that.

22
23 I think, the longer you make that time period, the less movement
24 there will be, and, yes, that could be more -- You won't see as
25 much variability, but you might also remove the ability to make
26 some changes based on what's going on.

27
28 The one thing I want to point out, and what we see with the
29 interim analyses is, when we show results, and it looks like
30 things will drop, you also have the other way, and so if, for
31 example, in 2021, the index comes back, and the population looks
32 like it's good, and things are doing really well, and that
33 cohort is moving through, and the red tide didn't have a big
34 effect on the stock, we will see that in the index and whether
35 the approach recommends an ABC -- It could go up or down, and
36 that's part of the nature of this approach.

37
38 I do have one more slide, and then I will back up to that, but
39 I just want to highlight, again, that we haven't simulation
40 tested all of this work for red grouper specifically. Of course,
41 it's something we want to do with every stock we do show, but
42 we do feel that these results, because there has been some
43 simulation work done, it is useful for the SSC at this time,
44 and, of course, we strive to be able to conduct an MSE specific
45 for red grouper, in addition, not just looking at interim
46 approaches, but the red tides and how best to incorporate it
47 and what are the potential risks and all those types of issues.

48

1 I think that's just references, and I am happy to take more
2 questions, but I will leave the slide here at this next decision
3 point.

4
5 **CHAIRMAN NANCE:** Perfect. Thank you very much for that
6 presentation. It was excellent. From the SSC perspective, the
7 modeling, as we said in our motion, really looks good, and I
8 appreciate that new approach. I think it enhances being able
9 to have these interim analyses.

10
11 I think the point right now where we want to go to is we need
12 to decide -- The OFL is going to be the same, no matter what we
13 do, but whether we want to use a three-year average -- For the
14 ABC, a three-year average or five-year average or wait until
15 December and look and see if we have anything from red tide.

16
17 My question, Skyler, is, if we wait until December and get the
18 data in, how much data would you have extra? Would you have
19 all the way through 2021?

20
21 **DR. SAGARESE:** We would have the ongoing -- The bottom longline
22 index of abundance, they sample in August and September for red
23 grouper, and they have done a lot of work to automate much of
24 the data cleaning and the index development, and so we should
25 have the 2021 index in time to provide results by the end of
26 this year.

27
28 Then we would be able to update the method through 2021, and,
29 again, the caveat there is that the survey is out there in
30 August and September, but the red tides may also trickle into
31 October, November, and December, depending upon how severe it
32 is, and it might go beyond those months, but we will have the
33 index updated through 2021.

34
35 **CHAIRMAN NANCE:** Okay. Thank you. Trevor and then Roy.

36
37 **DR. MONCRIEF:** Skyler just answered my question that I was going
38 to ask. We've heard angler reports on the fishery-dependent
39 side, but I was going to see if there was any -- If anyone had
40 been seeing anything on the fishery-independent surveys, but,
41 since it's done in August and September, I guess we'll see here
42 in a little while.

43
44 **CHAIRMAN NANCE:** Roy.

45
46 **DR. CRABTREE:** I mean, my inclination is that we would go ahead
47 and give the council a new ABC. If they wanted us to hold off
48 and wait, if we had some guidance from them, but that's sort of

1 their decision, if they want to do that, and so it seems, to
2 me, and so I will make this as a motion, I guess, is that the
3 SSC accepts that updated methodology and interim assessment
4 results and sets the ABC at 4.96 million pounds, based on the
5 three-year average.

6
7 **CHAIRMAN NANCE:** I think we need to have the OFL in there, also.

8
9 **MR. RINDONE:** Mr. Chair, just a point of order to that, and so
10 that ABC would actually be higher than our current OFL, and so
11 you guys should probably start with the OFL and then work back
12 from there. The OFL was 5.99 million pounds gutted weight.

13
14 **DR. CRABTREE:** So that would set the OFL at 5.99 million pounds
15 gutted weight and the ABC at 4.96. I am going with the shorter
16 period, because I tend to agree with Luiz.

17
18 **CHAIRMAN NANCE:** I think we may want to have that in there.
19 Using the three-year moving average.

20
21 **DR. PATTERSON:** You need to indicate Gulf red grouper in there
22 somewhere.

23
24 **CHAIRMAN NANCE:** Thank you.

25
26 **MR. GREGORY:** Mr. Chair, when we're ready to vote, I request
27 that you read the motion.

28
29 **CHAIRMAN NANCE:** We will, yes. We will. I think we need "the
30 SSC accepts the updated methodology for red grouper".

31
32 **DR. BARBIERI:** Mr. Chairman, should we clarify that this is in
33 FES units, just to avoid any potential confusion?

34
35 **CHAIRMAN NANCE:** Yes, we should.

36
37 **DR. POWERS:** I will second the motion.

38
39 **CHAIRMAN NANCE:** Okay, and so here is the motion. The SSC
40 accepts the updated methodology and interim analysis results
41 for red grouper and sets the OFL at 5.99 million pounds gutted
42 weight and the ABC at 4.96 million pounds gutted weight, using
43 the three-year moving average for setting the ABC relative to
44 the OFL. These catch limits are in MRIP-FES units. Dr. Powers
45 has seconded that. Any discussion? I think, David, you had
46 your hand up before.

47
48 **DR. GRIFFITH:** No, and I just wanted to know if a mixing event

1 affects the red tide, and so, if we have a hurricane between
2 now and December, if that's going to affect it, but --

3
4 **CHAIRMAN NANCE:** We hope we don't have any. Sean.

5
6 **DR. POWERS:** So my question is, since we're not going to wait,
7 which was one of the options, will we be able to see the interim
8 analysis again in January, I mean, in case we want to change
9 our minds or intervene?

10
11 **CHAIRMAN NANCE:** Ryan, to that point?

12
13 **MR. RINDONE:** Yes. Thank you. Yes, you guys -- The council
14 has a standing request to the Science Center for annual interim
15 analyses for red grouper, until otherwise indicated, and so,
16 every January, we expect -- Well, every December, late December,
17 before the January SSC meeting, we expect to receive an interim
18 analysis from the Science Center for red grouper, and so that's
19 just kind of become a standard thing that we have prepared for
20 January.

21
22 You guys didn't see this one this past January, because there
23 was another red-colored fish that was occupying a lot of your
24 time, but, typically, that January SSC meeting is when you would
25 see the red grouper interim.

26
27 **CHAIRMAN NANCE:** Thank you. Luiz.

28
29 **DR. BARBIERI:** Mr. Chairman, thank you. Just a couple of points.
30 First of all, just to make sure that the council has a full
31 understanding of our decisions here, and I know that we're going
32 to have our report, and there are the meeting minutes and all
33 of that, but, just to make sure, I think it would be good to
34 have -- To understand why we made this decision regarding the
35 three versus the five-year moving average for estimating this,
36 as well as why we decided to go with this approach versus not.

37
38 Then one other thing is I think that Skyler's presentation
39 brings up some very good points about the potential red tides
40 that could happen between now and the end of the year and that
41 the cruises are going to be in August and September, and they
42 may not be reflective of the potential impacts of these red tide
43 events, but my question is can we still get the interim analysis
44 completed at the end of the year, Skyler, so that we get to see
45 what happened in reality, versus what we are proposing here?

46
47 **DR. SAGARESE:** My understanding is there's a request from the
48 council for annual interims for red grouper, and so -- Katie

1 can chime in too, but I'm pretty sure we are already planning
2 on -- Assuming that we have the index developed in time, and no
3 issues with that, and we will be presenting that report by the
4 end of the year, is my understanding.

5
6 **DR. BARBIERI:** Excellent. Thank you. That's great, actually.

7
8 **CHAIRMAN NANCE:** Thank you, Luiz. Will.

9
10 **DR. PATTERSON:** I just recommend changing the words "these catch
11 limits" to "values" in the last sentence.

12
13 **CHAIRMAN NANCE:** Is that okay, Roy?

14
15 **DR. CRABTREE:** Yes.

16
17 **CHAIRMAN NANCE:** Thank you, Will. That's perfect. You want
18 "catch values" though, correct? Just "values"? Okay. Thank
19 you. David Chagaris.

20
21 **DR. CHAGARIS:** Thank you. This might be a moot point now, since
22 we're able to revisit this at the end of the year, but I'm
23 curious as to whether or not there are any consequences, or
24 ramifications, of waiting. If this is supposed to provide catch
25 advice for 2022, does it matter if the council gets that
26 information now or December?

27
28 **CHAIRMAN NANCE:** I think the point is we provide the science,
29 and then they can choose whether to wait or not. I think we're
30 providing this to them, and we'll have another -- It looks like
31 another analysis in January that we'll look at, or December
32 report, which will give us the chance to change that for next
33 year, if it looks bad. Matt.

34
35 **DR. FREEMAN:** The council will be receiving a draft framework
36 at the August meeting, in a week-and-a-half, based on the SSC's
37 recommendation. The tentative timeline would be that the
38 document would go final in October, and, again, that's
39 tentative, and so it would be in place at the beginning of 2022,
40 which, obviously, would have implications for commercial quota,
41 et cetera, towards the start of the year, whereas, again, if
42 it's delayed, implementation might not happen until later into
43 2022.

44
45 **CHAIRMAN NANCE:** Okay. Thank you. Harry.

46
47 **MR. BLANCHET:** Dr. Chagaris asked my question.

48

1 **CHAIRMAN NANCE:** Okay. Thank you. Jim.

2
3 **DR. TOLAN:** I was just going to echo what Dave was saying, and,
4 if I cut out real quickly, I'm just going to let you know that
5 I'm going to vote against this motion, simply because this red
6 tide is pretty unprecedented, in terms of the timing, and so I
7 think waiting until December is not a bad idea. Thanks.

8
9 **CHAIRMAN NANCE:** Thank you for that comment. Carrie.

10
11 **EXECUTIVE DIRECTOR SIMMONS:** Thank you, Mr. Chair. My question
12 is for Skyler and Luiz. I think, if we were going to take a
13 hard look at red tide, that you would have to look at multiple
14 fishery-independent indices, which would not just be the NMFS
15 bottom longline index updated, which I think is what has
16 historically been used for this, and so I think you would want
17 to look at those visual surveys, any trap surveys, or anything
18 else, because I don't know that the bottom longline is going to
19 show what we think it may for a couple of years from any impacts
20 from red tide, and that's just what I am thinking. I guess we
21 would ask for all of those, the next time this is on the agenda,
22 and is that correct?

23
24 **DR. SAGARESE:** To follow-up, what I mentioned earlier too is
25 the SEAMAP summer groundfish survey. In the past, we have
26 provided fishery-independent indices updates for that and for
27 bottom longline, because we both have much of that work
28 automated at the Science Center, and so I can plan on showing
29 those, assuming that we have enough data and the index is
30 developed in time.

31
32 The other fishery-independent surveys are the video survey,
33 which is a bit more complicated, because it's three different
34 labs that combine their data, and so that has much more of a
35 lag, in terms of combining the data and doing an index. That
36 would not be ready in time for this meeting, and the other index
37 is the FWRI repetitive time drop survey, which is no longer
38 operational.

39
40 I think, going forward, for December, we should be, assuming
41 Pascagoula is able to produce the two indices that I have
42 mentioned, the longline and the SEAMAP ground fish survey, and
43 those would be the two that I would expect that we can present
44 for the January SSC meeting.

45
46 **CHAIRMAN NANCE:** Okay. Carrie.

47
48 **EXECUTIVE DIRECTOR SIMMONS:** Thank you, Mr. Chair. Skyler, we

1 do get red grouper in the SEAMAP trawl surveys?
2

3 **DR. SAGARESE:** Yes, we do, and it's actually in the stock
4 assessment. It gets smaller red grouper, and so it's a pretty
5 good indicator of the younger red grouper size classes and age
6 classes. It's not an age-zero, but it has quite a bit of catches
7 of red grouper, but I think that might change now, with some of
8 the changes in the survey protocols, and so we may see that
9 there may be less data than there used to be, but, at this time,
10 yes, it was recommended for use in the stock assessment. We
11 have shown results in the past for that index, and so those are
12 the two fishery-independent indices that we can definitely have
13 together.

14
15 **EXECUTIVE DIRECTOR SIMMONS:** Okay. Thank you.
16

17 **CHAIRMAN NANCE:** Since the trawl survey moved over to Florida,
18 in these later years, we're able to see some of the different
19 fish over there now. Roy.
20

21 **DR. CRABTREE:** I am really, in terms of the timing, looking at
22 the need to get this into the FES currency issue, because that's
23 what we have to monitor the fishery, and then, when we get that
24 done, and then, if we get new information in January, or when
25 we get it, we'll deal with that as quickly as we can.
26

27 **CHAIRMAN NANCE:** I think that's a wise choice. Rich.
28

29 **DR. WOODWARD:** I just have a comment that I think this idea of
30 sort of moving the limits up and down, based on stock estimates
31 and indices of the stock, makes an awful lot of sense, but it
32 seems to me like there should be -- There is a variation across
33 species, across situations, and that the -- For example, a very
34 long-lived species might need to move faster or slower than a
35 short-lived species and how much uncertainty there is in the
36 catch data.
37

38 Obviously, we don't have that kind of information for this
39 decision today, but that would be an interesting analysis that
40 could be done down the road that would help inform decisions
41 along these lines in the future.
42

43 **CHAIRMAN NANCE:** Okay. Thank you. Any other comments or
44 discussion? Let's go ahead, and I think, for this one, we'll
45 vote. We already have -- I know that Jim has expressed
46 opposition to this motion, and so, Jessica, would you do the
47 call, please?
48

1 Here's the motion we're voting on. The SSC accepts the updated
2 methodology and interim analysis results for red grouper and
3 sets the OFL at 5.99 million pounds gutted weight and the ABC
4 at 4.96 million pounds gutted weight, using the three-year
5 moving average for setting the ABC relative to the OFL. These
6 values are in MRIP-FES units.

7
8 **MR. GREGORY:** Mr. Chair?

9
10 **CHAIRMAN NANCE:** Doug.

11
12 **MR. GREGORY:** With the OFL, I didn't hear you say "5.99". I
13 just heard you say "5.9".

14
15 **CHAIRMAN NANCE:** It's 5.99 million pounds gutted weight.

16
17 **MR. GREGORY:** Thank you.

18
19 **CHAIRMAN NANCE:** Thank you.

20
21 **MS. MATOS:** Jim Tolan.

22
23 **DR. TOLAN:** Opposed.

24
25 **MS. MATOS:** Rich Woodward.

26
27 **DR. WOODWARD:** In favor.

28
29 **MR. RINDONE:** You guys can just say yes or no, if you like, too.

30
31 **MS. MATOS:** Steven Scyphers.

32
33 **DR. SCYPHERS:** Yes.

34
35 **MS. MATOS:** Sean Powers.

36
37 **DR. POWERS:** Yes

38
39 **MS. MATOS:** Will Patterson.

40
41 **DR. PATTERSON:** Yes.

42
43 **MS. MATOS:** Jim Nance.

44
45 **DR. NANCE:** Yes.

46
47 **MS. MATOS:** Trevor Moncrief.

48

1 DR. MONCRIEF: Yes.
2
3 MS. MATOS: Paul Mickle.
4
5 DR. MICKLE: Yes.
6
7 MS. MATOS: David Griffith.
8
9 DR. GRIFFITH: Yes.
10
11 MS. MATOS: Doug Gregory.
12
13 MR. GREGORY: Yes.
14
15 MS. MATOS: Benny Gallaway.
16
17 DR. GALLAWAY: Yes.
18
19 MS. MATOS: Roy Crabtree.
20
21 DR. CRABTREE: Yes.
22
23 MS. MATOS: David Chagaris.
24
25 DR. CHAGARIS: Yes.
26
27 MS. MATOS: Harry Blanchet.
28
29 MR. BLANCHET: Yes.
30
31 MS. MATOS: Luiz Barbieri.
32
33 DR. BARBIERI: Yes.
34
35 MS. MATOS: Lee Anderson.
36
37 DR. ANDERSON: Yes.
38
39 MS. MATOS: Jason Adriance.
40
41 MR. ADRIANCE: Yes.
42
43 MS. MATOS: Michael Allen. John Mareska.
44
45 MR. MARESKA: Yes.
46
47 MS. MATOS: Luke Fairbanks.
48

1 **DR. FAIRBANKS:** Yes.

2

3 **MS. MATOS:** Jack Isaacs.

4

5 **DR. ISAACS:** Yes.

6

7 **MS. MATOS:** Mandy Karnauskas.

8

9 **DR. KARNAUSKAS:** Yes.

10

11 **MS. MATOS:** Josh Kilborn.

12

13 **DR. KILBORN:** No.

14

15 **MS. MATOS:** Steven Saul.

16

17 **DR. SAUL:** Yes.

18

19 **CHAIRMAN NANCE:** You skipped Cynthia, I think.

20

21 **MS. MATOS:** She is absent. That's it.

22

23 **CHAIRMAN NANCE:** Okay. Well, thank you. It's been a lively
24 discussion, and I appreciate that. Skyler, thank you very much
25 for that excellent presentation. Now we'll go ahead and have
26 our break, and we'll come back at 3:30 Eastern Time.

27

28 (Whereupon, a brief recess was taken.)

29

30 **CHAIRMAN NANCE:** It's approaching time to start again. I think
31 our next topic is Determination of Topical Working Groups for
32 SEDAR 75, which is the Gulf of Mexico gray snapper operational
33 assessment.

34

35 **MR. RINDONE:** Mr. Chair, if I could, if we could talk about the
36 red grouper operational assessment first, while that particular
37 species is fresh in everyone's minds, and maybe that would be a
38 decent modification. Just to take the red grouper operational
39 assessment scope of work first, since we just finished talking
40 about the interim analysis and that species is fresh.

41

42 **CHAIRMAN NANCE:** That would be perfect. We will do Item XI and
43 then X.

44

45 **SCOPE OF WORK FOR RED GROUPER OPERATIONAL ASSESSMENT**

46

47 **MR. RINDONE:** All right, and so we're going to review this scope
48 of work for the planned operational assessment for red grouper,

1 which is going to take place in 2024 and use data through 2022.
2 You guys should discuss the items proposed for the terms of
3 reference that are in this scope of work, whether topical
4 working groups would be necessary, and for which topics, like
5 life history, recreational landings, whatever, and red tide,
6 perhaps, and whether an in-person workshop should be necessary
7 for this operational assessment.

8
9 Your recommendations will then be incorporated into the scope
10 of work and submitted to SEDAR for use in developing the terms
11 of reference for the proposed assessment, and so, up here, you
12 can see -- On the screen now, you can see the proposed scope of
13 work, and so this was developed by council staff, in
14 consultation with SERO and the Science Center, and also looking
15 at some of the things that were mentioned as needing examination
16 in SEDAR 61. You guys can take a look and recommend edits as
17 you think appropriate.

18
19 We can go line-by-line, if you want. I mean, some of the main
20 takeaways here is we're suggesting a terminal year of data of
21 2022, and we have added in that we want -- As we have for been
22 for many of these recent assessments, to document any changes
23 in the MRIP data, both pre and post-calibrations, in terms of
24 the magnitude of changes in catch and effort, and we are
25 recommending that -- This is new, and this is a new addition,
26 and we're recommending that this be compared to the values that
27 are demonstrated in SEDAR 61, just to see how the data change
28 with time, due to QA/QC processes.

29
30 Also, to update life history information, if warranted, as it
31 may relate to growth, reproduction, and mortality, and red tide
32 factors in here and in Number 3 down there. Also, consider the
33 treatment of recreational harvest, such as consider inputting
34 recreational catch in weight, such as in pounds, instead of in
35 numbers of fish, and then reevaluate error estimates for the
36 recreational landings, and that's something from SEDAR 61.

37
38 For point Number 3 here, to explore the potential effects of
39 red tide with consideration to past red tide events and more
40 recent events in 2018 and thereafter, which would include the
41 2020 event and if that -- Sorry. The 2021 event and, if that
42 extends into 2022, then that as well. Dr. Powers.

43
44 **DR. POWERS:** Given our discussions about the red tide and all
45 of the great ideas that people had, I mean, how do we go about
46 -- Would we just make a motion, or we would just suggest that
47 we think that this is a big enough issue for a topical working
48 group, because we don't think we can just simply just check this

1 box without one?

2

3 **MR. RINDONE:** You guys can -- At the bottom there is an option
4 for topical working groups, and we can list those out there,
5 and so we can add in a topical working group for red tide there,
6 and, if we can get this to a point where everybody is generally
7 happy with the material contained therein, then you guys can
8 just make a blanket we think this is good and submit this to
9 SEDAR, and so I can add that in now.

10

11 **CHAIRMAN NANCE:** Also, as we go through here, if there's any
12 edits that we want to have. John, did you have a comment?

13

14 **DR. FROESCHKE:** Just real quick, just following up on the earlier
15 discussion we had on the average weight issue that we just
16 discussed, is that incorporated in the first bullet on Item 2,
17 in regard to the changes in MRIP data, or are there other parts
18 of that that need to be considered?

19

20 **SSC MEMBER:** I had the same question. Thank you.

21

22 **CHAIRMAN NANCE:** Let's go through this, and then if there are -
23 - Think about, like for Number 2, if we want to add something
24 and edit, and let's put that in, okay? This is our opportunity
25 to put items into this document, so that, when we have the
26 assessment, we know they're being covered.

27

28 **MR. RINDONE:** Under Number 2, if you guys wanted to be more
29 explicit about it, you could add a bullet that says something
30 like "explore the effects of changes in the mean weight
31 estimation procedure from that used in SEDAR 61 to that proposed
32 and used in the 2021 red grouper interim analysis". Is that an
33 addition that you guys would like to see put there? I am seeing
34 some nods.

35

36 **CHAIRMAN NANCE:** Yes. Steven Saul.

37

38 **DR. SAUL:** Thank you, Mr. Chair. Please correct me if this is
39 beyond the scope of an update assessment, and it's been a bit
40 since I was involved in the SEDAR process, but one edit to the
41 scope of work that I would recommend, and, again, this may be
42 not appropriate for an update and have to be done during a full
43 benchmark, but one recommendation that I would make would be to
44 try and include runs, sensitivity runs, or the base runs, that
45 incorporate historical data. There is precedent for this for
46 red snapper, of course, and we often include historical time
47 series, going back pretty far, and we have analogous data for
48 groupers, and we know, from historical records, that this is an

1 old fishery, that people were catching red grouper back in the
2 1800s and such.

3
4 Again, I don't know that it's -- Correct me if this is not an
5 appropriate place for it, and if that should be considered
6 during a full, during a benchmark, assessment, but that would
7 be my recommendation. Thank you.

8
9 **MR. RINDONE:** So where are we plugging this in again, Steve?

10
11 **DR. SAUL:** It's not for any specific line item, but it was just
12 a general kind of -- It may have to be another item.

13
14 **MR. RINDONE:** Okay, and so do you want to draft that?

15
16 **DR. SAUL:** I can. Again, is it appropriate for this type of an
17 update assessment to explore that?

18
19 **MR. RINDONE:** We haven't set the schedule yet. Since this is
20 beginning in 2024, it's still, obviously, a ways off, and so,
21 at this point, we request the things that we want to see happen,
22 and then it's moved to SEDAR, and SEDAR consults with the Science
23 Center, to try to determine the feasibility of these things,
24 and, if it's something that can be done, then we'll do that.

25
26 **CHAIRMAN NANCE:** I think it would be good to put it in, and it
27 can always be taken out.

28
29 **MR. RINDONE:** Okay, and so let's go ahead and put it under
30 Number 3, and so, Steve, if you want to give me specific
31 language, I will type that into my copy here.

32
33 **DR. SAUL:** Okay, and so I would say to explore stock assessment
34 model runs that incorporate historical landings data back to
35 the start of the fishery. The reason I feel this is important
36 is because, from my own work, it has shown -- Again, when I have
37 simulated Gulf fisheries and then assessed them, that, in models
38 like Stock Synthesis and many of the assessment tools that we
39 use, that it can be really difficult to fit that starting year
40 fishing mortality value, and that value makes a big difference.
41 The model is really sensitive to that, and, when you play around
42 with that, you can often get different stock status results,
43 and so, if you don't have that right, it can be a problem, and
44 so that's the rationale behind the recommendation.

45
46 **MR. RINDONE:** Okay, and so I'm actually going to plug this in
47 as the fourth bullet under Number 2, and, Steve, just to this
48 item, this is something that was explored in-depth in SEDAR 61,

1 but it also something that can be revisited, and it usually is
2 revisited, just as a function of trying to determine the start
3 year for the assessment.

4
5 One of the things that makes some of the grouper species a
6 little bit more interesting is the IFQ program and the
7 resolution and availability of data going back in time, and
8 sometimes it's a little bit more hit or miss, but we can
9 definitely plug that in and look at that again, and so, given
10 where I've got it put now, under Number 2, do you think that
11 appropriate?

12
13 **DR. SAUL:** That works for me, yes. Thank you.

14
15 **CHAIRMAN NANCE:** Let's see. I think Luiz is next.

16
17 **DR. BARBIERI:** Thank you, Mr. Chairman. I am going to start
18 with the same caveats that Steve just made, regarding the fact
19 that, yes, this is an operational assessment, and I understand
20 Katie and Julie's presentations this morning, talking about what
21 scenarios are considered for operational versus research track
22 assessments, but, still, I really would like to see if it would
23 be possible to conduct the sensitivity run that explores the
24 use of the Florida State Reef Fish Survey data of the private
25 recreational sector, instead of MRIP, similar to what we are
26 doing now for gag, and, again, it's just something that, as we
27 continue the discussion on how to develop, implement, or
28 interpret the results of these supplemental surveys, more
29 specialized surveys, in the Gulf for some of our reef fisheries,
30 that, the more we learn about them and how models, assessment
31 models, handle those data, relative to MRIP, the more
32 information I think we're going to have to help us move forward
33 in getting those issues resolved. That's my point there, Mr.
34 Chairman and Ryan.

35
36 **CHAIRMAN NANCE:** Thank you. Ryan.

37
38 **MR. RINDONE:** Thank you, Mr. Chair, and thank you, Luiz. I
39 would also be adding this under Number 2, and this would be the
40 fifth bullet, and it's my understanding that this sensitivity
41 would use the SERFS survey in place of the MRIP program data.

42
43 **DR. BARBIERI:** Yes, just for the private recreational sector,
44 yes.

45
46 **MR. RINDONE:** All right. Explore the use of the Florida State
47 Reef Fish Survey program for recreational catch and effort for
48 red grouper, in place of the same data collected by the Marine

1 Recreational Information Program. For private recreational
2 catch and effort. Sorry. Luiz, does that look correct to you?

3

4 **DR. BARBIERI:** Yes, it does, Ryan. Thank you. That's it.

5

6 **CHAIRMAN NANCE:** Okay. Thank you. Harry.

7

8 **MR. BLANCHET:** I was going somewhere else, but I think that
9 there is -- I think you can -- From the first line of Luiz's
10 bullet, if you put "private" right before "recreational", on
11 the first line, you don't need that last phrase.

12

13 Where I was going is I know that a lot of these terms of
14 reference have been built by a considerable effort by a group
15 of people, and I am kind of curious, in terms of the third
16 bullet, the first sub-bullet, about inputting recreational catch
17 in weight, instead of numbers of fish.

18

19 To me, I have always -- Because of the way that weight is
20 estimated in the MRIP, I have always considered that less
21 reliable than the numbers of fish harvested, and so I'm curious
22 why that bullet is in there.

23

24 **CHAIRMAN NANCE:** Is that the third bullet on Number 2, Harry,
25 that you're talking about?

26

27 **MR. BLANCHET:** Yes, the third bullet, the first sub-bullet under
28 that bullet, right where the cursor is.

29

30 **CHAIRMAN NANCE:** Okay.

31

32 **MR. RINDONE:** I can speak to this, and so this has been talked
33 about at the council level, because the commercial landings are
34 input in weight, and the catch is measured in weight, and
35 everything, all the quota, is allocated and dispersed in weight,
36 and all of that is done in weight, but the recreational catch
37 is initially recorded and monitored in numbers of fish, which
38 is then converted to weight, and, within the stock assessment,
39 the stock assessment internally estimates annual average weight,
40 and then that's what it uses to take that numbers of fish and
41 turn it into a weight within the assessment.

42

43 The thinking was to try to just input everything as weight,
44 since it's managed in weight, as opposed to counting it in
45 numbers and then managing it in weight, and this has been
46 attempted, and it wasn't successful for gag, but perhaps it
47 would be for another species, like red grouper, and so that's
48 why it's being considered here, and the Science Center folks

1 that are on the line, and I'm sure there's still a couple, can
2 speak to the difficulty with being able to do this, but this
3 was something that the council had talked about wanting to see.
4

5 **MR. BLANCHET:** I mean, I'm -- You almost never hear me speak
6 against including something, but, to me, this seems like a step
7 backward, unless there is some reason in the modeling process
8 that this should be included. I recognize that -- We just saw
9 a slide that showed the issues with translating from -- The
10 estimation process that the model had versus what was estimated
11 from the dockside sampling. However, that's very different than
12 what I am seeing here, and I would much rather have it being
13 fixed by some other method than by using the weights, and that's
14 just -- It rubs me the wrong way.
15

16 **CHAIRMAN NANCE:** Okay. Thank you. Doug Gregory.
17

18 **MR. GREGORY:** Thank you. I say to Harry that the bullet says
19 "consider". It doesn't say do it, and so I'm comfortable with
20 that. With the historical landings, that was attempted in the
21 late 1990s with the red grouper stock assessment. To the extent
22 that a big effort was made to try to compile Cuban landings,
23 because our longline fleet learned how to longline from the
24 Cubans, and, prior to the Magnuson Act, the Cuban fishery was
25 fishing on the west coast, and I think, until the longline
26 fishery was developed, or started, there probably wasn't a large
27 commercial catch of red grouper, because they don't aggregate
28 like gag, and so exploring it is no problem, but it's been done
29 before.
30

31 My question to Luiz is does the Florida State Survey program
32 extend in enough years for it to replace MRIP in the assessment,
33 or would it be used something like an independent index of some
34 sort? Thank you.
35

36 **DR. BARBIERI:** Just to answer that question, Mr. Chairman?
37

38 **CHAIRMAN NANCE:** Yes, you may. Thank you.
39

40 **DR. BARBIERI:** Doug, we do have a full calibration for the
41 entire time series. It doesn't really include a historical
42 period. I mean, that would have to be handled differently, and
43 this is something that we are going through now with gag, but,
44 for the full time series of MRIP data, we have a calibration
45 conversion factor in place.
46

47 **MR. GREGORY:** Thank you.
48

1 **CHAIRMAN NANCE:** Okay. Thank you. Dave Chagaris.

2
3 **DR. CHAGARIS:** Just another maybe bullet to add with regard to
4 the mean weight. Maybe we could add a bullet that says, if
5 using numbers, compare mean weight from the stock assessment
6 with the ACL monitoring mean weight.

7
8 Actually, better yet, include -- So, going back to Harry's
9 question, I mean, part of the problem is that -- I agree with
10 Harry that, ideally, we would be able to fit the model to
11 numbers, and the mean weights would line up, and everything
12 would be fine, but one thing that we're trying to do, I believe
13 we're trying to do, with scamp is to actually include observed
14 mean weight data from the recreational sector in the model and
15 then fit to those data, to try to match that, and so something
16 along those lines. Include or compare the mean weight from the
17 model with the mean weight used in ACL determination, because I
18 think that was really -- What Skyler showed today really
19 highlighted the issue, and it's something we're going to want
20 to take another look at.

21
22 **CHAIRMAN NANCE:** Okay. Thank you.

23
24 **MR. RINDONE:** Mr. Chair, just so we're putting this in the right
25 place, and, Dave, heads up. Under Item 2, the third bullet,
26 the third sub-bullet, we're going to have a -- I have, as a
27 third sub-bullet, to explore the effects of changes in the mean
28 weight estimation procedure between SEDAR 61 and the 2021 red
29 grouper. To explore the effects of changes in the mean weight
30 estimation procedure between SEDAR 61 and the 2021 red grouper
31 interim analysis.

32
33 Under that, I have Dave's -- So this is, if using numbers of
34 fish as the input, or unit, for recreational catch, compare the
35 mean weights estimated by the model with that reported by the
36 SERO ACL Monitoring Dataset. As the input unit for recreational
37 catch, and so, that "for" between "input" and "unit", you can
38 delete that word. Dave, thoughts?

39
40 **DR. CHAGARIS:** I think that's good, and maybe we could just add
41 maybe -- At the end of that, you could add "or explore fitting
42 to the SERO ACL monitoring data within the model". I don't know
43 if that's maybe getting a little bit too prescriptive, but
44 there's two things. You can compare the model with the ACL data
45 afterwards, or you can actually try including them in the model
46 as an observed time series.

47
48 I guess, continuing on with that, "or explore fitting to the

1 SERO mean weights". I think that's just there to remind the
2 assessment team of this other option when building the model,
3 if that works.

4
5 **MR. RINDONE:** Okay. Got it.

6
7 **CHAIRMAN NANCE:** Looks good. Jason.

8
9 **MR. ADRIANCE:** Thank you, Mr. Chair. So the advantage of being
10 later in the queue is I guess I can just jump straight to where
11 I wanted to get to. Given the previous presentation and what's
12 going on with this Section 2, this might be one we consider for
13 a topical group, a landings group. Thanks.

14
15 **CHAIRMAN NANCE:** Thank you. Mike Allen.

16
17 **DR. ALLEN:** I must admit, this is my first SSC meeting, and I'm
18 a bit drinking from a firehose, diving right in, but I enjoyed
19 Skyler's presentation, and I just wanted to add that, perhaps
20 for no other species, the red tide effects on natural mortality
21 anomalies are going to be important. They've had big effects
22 on the abundance, and I don't fully understand what that topical
23 working group option might be, but I definitely think that Point
24 3 here in the document is a critical thing to consider in the
25 future assessments, and so thank you, Mr. Chairman.

26
27 **CHAIRMAN NANCE:** Thank you very much for that input. Any other
28 edits within the document itself? Let's go down to the bottom,
29 Ryan.

30
31 **MR. RINDONE:** Thank you, Mr. Chairman. Item Number 4 is pretty
32 canned, and it reflects the update to the status determination
33 criteria from Reef Fish Amendment 44, and so, if we scroll on
34 down, Item Number 5 just says to report what you did.

35
36 Right now, we have it listed that an in-person data and
37 assessment workshop is not recommended for this assessment. If
38 you guys think that the nature of it necessitates a workshop,
39 you can certainly recommend otherwise, and, right now, for our
40 topical working groups, I have three. I have, based on the
41 discussion, and so you guys advise, but I have red tide, changes
42 in the mean weight estimation procedure, and recreational catch
43 and effort.

44
45 Typically, for the -- Well, not typically, because we've never
46 done this before, but, in concept, for the operational
47 assessments, we try not to have more than two or three topical
48 working groups, and we really try to use those to focus in on

1 specific issues that need to be evaluated. It's red tide,
2 changes in the mean weight estimation procedure, and the third
3 one is recreational catch and effort.

4
5 **CHAIRMAN NANCE:** Then we'll need to change topical working
6 groups are thought necessary.

7
8 **MR. RINDONE:** The other thing to evaluate is the in-person
9 workshop component of this. If you guys think that the
10 discussions are such that they would better be served by being
11 in person to discuss some of those things, you can recommend
12 that, or, if you think this can be facilitated by webinar, then
13 we can --

14
15 **CHAIRMAN NANCE:** I am going to ask Sean this question. With
16 the red snapper stuff that you were doing, was it
17 straightforward to do it over webinar, or would it have been
18 better to be in-person?

19
20 **DR. POWERS:** The stock ID? It would be much better to be in-
21 person. I mean, without a doubt. Of these topics though, I am
22 guessing you could do two or three by remote, but the red tide
23 issue is a pretty large one, and it's not just this stock that
24 is affected, and so I would think that you would want an in-
25 person workshop for red tide. Some of the ideas that we
26 discussed, whether it's age-specific mortality, how you deal
27 with the mortality and how you include some of the environmental
28 modeling products, and the models that are going out, like the
29 ecosystem model, and so I think that's a large one. I would
30 put it with this species, but realize that it's going to affect
31 a lot of other species.

32
33 **CHAIRMAN NANCE:** Maybe Julie can answer this, but is the in-
34 person data and assessment workshop -- You have the topical
35 working groups, which is separate from the data and assessment
36 workshops, right, Julie?

37
38 **DR. NEER:** No. There are no -- There is no longer an assessment
39 panel that gets together and works on all the data for
40 operational assessments. There are now only topical working
41 groups, and so there is no panel to review all the components
42 of the data. The only pieces that anyone external to the Science
43 Center is going to get to weigh-in on are the things that are
44 talked about within a topical working group.

45
46 Topical working groups may be held in-person, and they may be
47 held via webinars, and I was going to suggest that, if there
48 are ones that you feel are better suited via webinar, versus

1 ones might be better to have in person, please indicate that,
2 because the reality is, if you need three topical working groups
3 for every operational, we cannot, probably, afford six in-person
4 workshops.

5
6 The new structure, we need as much information as possible, and
7 so if the SSC -- Like Sean had said, perhaps a red tide
8 discussion would be better suited to be in-person. Maybe red
9 tide is best suited in-person, and changes in mean weight
10 estimation may be handled via webinar, and that information
11 helps everyone process the scope of this -- The scope of what's
12 being requested, and so we would appreciate that.

13
14 **CHAIRMAN NANCE:** Do we need to then say, for each one of these,
15 in-person or webinar?

16
17 **DR. NEER:** I think it would be good to provide what you would
18 like to see, and it's really not up to me, SEDAR, to make that
19 decision. How this works is -- I will say you guys request what
20 you want, basically your statement of work of what you would
21 like to see, what you and the councils would like to see, and
22 you provide that information to the Science Center. The Science
23 Center will weigh-in on what can be accomplished.

24
25 You may request -- You guys just added four different things to
26 the terms of reference, to the statement of work, and they might
27 say we can do one, two, and four, but we can't do three, right,
28 and so then there's a negotiation period between the council
29 and the Science Center before it's actually approved.

30
31 The Science Center may also say we agree that you need topical
32 working groups for all three of these things, and we may think
33 you need topical working groups for two of them, but not this
34 one, and there's a negotiation process, but you should put
35 everything you want in here, and it never hurts to ask.

36
37 You may not get it all, but that, again, is a negotiation between
38 the Science Center and the council, and then SEDAR gets to make
39 happen, but, yes, if you have advice on which ones you think
40 would be best suited for -- Like Sean said, these two might be
41 fine via webinar, but this one maybe would be better in-person,
42 and indicate that, so that we have an idea of what you guys are
43 thinking.

44
45 **CHAIRMAN NANCE:** Okay. Thank you.

46
47 **MR. RINDONE:** All right. So, in light of that, we'll go ahead
48 and delete the in-person workshop bit there, and we'll just take

1 it out completely. Next to "red tide", in parentheses, put "in
2 person". Next to "changes in the mean weight estimation
3 procedure", put "via webinar". Then what is the pleasure of
4 the SSC for recreational catch and effort? Think about this
5 also in context of the comparison between the Florida State Reef
6 Fish Survey and MRIP, and is this best served in person, or can
7 it be done via webinar? That's a question.

8
9 **CHAIRMAN NANCE:** I think webinar.

10
11 **DR. TOLAN:** Mr. Chairman, if I may?

12
13 **CHAIRMAN NANCE:** Yes, Jim.

14
15 **DR. TOLAN:** Having been the leader for the landings and CPUE
16 group for red snapper, the very recent one, I think the quality
17 of the data that was out there and the number of people that
18 participated, we did just fine with a webinar, and so I would
19 agree that this one could be handled by webinar.

20
21 **CHAIRMAN NANCE:** Thank you very much, Jim, for that input.
22 Trevor, you had a comment?

23
24 **DR. MONCRIEF:** My only comment is -- On that one, doing it via
25 webinar I don't think too much matters, but those two -- I know
26 the weight estimation procedure is fairly analytical, and there
27 will probably be a little more conversation, but I was thinking
28 the two could probably be combined, but, since they're both
29 separate webinars, it should be no problem.

30
31 **CHAIRMAN NANCE:** Thank you. Any other -- David, yes.

32
33 **DR. GRIFFITH:** Given the importance of red tide, I was just
34 wondering if -- It's going to affect a whole bunch of different
35 species, and I was just wondering if -- Is there another way to
36 actually -- Rather than within the SEDAR, to focus on that as a
37 working group for a whole bunch of species, rather than just
38 red grouper, or does it have to come under something like this?

39
40 **MR. RINDONE:** It's funny that you mention that, because that
41 was exactly what I was just texting Ms. Guyas about, about how
42 this isn't the only species for which this situation would exist
43 for the State of Florida, and it exists for gag, and it exists
44 for, obviously, red grouper, and several of the southeast U.S.
45 species that we manage along with the South Atlantic Council,
46 like mutton snapper and black grouper, yellowtail, et cetera.

47
48 There is definitely some other species that would fall into

1 this, and, looking at all of those species and the relationship
2 between, and the differences between, SERFS and MRIP would be a
3 larger SEDAR procedural thing, I think. That would be a larger
4 separate effort, probably separate from this assessment itself.

5
6 I think that, in the interest of making sure that all the I's
7 are dotted and the T's are crossed for red grouper, what you
8 guys have in here is appropriate, but you could also recommend
9 to the SEDAR Steering Committee, of which the council's two
10 members are currently here, Dr. Simmons and Dr. Frazer, that
11 the idea of a workshop of some fashion to explore the differences
12 between SERFS and MRIP would be beneficial to the SEDAR process
13 for multiple species, and that certainly does seem to be the
14 case. Perhaps, after we tie the bow onto the scope of work,
15 that's something that you guys could formally recommend.

16
17 **CHAIRMAN NANCE:** Let's go ahead and finish this one. We need a
18 motion to approve this document, with the edits that we've made.

19
20 **SSC MEMBER:** So moved.

21
22 **CHAIRMAN NANCE:** Okay. Any opposition to that?

23
24 **MR. RINDONE:** You need a second.

25
26 **CHAIRMAN NANCE:** Okay.

27
28 **DR. BARBIERI:** Second, Mr. Chairman.

29
30 **CHAIRMAN NANCE:** Okay. Perfect. **Any opposition to that?** Thank
31 you. If we would like to make a motion, I am open to that, for
32 a red tide meeting, to be able to explore the effects of red
33 tide on different species.

34
35 **DR. POWERS:** Ryan, we're talking about like a best practices
36 type of workshop or something like that?

37
38 **MR. RINDONE:** Yes, and so, with respect to the difference between
39 the State Reef Fish Survey and MRIP, it would be like a best
40 practices thing, basically to look at the relationship between
41 the two surveys and the differences for all the species for
42 which the State Reef Fish Survey currently includes, which,
43 right now, it's ten species, and, in the future, it's going to
44 be increased to I think thirteen species, once they get a few
45 more years of data.

46
47 This would be something that, because it spans so many species
48 that are managed both by the state and federally, a SEDAR

1 procedural workshop seems a good look to be able to look at all
2 of that at once, rather than species-by-species.

3
4 **DR. POWERS:** Yes, and so the only problem, issue, that I see
5 with that is, obviously, we're talking Florida now, because of
6 red grouper, but Alabama and Mississippi and all of them have
7 their state datasets now, and so I could see each one wanting
8 the opportunity for the different species in question, to do
9 precisely that. It came up with red grouper by Luiz, justifiably
10 so, because Florida -- Obviously, red grouper in Florida would
11 be the only state that has a comparable dataset, but I think,
12 once we open this box, each state is going to want to be
13 involved.

14
15 **MR. RINDONE:** To that point, Mr. Chair, you guys could certainly
16 constrain this to the species that primarily or only occur in
17 Florida waters, and, for instance, like yellowtail snapper isn't
18 really found in any measurable quantities that are relevant
19 outside of Florida, and the same mostly with gag, with red
20 grouper, like with those kinds of species. Obviously, for
21 something like red snapper, there are multiple different
22 datasets that are available to quantify recreational catch and
23 effort for red snapper, and so that particular species might
24 not be a subject in this procedural workshop. You guys could
25 identify that, and I think Luiz would probably be key to helping
26 to identify which species.

27
28 **CHAIRMAN NANCE:** Julie, did you still have your hand up on
29 something?

30
31 **DR. NEER:** I do, and I just wanted to -- As you continue this
32 discussion, I wanted to -- Two things to be aware of. One,
33 you're talking likely a procedural workshop will not happen
34 until 2024, at the earliest, most likely, and so, if you want
35 to go through the SEDAR process, this is quite a bit down the
36 line, and that's not saying you shouldn't recommend it.

37
38 I also want to let you know that the procedural workshops are
39 usually -- They make sure that the topic spans and can take all
40 of the species that all of the cooperators can be involved, with
41 regard to the importance for -- This is certainly an issue
42 within the Gulf, with red tide, and this is not an issue in the
43 South Atlantic for any of the other cooperators, and so just
44 keep that in mind when you're crafting whatever your request
45 might be.

46
47 Third, I think it's an excellent idea to try to do this outside
48 of an individual assessment, and the SEDAR procedural workshops

1 are one way to handle it, and there might be a way that the
2 council can organize something on its own, with the help of the
3 Science Center, and produce information and review things
4 outside of SEDAR, where you might have more flexibility in
5 timing and can tackle more than one issue.

6
7 Just, as you're crafting your motion recommending this be given
8 its own look, especially for red tide, maybe think about those
9 things and how you word your motion, to leave a little bit of
10 flexibility of who might need to make this happen, so that it
11 gets done in a timely fashion, because it is an important issue
12 that does cross a variety of species within the Gulf, but is
13 not a huge topic in some of the other regions. Thank you.

14
15 **CHAIRMAN NANCE:** Thank you, Julie. Benny.

16
17 **DR. GALLAWAY:** I believe the Fishery Ecosystem Management Plan
18 will address red tide as one of the ecosystem issues of
19 consequence in the report, and Carrie or Mandy might wish to
20 speak to that also, but I will be meeting with the program
21 manager this afternoon, later, and I'm sure that red tide is on
22 that list, and so it will be addressed very soon, with a
23 presentation in the next week or so in the Fishery Ecosystem
24 Management Plan study.

25
26 **CHAIRMAN NANCE:** Okay. Thank you. Jason.

27
28 **MR. ADRIANCE:** Thank you, Mr. Chair. To the point of -- Sean
29 brought it up a little bit, but you have -- While some of these
30 state surveys focus specifically on red snapper, some cover all
31 species, and so I hate to say the "C" word, but it sounds a lot
32 like calibration to me, just outside of red snapper. Anyway,
33 thanks.

34
35 **CHAIRMAN NANCE:** You're welcome. Thank you. Jim.

36
37 **DR. TOLAN:** Thank you, Mr. Chairman. Jason I think covered the
38 question that I was just about to ask, and it really was a
39 question for the folks in Florida. When you do have a red tide,
40 and you have an assessment, what level of detail do you normally
41 go to, because I know, here in Texas, when we get our pretty
42 bad red tides, it's long along the Gulf beach, and it's pretty
43 much everything we run across, and we're counting everything,
44 and we're putting them into different size bins, and so we're
45 getting a bunch of information, but I was just curious, on the
46 Florida side, what level of detail you're working with. Thank
47 you.

1 **CHAIRMAN NANCE:** Thank you. Any other discussion? Any motion?
2 Luiz.

3
4 **DR. BARBIERI:** Thank you, Mr. Chairman. Just to Jim's question
5 there, Jim, we try to collect some information on the sizes and
6 ages and species that are being impacted by the red tide events,
7 but, as you know, this can be a very overwhelming effort that,
8 in some ways, depending on the area coverage, can be highly
9 inaccurate and imprecise and generate sometimes more confusion
10 than not.

11
12 We mainly just try to incorporate the information that's coming
13 through the indices of abundance, with the idea that, if an
14 event is large enough to have stock-wide-level impacts, it will
15 show up in the indices that are really successfully indexing
16 abundance for that stock.

17
18 Of course, that doesn't really work all the time, and that
19 doesn't include sometimes the level of detail that we would like
20 to have there, and so efforts like the Center has been conducting
21 and then the projects that Dave Chagaris and others have been
22 working on, to try and more explicitly integrate those effects,
23 are better, and they improved to just the general assessment
24 process, but we try to integrate some level of those impacts
25 into our state species assessments, but in a limited way that
26 never has gone as extensively as what we see with some of those
27 other assessments. I hope that answers your question, Jim.

28
29 **DR. TOLAN:** Mr. Chairman, if I may?

30
31 **CHAIRMAN NANCE:** Absolutely.

32
33 **DR. TOLAN:** Thank you so much, Luiz. I wholeheartedly agree
34 that the accuracy of some of these assessments, especially when
35 they can range hundreds and hundreds of miles up and down the
36 coast, here in Texas, and so, again, like you guys, we do what
37 we can with the personnel that we have, and we try to capture
38 the event, but, when you have one of these -- Like especially
39 in Florida, and you have these long-term events, and they're
40 going on and on and on, and it's really hard to keep up with
41 what's fresh and what's not and what's coming in, and so I fully
42 agree that the accuracy can be an issue, but that's all I have
43 to say on red tide. Thank you.

44
45 **CHAIRMAN NANCE:** Thank you very much. Katie.

46
47 **DR. SIEGFRIED:** Thank you, Mr. Chair. Feel free to tell me to
48 wait until the Science Center gets these scopes of work to make

1 my comments, and I certainly don't want to impede the SSC's
2 ability to make their comments freely, but I just have a couple
3 of comments for you.

4
5 One of them is about just clarifying for me what we were just
6 discussing, and are we talking about the way that we model red
7 tide, or are we talking about the way that we monitor during
8 red tide, because I see this procedural workshop, which I'm
9 concerned that we wouldn't actually be able to have until 2024,
10 might be conflating the two, and, actually, what we were
11 discussing, at least internally, is we still don't quite have
12 the time -- We haven't had the time or quite know how to model
13 red tide effectively, and we've talked to Dave Chagaris a lot
14 about this, and it's like we need to wait until we have our
15 research track for red grouper in order to explore all these
16 things.

17
18 We just can't go down every avenue of just what Dave has
19 discovered during his research if it's an operational, and so I
20 don't know if it was discussed as to whether the red grouper
21 assessment could be a research track, and it's certainly
22 important, and you have your three topical working groups, and
23 it seems like the group could actually make even more, and so I
24 see this as a really good candidate for that, but I understand
25 if that's not the council's choice.

26
27 The other thing I was going to ask about is I guess the
28 calibration side of it, and so I didn't actually see it as both
29 the monitoring and modeling, and Sean is right that, if we go
30 down that path, we would have to discuss calibration and all of
31 the state data, which I didn't see as conflated with red tide,
32 and so those are just my comments. Thanks.

33
34 **CHAIRMAN NANCE:** You're very welcome. I was looking, and maybe
35 I'm wrong here, Katie, but I was looking more as a monitoring,
36 as opposed to modeling. Is there other -- Go ahead, Trevor.

37
38 **DR. MONCRIEF:** I mean, I think you would have to do a little
39 bit of both, right? You would have to take into account the
40 surveys, the monitoring, the effects, and then, within the
41 framework of the operational assessment, what your constraints
42 are, and come up with some reasonable analyses to move forward,
43 whether it be just sensitivities on age-specific mortality or
44 increased natural mortality or something else like that, and so
45 that was my thought.

46
47 **CHAIRMAN NANCE:** I guess, with that, Ryan, do we -- On the
48 topical groups, we just have red tide there, and is that too

1 open?

2

3 **MR. RINDONE:** For the purposes of a topical working group,
4 probably. When the Science Center is looking at this
5 information, they're trying to determine workload and time and
6 the data that are going to need to be gathered and who needs to
7 be asked what, and specificity is certainly their friend, and
8 so, if there's a specific aspect of red tide that you guys, or
9 a couple of aspects of red tide that you guys, really want to
10 zero-in on, it would certainly help the process to list those.

11

12 **CHAIRMAN NANCE:** I think, to help the Center, instead of just
13 having red tide, we need to be more specific on what the topic
14 is that we're interested in. Sean.

15

16 **DR. POWERS:** I think the lower-hanging fruit is two. One is
17 how do you model the mortality events, and, secondly, what type
18 of index of red tide, an environmental covariate, you can put
19 in the model, and I think those, to me, are the two immediate
20 ones.

21

22 There's larger questions on ecosystem and food web and all those
23 other things, but the most proximate for stock assessment is
24 how do you deal with the mortality, and that's the question of
25 age specific as well as general mortality, and then what kind
26 of index can we put in, and I know some work has been done on
27 both of those, and so a lot of it is just synthesizing what's
28 been done and trying to figure out what's the next step, and I
29 think those are the two topics most relevant for a stock
30 assessment.

31

32 **MR. RINDONE:** For that first bullet under topical working
33 groups, after red tide, we're going to put "age-specific
34 episodic mortality and red tide index development". Dr. Powers,
35 what do you think? All right.

36

37 **CHAIRMAN NANCE:** Do we need to have another motion to approve
38 that change? I would think.

39

40 **MR. RINDONE:** Yes, you guys could make a --

41

42 **CHAIRMAN NANCE:** Anyway --

43

44 **MR. RINDONE:** I mean, we follow Roberts Rules here, and so,
45 technically, you would have to have a motion to reconsider the
46 previous motion and then make a new motion, but it doesn't seem
47 as if there would be a lot of mutinous mumblings about --

48

1 **CHAIRMAN NANCE:** I hope not.

2
3 **MR. RINDONE:** So at your pleasure, Mr. Chair.

4
5 **CHAIRMAN NANCE:** Is there any opposition to approve the edits
6 that have been made in the red grouper operational assessment
7 scope of work? Hearing none.

8
9 **MR. RINDONE:** All right. I've got it, and I will send this to
10 SEDAR, so that they can share it with the Science Center and we
11 can get to work on plotting out a schedule for this thing.

12
13 **CHAIRMAN NANCE:** Thank you very much. I guess our next item is
14 --

15
16 **MR. RINDONE:** Topical working groups for SEDAR 75.

17
18 **CHAIRMAN NANCE:** So it's Topic X. Ryan, would you bring that
19 one up, please?

20
21 **DETERMINATION OF TOPICAL WORKING GROUPS FOR SEDAR 75: GULF OF**
22 **MEXICO GRAY SNAPPER OPERATIONAL ASSESSMENT**

23
24 **MR. RINDONE:** Sure. If we can go to the scope of work, then I
25 will tell you what's going on with this, or, generally speaking,
26 I can just tell you anyway. SEDAR 75 is going to assess the
27 Gulf of Mexico gray snapper, and it follows the SEDAR 51 stock
28 assessment.

29
30 There is going to be two topical working groups at this time,
31 one for life history and one for recreational catch and effort,
32 specifically looking at the effect of the shore mode on
33 recreational catch and effort for gray snapper. The shore mode
34 constitutes a significant portion of the landings, especially
35 in Florida, and so, right now, these are the people that I have
36 listed for participating in SEDAR 75: Jim Tolan, Doug Gregory,
37 Steven Scyphers, and Jim Nance. There are also some other
38 members that are part of our larger SEDAR pool that are members
39 of FWRI and then other fishermen.

40
41 At this time, given the diverse makeup of the SSC participants
42 and the other participants, it is my advice that all of you be
43 appointed to both topical working groups. It seems as if you
44 would all have something to contribute under both, and so,
45 unless there is some objection to that, that's the path forward.
46 Does anyone think that a poor idea? Brilliant. I like it.
47 Make sure that ends up in the transcription, that it's a
48 brilliant idea. All right. We can move on from that one, Mr.

1 Chair. That one was easy.

2

3 **CHAIRMAN NANCE:** Okay. The last one is scope of work for the
4 vermilion snapper operational assessment, and it's Topic Number
5 XII.

6

7 **SCOPE OF WORK FOR VERMILION SNAPPER OPERATIONAL ASSESSMENT**

8

9 **MR. RINDONE:** For this one, just like with red grouper, we're
10 going to review the scope of work, and this assessment is going
11 to take place in 2024, using data through 2023, and, just like
12 the last one, you guys just take a look and see what we have
13 listed in here for what to do for vermilion and see what kind
14 of changes that you want to make.

15

16 We don't have as many things listed in here for vermilion,
17 mostly because there hasn't been much change in the data
18 available for the species, and the SEDAR 67 assessment used the
19 MRIP-FES data, but we haven't implemented catch limits yet,
20 based off the recommendations from the SSC, from I think it was
21 June of 2020, and so we've been a little backed up in amendment
22 development, and there's lots of things going on.

23

24 The catch advice that would result from this assessment though
25 wouldn't be expected to be incorporated until sometime in
26 probably 2025, and so there's still plenty of time to implement
27 those new catch recommendations from the SSC following SEDAR
28 67.

29

30 What we have listed in here is to document any changes in the
31 MRIP data, pre and post-calibration, in terms of the magnitude
32 of changes to catch and effort, and compare that to SEDAR 67,
33 and then to update the life history information, if warranted,
34 and then that's really it.

35

36 The updated status determination criteria, as listed in
37 Amendment 44, are included in Scope of Work Item Number III
38 there. Then do the report. An in-person workshop or topical
39 working groups are not currently recommended for vermilion.
40 Does anyone have any edits to this?

41

42 **CHAIRMAN NANCE:** Dr. Griffith.

43

44 **DR. GRIFFITH:** I don't have an edit, but I was just wondering
45 what is your knowledge of the vermilion snapper stock? I know,
46 when I was doing that study of the IFQ program, they were saying
47 that vermilion was the one that a lot of people were going to
48 shift to if they were cut out of -- If they didn't get catch

1 shares, or didn't get enough catch shares, and so I was just
2 curious what's gone on in the past few years with the stock,
3 that you know of.

4
5 **MR. RINDONE:** Thank you. SEDAR 67 reported the stock as healthy,
6 and I think one the comments was these things grow like weeds,
7 and so the stock does appear to be pretty healthy, and it's not
8 a stock that we hear about from fishermen as being one that they
9 think is imperiled, and we know, from other species, that
10 they've not been shy to let us know when they think something
11 is on a downturn.

12
13 We don't have any data to suggest, at this time, that there is
14 a dramatic amount of effort shifting or anything like that going
15 on, or anything like that, or anything biological occurring with
16 the stock that would somehow impede its ability to support
17 removals through fishery activity, and so that's what I have.

18
19 **CHAIRMAN NANCE:** Any other comments? Rich.

20
21 **DR. WOODWARD:** I am just curious, and I don't know whether this
22 belongs in the SEDAR process or not, but we just had this long
23 discussion about adjusting the harvest control rule based on
24 index-based adjustments, and the reference was that they had
25 done this for vermilion snapper, and is that something that
26 would be normally included in a SEDAR-type of document, or is
27 that always ex-post in an SSC discussion?

28
29 **MR. RINDONE:** I will kind of punt to the Science Center on this
30 one, if they think that the Huynh study is something that should
31 be considered within the scope of the vermilion snapper
32 operational assessment. Katie, are you around?

33
34 **DR. SIEGFRIED:** Yes, I'm here. Sorry. My audio was not working
35 for Rich's comment, but I heard you, Ryan. Is the question why
36 wouldn't we just do an interim instead of an operational?

37
38 **MR. RINDONE:** Rich, do you want to restate your question for
39 Katie, please?

40
41 **DR. WOODWARD:** My question was, I mean, we had this discussion
42 about index-based adjustments in the harvest control rule, and
43 is that something that would typically be -- Is that the type
44 of analysis that would typically be done within the context of
45 a SEDAR document, or is that something that is outside the scope
46 entirely of those type of analyses?

47
48 **DR. SIEGFRIED:** The interim assessments have been requested from

1 the council, and they are not SEDAR processes. They are not
2 run by SEDAR, and so the interim-based approach is separate.
3 That would have to be requested instead of, or I guess in lieu
4 of, or after the operational assessment, in order to maintain
5 management advice in between SEDAR-run assessments. We didn't
6 decide -- The Science Center didn't decide whether this was an
7 interim or an operational.

8
9 **DR. WOODWARD:** So let me rephrase my question. Is analysis of
10 an index-based harvest control rule outside the scope of this
11 scope of work?

12
13 **DR. SIEGFRIED:** That is separate, yes.

14
15 **DR. WOODWARD:** That's all I wanted to know. Thank you.

16
17 **CHAIRMAN NANCE:** Harry.

18
19 **MR. BLANCHET:** This kind of goes to Luiz's point about the last,
20 or one of the prior terms of reference, but is this another one
21 where we want to be comparing state-level data versus the MRIP
22 recreational harvest data? That's a question.

23
24 **MR. RINDONE:** Luiz, is vermilion included in SERFS? I didn't
25 think that it was.

26
27 **DR. BARBIERI:** No, that's not included, Ryan. You're correct.

28
29 **MR. RINDONE:** So the other recreational catch and effort
30 datasets would be TPWD and LA Creel, and I think that's it for
31 vermilion, and so TPWD being the only one available for Texas,
32 because MRIP hasn't operated there, and then LA Creel being the
33 only index available for Louisiana from 2014 on, but, beyond
34 that, it would be MRIP for Mississippi, Alabama, and Louisiana.

35
36 **MR. BLANCHET:** So, basically, it is what it is. Okay.

37
38 **MR. RINDONE:** It is what it is.

39
40 **CHAIRMAN NANCE:** Yes. Julie.

41
42 **DR. NEER:** I just wanted to quickly follow-up on Rich's question
43 with regard to operational versus interim, and so the SEDAR
44 manages research tracks and operationals, and those are the full
45 assessment processes, and, out of those assessment processes,
46 we get status updates, stock status determinations, out of those
47 processes. Well, just from operationals, but we get stock
48 status processes, and we update all of the information from the

1 last assessment. If the last terminal year was 2017, we'll
2 update it through 2022 or whatever is feasible for when the
3 assessment gets done.

4
5 The interim analyses that happen in between are simply -- You
6 don't produce a stock status update, and you don't update all
7 of the data. You only update that one index, or that one piece
8 of information that was determined to be the thing we're using
9 to track the stocks between doing full assessments, and so it's
10 not necessarily outside the scope of looking at that, but it's
11 a very different process.

12
13 With regard to this operational assessment for vermilion, we
14 would update all the data from the last assessment and look at
15 -- So that we have up-to-date data, and come up with potentially
16 a new stock status, and give you all the management parameters,
17 whereas you don't get all of that out of an interim, and you
18 just get a how to adjust your ABCs, up or down, essentially,
19 and so I just wanted to try and clarify that, because I really
20 didn't talk about interims in my presentation, because, as Katie
21 said, and she's correct, those are negotiated between the
22 Science Center and the cooperators directly, and SEDAR is not
23 really a part of those. Thanks.

24
25 **CHAIRMAN NANCE:** Thank you. Any edits to this TOR? Does someone
26 want to move to accept these?

27
28 **DR. MONCRIEF:** I will make the motion to accept.

29
30 **CHAIRMAN NANCE:** Okay. Do we have a second?

31
32 **DR. POWERS:** Second.

33
34 **CHAIRMAN NANCE:** Any opposition? Okay. So moved. That ends
35 for today.

36
37 **MR. RINDONE:** Good job, everybody. You survived your first day.

38
39 **CHAIRMAN NANCE:** Tomorrow, we start at 7:30.

40
41 **MR. RINDONE:** Tomorrow, we start at 8:30, Eastern Time.

42
43 **CHAIRMAN NANCE:** I was doing Galveston time.

44
45 **MR. RINDONE:** 8:30 a.m. Eastern Time tomorrow, everybody. Thank
46 you.

47
48 **CHAIRMAN NANCE:** Thanks to everyone that participated.

1
2 (Whereupon, the meeting recessed on August 9, 2021.)
3

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5
6 August 10, 2021

7
8 TUESDAY MORNING SESSION
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11

12 The Meeting of the Gulf of Mexico Fishery Management Council
13 Standing and Special Reef Fish, Special Socioeconomic & Special
14 Ecosystem Scientific and Statistical Committees reconvened on
15 Tuesday morning, August 10, 2021, and was called to order by
16 Chairman Jim Nance.
17

18 **CHAIRMAN NANCE:** Welcome, everybody, to the SSC on the second
19 day. We're going to start with Item XIII, Determination of
20 Approach to Assess the Gulf of Mexico Tilefish Complex.
21

22 **DETERMINATION OF APPROACH TO ASSESS GULF OF MEXICO TILEFISH**
23 **COMPLEX**
24

25 **MR. RINDONE:** Thank you, Mr. Chair. This is more of like an
26 open discussion and trying to get information from you guys on
27 what you think about this, and so the council has been talking
28 with the SEDAR Steering Committee about another assessment for
29 Gulf of Mexico tilefish.
30

31 The last assessment proved pretty difficult, because we had
32 landings data, but not a terrible amount more than that, as far
33 as information on the different species. In the Gulf,
34 originally, we had five species of tilefish for which the Gulf
35 was responsible, and it was golden, blueline, goldface,
36 blackline, and anchor tilefish.
37

38 In 2010, when the IFQ program began for the tilefish complex,
39 all five species were included, and then, in 2012, anchor and
40 blackline tilefish were removed from that share category, the
41 landings being almost zero most of the time, and so the golden
42 tilefish is the species that was kind of used as like an
43 indicator for the rest of the tilefish complex in SEDAR 22, but
44 SEDAR 22 did include those three species, and so golden,
45 blueline, and goldface.
46

47 Landings of all of those, of those three species, are somewhat
48 consistent for the commercial sector and pretty intermittent

1 for the recreational sector in years past, but, as you approach
2 the current year, there are ever increasing numbers of -- Or
3 ever increasing landings by the recreational sector of tilefish,
4 as you see more recreational fishermen operating larger boats
5 that can go out further and, within one fishing day, operating
6 larger transducers, under higher power, and they're able to
7 better map the bottom and better find these fish.

8
9 Deep-dropping by recreational fishermen has gotten a lot more
10 popular, especially with improvements in electric reel
11 technology and just general availability of more data to try to
12 find these fish.

13
14 When the South Atlantic did its assessment for SEDAR 50 for
15 blueline tilefish, there was a lot of debate about connectivity
16 between the Gulf and the Atlantic with respect to blueline
17 populations on the West Florida Shelf. There's not a terrible
18 amount of information on blueline on the West Florida Shelf, or
19 anywhere else in the Gulf for that matter, but it stood to
20 reason that, given current patterns in the Gulf, going through
21 the Straits of Florida, that there was probably some gene flow
22 going from the Gulf to the Atlantic to at least support
23 homogeneity, from a genetic standpoint, between the stocks.

24
25 Tilefish are not a migratory species though, and so there's no
26 presumption that blueline tilefish are going from the Gulf to
27 the Atlantic, and so the Straits of Florida would still serve
28 as a population bottleneck, like a geographic barrier, between
29 the stocks, as far as that is concerned.

30
31 Basically, what we're looking for from you guys is just some
32 open discussion about, based on the findings from the SEDAR 22
33 stock assessment report that are up on the website and our
34 contemporary understanding of tilefish, for which there hasn't
35 been much work done on tilefish species in the Gulf since then,
36 and a couple of things, but not much, would the -- What approach
37 should the council consider when trying to figure out how it
38 should move forward with assessing these stocks? Is it
39 something that we should take a swing at individually, or should
40 we consider them a complex, bearing in mind the data environment
41 and how we typically have been trying to look at these things,
42 and so I will open the floor.

43
44 **DR. CRABTREE:** Ryan, when we did the previous assessment, that
45 was golden tile, and is that correct, SEDAR 67?

46
47 **MR. RINDONE:** It was 22, actually, was the last time any of the
48 tilefish were assessed.

1
2 **DR. CRABTREE:** Was that golden?
3

4 **MR. RINDONE:** It was golden, but it was considered for all
5 three.
6

7 **DR. CRABTREE:** When I have looked at this fishery in the past,
8 the recreational landings are probably increasing, and I think
9 that's probably real, but, boy, when you look at the catch
10 estimates, they really suffer from low numbers of intercepts,
11 and I can recall a number of occasions where one intercept would
12 drive the estimate essentially through the roof. Then, in the
13 previous assessment, were they able to come to a status
14 determination, or was it inclusive, or what happened?
15

16 **MR. RINDONE:** It was inconclusive, as far as whether the stock
17 was overfished or not, and then overfishing, since it's just
18 been measured based on the average landings in our Tier 3, and
19 so --
20

21 **DR. CRABTREE:** I know, for years, we've done golden tilefish
22 assessments in the South Atlantic, and bluefin as well,
23 although there have been a lot of issues, more issues, really
24 with that one, and the Mid has done assessments on golden
25 tilefish, and I think those have all come to conclusions.
26 Whether you believe them or not is a different story, but they
27 have come to status determination conclusions, and I wonder if
28 anyone has looked and compared the two. I would think we have
29 more data in the Gulf, but I don't really know if that's true,
30 and I think we have higher landings in the Gulf than in the
31 South Atlantic, but I'm not even sure of that.
32

33 **MR. RINDONE:** I can try and look that up, real quick, just like
34 a landings comparison.
35

36 **DR. CRABTREE:** Well, it would seem, to me, to be kind of a
37 starting point, is to see what the other -- Look at golden and
38 what have they done in the other regions and what has worked
39 and what hasn't.
40

41 **MR. RINDONE:** Well, they have more data on tilefish species in
42 the Atlantic than we do in the Gulf, and so we might have
43 comparable landings, but the SEDAR 50 assessment focused
44 exclusively on bluefin, but, again, based on the -- There was
45 a lot of debate in the data workshop for bluefin about the
46 connectivity between the Gulf and the Atlantic, and those in
47 favor of saying that the West Florida Shelf was connected to
48 the Atlantic, as far as justification for a single-stock

1 hypothesis, it was based mostly on there being habitat that
2 seemed reasonable to be occupied by blueline tilefish from west
3 Florida through the Keys and up the east coast of Florida, and
4 it seemed reasonable, based on the current patterns, that larvae
5 could be making the trek.

6
7 **DR. CRABTREE:** Well, I'm sure they are, and I remember that
8 debate very well, and the council, the South Atlantic more, was
9 pretty adamant that they wanted the assessment break at the
10 line, and no one felt that the fact that some larvae may come
11 around -- That's true of everything, and it's going to be true
12 of any snapper and grouper species, and so that didn't seem like
13 a compelling reason for why we would jumble these together, and
14 I know, over there, it's been a longstanding issue with the Mid-
15 Atlantic about how to divvy up management of things like
16 blueline tile.

17
18 We've done separate golden tile assessments for the South
19 Atlantic and the Mid, even though there is even less of an
20 apparent boundary between the two, and so that's just some
21 background.

22
23 **MR. RINDONE:** As it stands right now -- Based on the generic
24 annual catch limits and accountability measures amendment that
25 was implemented in 2012, there's a 582,000-pound gutted weight
26 allocation to the commercial sector for the entirety of the
27 tilefish IFQ program, and that constitutes 99.7 percent of what
28 the total allocation would be, and so only 0.3 percent to the
29 recreational sector.

30
31 Typically, the entirety of the tilefish IFQ program isn't
32 landed, and so -- Recreational landings being historically
33 pretty low, it's not been something that the Southeast Regional
34 Office has been flagging to us as there being an outstanding
35 issue or anything like that with tilefish landings, where we
36 need to be paying closer attention to it, but, again, this is
37 for all species combined, and so they're not reported to us by
38 individual species.

39
40 **CHAIRMAN NANCE:** David Griffith.

41
42 **DR. GRIFFITH:** The last assessment was done in 2011, and is that
43 right?

44
45 **MR. RINDONE:** Using data through 2009, yes.

46
47 **DR. GRIFFITH:** Okay. Since then, is that when the recreational
48 sector has seen tilefish as a much more popular species?

1
2 **MR. RINDONE:** Yes, and it's growing in popularity because the
3 technology has improved, and more fishermen have larger boats
4 that are able to go out to those depths and try to fish for
5 those species within the course of a day.

6
7 Depending on where you are in the Gulf, the frequency of that
8 activity has increased at a faster rate, and so, like up in the
9 northern Gulf, where you don't have to go offshore quite as far to
10 get into deeper water, that practice has picked up, and there's
11 some charter captains up there that have been telling us about
12 that, but, off of like Florida and Texas, the upper West Florida
13 Shelf and the Texas shelf, you could have to go quite a ways
14 offshore in order to get there, but, if you're in a thirty-six-
15 foot Contender, with triple 350s on the back of it, you can get
16 out there and back in the course of a day.

17
18 **DR. GRIFFITH:** How about the commercial sector? Has the
19 popularity of the species gone up with dealers and the market
20 and stuff, because I recall, when I was doing some work in
21 Charleston, there was some interest in golden tilefish by local
22 chefs and stuff like that, and so it was kind of starting a
23 market there for them, and so I was wondering if the same thing
24 is going on with the commercial sector. When I was doing the
25 work on the IFQ program, tilefish was kind of an incidental
26 species, and it wasn't that big of a deal.

27
28 **MR. RINDONE:** For the commercial fleets, they have always landed
29 them in the longline fleets, and so, in some areas, they focus
30 more on other grouper species, like historically in the eastern
31 Gulf, before they were pushed out offshore a little bit further,
32 but, in the central and western Gulf as well, when they're
33 fishing for things like scamp and deepwater grouper species,
34 and they do get tilefish.

35
36 Insofar as I am aware, and I don't know if Matt is listening
37 in, or Assane is listening in, and they might have more
38 information on this, but the market has been relatively steady,
39 and so, Mr. Chair, you have Luiz and Paul and Carrie.

40
41 **CHAIRMAN NANCE:** Thank you. Luiz.

42
43 **DR. BARBIERI:** Thank you, Mr. Chairman. I just wanted to add a
44 little bit more background to what Roy presented and talked
45 about earlier. For golden tilefish over there, in the South
46 Atlantic, it has been a programmatic assessment, and Roy is
47 right that they have been able to conduct an age-structured
48 assessment and obtain stock status determination, but the

1 uncertainties associated primarily with the recreational
2 estimates, landings estimates, has been really problematic.

3
4 In perhaps not the last one, but the two previous assessments,
5 they have major uncertainties that couldn't really be well
6 explained, and it was just something that we could tell, and it
7 wasn't easy to get to and have very high -- Blueline tilefish
8 was an even worse situation. They started over there by trying
9 to conduct an age-structured model, using BAM, and that didn't
10 really go anywhere.

11
12 Then they tried to do a biomass dynamic model, through BAM as
13 well, but not an age-structured, and that didn't go much
14 further, and then my recollection is that, for the last time,
15 they actually had to use a data-limited approach, because they
16 couldn't get anything better completed for blueline tilefish,
17 and so I like this approach, Ryan, and I think it's an important
18 discussion, but this is something that I think we're going to
19 have to discuss, in terms of broader issues that have to do with
20 the high uncertainties in some of these landings estimates,
21 primarily for the recreational sector associated with the
22 tilefish species and then evaluate if there is some other way
23 for us to approach recreational fisheries data collection for
24 these stocks that would be more reliable than what we have in
25 place right now through MRIP, given the fact that these stocks,
26 for the recreational sector, is still very much considered rare-
27 event species. Thank you.

28
29 **CHAIRMAN NANCE:** Thank you, Luiz. Carrie.

30
31 **EXECUTIVE DIRECTOR SIMMONS:** Thank you, Mr. Chair. I was just
32 going to point out that, I think in the five-year review of the
33 IFQ program, it says that, typically, golden tilefish, or
34 tilefish, account for 80 percent or more of the tilefish complex
35 landings, and we can circulate this report, if it's not up on
36 our website yet.

37
38 **CHAIRMAN NANCE:** What was the percent?

39
40 **EXECUTIVE DIRECTOR SIMMONS:** 80 percent. However, in recent
41 years, there has been a shift towards more blueline tilefish
42 being caught, and we're not sure what may be driving this shift,
43 but it's something that we should perhaps investigate, and this
44 was an exchange between Andy and Jessica Stephen and some of
45 our staff.

46
47 We can circulate that report, and it says it's Figure 1 on page
48 32, but I don't -- I mean, would it be worthwhile to consider

1 perhaps that data-poor process that we used, and I think that
2 ended up that we got some management advice, and maybe not
3 status determination criteria, but we got some management advice
4 for lane snapper. If not, then I guess we'll just try something
5 else, but that's just some ideas to start looking at this again.
6 Thanks.

7
8 **CHAIRMAN NANCE:** Plus, I was curious -- There's a whole bunch
9 of recommendations in SEDAR 22, and it would be interesting to
10 see those recommendations and then anything that has happened
11 in order to meet those recommendation needs. I don't know if
12 there's anywhere where that's listed.

13
14 **EXECUTIVE DIRECTOR SIMMONS:** I don't know. Ryan, we would have
15 to look at that. I'm not sure we've made any progress. Do you
16 know?

17
18 **MR. RINDONE:** I would venture to guess there has not been any
19 progress specific to -- I am going to look it up right now, but
20 I would venture to guess there has not been any specific progress
21 to tilefish, but there have been substantial improvements in
22 best practices and model development and just the general way
23 that Stock Synthesis can operate and handle different types of
24 data from where we were back in 2009, 2010, and 2011, when this
25 assessment was done.

26
27 The Science Center can certainly speak better to the things that
28 are available, as far as the NMFS Data Limited Toolkit and the
29 models contained therein, and perhaps some insight on the data
30 that they know to be available, versus what is necessary to run
31 the species or the complex through Stock Synthesis.

32
33 **CHAIRMAN NANCE:** Thank you. Paul.

34
35 **DR. MICKLE:** Just two things, real quick. First, I would wager
36 that the recreational landings are probably very underestimated,
37 and I mean private landings, because these are large boats, like
38 Ryan said, and, to approach Luiz Barbieri's concerns about the
39 recreational landings, those large boats leave from private
40 properties, which never encounter, ever. There is a zero
41 percent chance they will ever encounter MRIP intercepts.

42
43 In talking to folks that do this from their private homes, it's
44 just too hard to launch those large boats at public ramps and
45 annoy everyone around you, and they don't have to, and so they
46 launch from their houses, or they have the boat houses they
47 launch from, and they're back by one o'clock, at least in the
48 central Gulf, and so it's not as far as people think, at least

1 with the technology they possess.

2
3 Also, they have actually -- A few of them in eastern Louisiana
4 and western Mississippi, I've gotten a few calls to identify
5 them, because they are very into tilefish, and they even have
6 some of the Gulf of Mexico dichotomy books to identify them,
7 and I have been called, called over to their houses, and there
8 is maybe some hybridization, and there is some very strange
9 looking tilefish coming up that don't quite look like golden or
10 anything else.

11
12 There is a paper that came out, and this is the last thing that
13 I want to share, and T.S. Kang put it out in 2019 talking about
14 some new PCR methods for identifying and differentiating
15 tilefish species, and there is a lot going on. It's a very
16 stable environment with deepwater fish, and so a hybridization
17 is very probable, and it seems like keeping this as a complex
18 would be a wise thing.

19
20 I mean, I am giving anecdotal information just to share with
21 the group, but, yes, they are targeting tilefish, because
22 they're just so sought after. Just, in my experience, in talking
23 to folks in the past ten years, they have shown up on menus all
24 along the east coast and west coast. They are highly prized,
25 and, once they end up on menus, folks want to go out and get
26 them themselves, because the price is so high from the
27 commercial side. If you own a big boat, you want to use it a
28 lot, and when everything else is closed -- You can go for them
29 year-round, which is a very attractive endeavor. That's it.

30
31 **DR. GRIFFITH:** Do you know the time period? Is it over the past
32 ten years or so that this has happened, since this assessment
33 came out?

34
35 **DR. MICKLE:** I don't know if I can answer that. I've just been
36 getting calls and talking to folks lately, but it's centralized
37 Gulf, and I'm just imagining Alabama and Louisiana is the same
38 as what we have here in Mississippi, but I've got a few calls
39 here and there, and they're mostly identification and just
40 sharing that they're doing very well, and it's a real steady
41 fishery for them, and it's not as far as people say when you
42 can do about seventy-five miles an hour.

43
44 **SSC MEMBER:** It might be interesting to look through some of
45 the magazines and internet forums that these people use to
46 communicate with each other and see if there are more references
47 to tilefish coming up in those sources. I don't have any
48 experience looking at those things, but it could be interesting

1 to explore.

2

3 **CHAIRMAN NANCE:** Ryan.

4

5 **MR. RINDONE:** From both personal experience and talking to
6 fishermen, there is a growing desire by recreational fishermen
7 to go and catch tilefish, because there is a considerable amount
8 of effort that is put into catching one, but, if you're deep-
9 dropping, and you catch two forty to sixty-pound tilefish,
10 everybody is happy, and so everybody gets to take home nice cuts
11 of fish, and it makes terrific table fare, which is part of the
12 reason why it commands the price that it does at seafood
13 restaurants and at fish houses, and so it's --

14

15 From the fishermen in the northern Gulf that we've talked to,
16 the guys that are operating charter businesses out of popular
17 marinas will say that there's a lot more talk about fishing for
18 deepwater grouper and tilefish species now than there was say
19 ten years ago.

20

21 **SSC MEMBER:** Is there a challenge to finding them and catching
22 them that might make them more interesting to anglers?

23

24 **MR. RINDONE:** There is a challenge, and so you have to have the
25 technology to be able to sound the bottom in a way to understand,
26 and so, if you're running an off-the-shelf \$500 or \$600 depth-
27 sounding equipment, you may not have the power to really be able
28 to sound the bottom in a meaningful way, except for large
29 features, but, if you're on a large center console, or a sport
30 fisher, and you have a transducer that's running over a thousand
31 watts through it, to be able to sound the bottom in much higher
32 resolution, you can see those shifts in ledges, and you can see
33 differences in the bottom topography that a smaller vessel with
34 less-powerful equipment might not be able to see.

35

36 That is where some of the charter vessels have an advantage for
37 being able to put people on these fish, because it's a business,
38 and so the investment is just considered a critical part of the
39 business, but more private recreational fishermen are starting
40 to run this equipment, and they're getting better at finding
41 these fish, and it's a challenge, because, when you drop that
42 deep line down there, you have no idea what you're going to
43 catch, and so maybe you get a yellowedge, or maybe you get snowy
44 grouper, or maybe you get a tilefish or a blackbelly rosefish,
45 or who knows what.

46

47 It's kind of like a lottery, or like playing a slot machine.
48 When you pull the handle down, you have no idea what you're

1 going to get, and maybe you get something cool, and it's always
2 exciting.

3
4 **SSC MEMBER:** It could be kind of an angler's version of the
5 birders checklist of species they've never caught before, and
6 that's interesting.

7
8 **CHAIRMAN NANCE:** Okay. let's go ahead. Shannon.

9
10 **DR. SHANNON CALAY:** Thank you very much, and congratulations to
11 you, Jim.

12
13 **CHAIRMAN NANCE:** Thank you.

14
15 **DR. CALAY:** From the Science Center's perspective, Ryan is quite
16 correct when he said that the -- We have evolved quite a bit
17 with our data-limited and data-moderate methodologies since the
18 time of SEDAR 22, and, in fact, in the U.S. Caribbean, we have
19 successfully created both OFLs and ABCs with a data-moderate
20 implementation of Stock Synthesis, which only uses catch
21 information and length composition data, but there are other
22 configurations that could be considered, and, essentially, what
23 is needed to do a data-limited approach, or a data-moderate
24 approach, is a reliable time series of catch, an index of
25 abundance, or length composition data.

26
27 What I think I would recommend, rather than promising, for
28 example, to do a research track assessment of this stock, would
29 be to allow the Science Center to do a data triage, to make sure
30 that this is a plausible species to assess, and, if it is, we
31 can let you know what methodologies are feasible.

32
33 **CHAIRMAN NANCE:** Okay. It sounds like, from just the talk we've
34 had right here, it sounds like it's a sought after -- It's
35 getting more popular, and so it would probably be good to do
36 something with it, but we, obviously, need the data in order to
37 do that. Roy.

38
39 **DR. CRABTREE:** Shannon, is there enough in the NMFS longline
40 survey to get any kind of index of abundance?

41
42 **DR. CALAY:** Well, that is exactly what we would want to look
43 into. My recollection of SEDAR 22 is that there were indices
44 that were attempted, and I think the assessment just didn't
45 quite meet the standard for using it for management purposes.

46
47 We do also have a commercial IFQ fishery, and it is possible
48 that this one might be able to be turned into an index of

1 abundance, but we do need the time to look into that and to see
2 if the stock is plausible. What, frankly, the Science Center
3 doesn't want to do is commit to entire an entire research
4 tracking process and then find out, after all the data that are
5 provided, that it's not really a candidate for assessment.

6
7 I would encourage you to basically request a data triage, but
8 you do need to understand that it does take some time to do that
9 data triage correctly, and so it may not be something we can
10 turn around quickly, but I think we could turn it around in a
11 reasonable timeframe.

12
13 **CHAIRMAN NANCE:** Thank you very much. Will.

14
15 **DR. PATTERSON:** Thanks, Jim. A couple of things. The earlier
16 discussion about whether the fishery actually is, at least on
17 the recreational side, targeting these deepwater reef fishes
18 more heavily, I think the anecdotal information is pretty clear
19 there, but, again, I think it's going to be tough to come up
20 with an objective way to try to quantify that, but it's
21 definitely -- As Ryan was pointing out with the electronics,
22 and the evolution of transducers in particular, the ability to
23 find soft bottom to target at least golden tilefish has
24 increased.

25
26 Charter captains, which typically have more advanced sonars than
27 just the chirps that you can get on most center consoles, the
28 challenge is not just the bathymetry, but also the reflectance
29 of the sediment, and, to the second point here about blue line
30 as a percentage of the catch, I think it would be worth looking,
31 at whatever level of detail that the data exist, at what the
32 spatial distribution of recent recreational golden versus
33 blue line tilefish landings have been, because the habitats where
34 they live are different.

35
36 Golden bury into clay and mud sediment, and blue lines prefer a
37 little harder bottom, and so the distribution of where they
38 exist on the upper slope in the northern Gulf is a little bit
39 different, and, spatially, I think you might find some
40 differences in where they're being targeted.

41
42 For example, if the long-range deep-drop fishery in the West
43 Florida Shelf has increased more so than other places, then you
44 might see a shift in the distribution, and so I don't think we
45 can just look at landings trends, but we need to look at this
46 spatially as well.

47
48 Then, as far as the data-limited assessment approaches, we

1 published a paper last year using the NMFS Panama City otolith
2 archive for warsaw, in which we used the Taylor et al. 2004
3 Bayesian model to estimate growth rates, but also to estimate
4 mortality, and Rob Ahrens was a part of that, and he's now at
5 the Pacific Islands Fisheries Science Center.

6
7 I think, given the amount of otolith data that exists in Panama
8 City, for golden in particular, this might be an approach that
9 would be useful. You have to make some assumptions about
10 selectivity, but you can actually do sensitivities where you
11 change the shape of the selectivity function in the model, and
12 we're doing some work, and Beverly Barnett is involved with
13 this, and some other folks, looking at age validation for some
14 of these deepwater fishes, and the three that Ryan just
15 mentioned of yellowedge, golden tilefish, and blackbelly
16 rosefish are all part of that.

17
18 We do have some knowledge of what's in the archive, and I think
19 it's substantial enough that you could potentially explore the
20 SS length-based approaches that Shannon just mentioned while,
21 at the same time, trying to utilize the otolith archives and
22 the age composition data in a little different way than we would
23 typically use, but might be useful for some of these deepwater
24 data-limited stocks.

25
26 **CHAIRMAN NANCE:** Thank you, Will. Doug Gregory.

27
28 **MR. GREGORY:** Good morning. Thank you. I just wanted to
29 reinforce what Ryan and Shannon were saying, and I think
30 Shannon's suggestion of a triage is ideal. I was the chair of
31 the review workshop for tilefish and the grouper, and what I
32 remember from that is the tilefish assessment ran into problems,
33 because SS was a new method for us, and my impression was the
34 lead analyst chopped up the data too much.

35
36 There were too many fleets, and there were too many depth zones,
37 or regions, and there just wasn't the data to support that many
38 different categories, because I clearly remember telling him
39 and suggesting that he doesn't do that next time, because his
40 next assessment was red snapper.

41
42 I think another look at it would be ideal, without going headlong
43 into an assessment routine, and I think the Science Center is
44 the ideal people to take a look at this and give us some advice
45 on whether we should go with the data-limited approach or use
46 SS again. Thank you very much.

47
48 **CHAIRMAN NANCE:** Thank you, Doug. I agree. Trevor.

1
2 **DR. MONCRIEF:** I think everybody's points so far have been well
3 made, and I am also in favor of a data triage, just to be able
4 to see what's there and what's available. One point I was going
5 to make, on the fisheries side of things, is, I mean, yes, these
6 guys are going out and targeting golden tilefish, and that
7 fishery has really expanded over the last few years, as we've
8 already discussed, but the guys who are doing it are going out
9 there for a lot of different species, and it's not really just
10 a specific tilefish fishery, but it's they can go out there and
11 catch let's just say five to ten species pretty easily that
12 really don't have seasons, and things that come in the boat can
13 go straight to the box.

14
15 That's one of the reasons they do it, with constrained seasons
16 on the closer-in species and everything else like that, and
17 that's really what has driven this fishery to be so popular,
18 along with the advances in technology.

19
20 The other thing that I was going to point out, and I think Luiz
21 is about to be up, and he'll probably be able to speak to it a
22 little bit better, because he was an instrumental part of it,
23 but the NAS report that came out on management of species with
24 ACLs and everything has a specific list in there about
25 identifying an angler universe, an offshore angler universe
26 within the Gulf of Mexico, and leveraging that, using that, as
27 a vehicle to identify the magnitude of this fleet that fishes
28 the deep-drop fishery.

29
30 That will probably be something that we can look forward to as
31 we continue to look into that report and everything else, and I
32 think that's a good way for us to be able to get an idea of how
33 big the fleet actually is.

34
35 **CHAIRMAN NANCE:** Thank you very much. Julie.

36
37 **DR. NEER:** Thank you. Good morning. Shannon touched on some
38 of what I wanted to bring up, just as a kind of little procedural
39 thing. Currently, tilefish, or a tilefish complex, assessment,
40 either way, is slated for 2024, as an operational assessment.
41 It sounds, from all the discussions here and the discussion the
42 Science Center has put forward, again, that this might not be
43 appropriate for an operational, because it sounds like we might
44 need to change models and try new methods of assessing this
45 species.

46
47 I too support the Science Center's suggestion to request a
48 triage of the data, and then we can more accurately figure out

1 what type of assessment this should be in the SEDAR process. I
2 don't think it would fall under an operational, which is what
3 it is currently slated for, but, again, we don't want to invest
4 a bunch of time in putting it in as a research track if the data
5 is just not there, and so that's just a little hint on what we
6 thought we were going to do with it might need to change with
7 regard to the type of assessment that is requested for this
8 species this next time. Thank you.

9
10 **CHAIRMAN NANCE:** Thank you. Ryan, to that point?

11
12 **MR. RINDONE:** Thank you, Mr. Chair. Julie, we have an assessment
13 on the books that, granted, ultimately wasn't used for
14 management advice, but, through that assessment, we identified
15 some of the data that were available, and there's been some
16 discussion here about some other data and approaches that might
17 be considered.

18
19 Given that -- I kind of wonder and does this have to actually
20 go in as a research track, if we're considering taking a step
21 back, as opposed to trying to do something more with these three
22 species, and so, if we could use the time that would otherwise
23 be blocked off for an operational assessment and to allow the
24 Center to do its triage and to make some recommendations, I
25 mean, even that would be a step somewhere. Right now, we're
26 just kind of standing here without any real clear path forward
27 for this complex.

28
29 I know it doesn't really fall within the prescribed pegs for
30 the research track and operational, but it just doesn't seem
31 appropriate to leverage the machine to the research track degree
32 in this case.

33
34 **DR. NEER:** Mr. Chair, may I respond to that?

35
36 **CHAIRMAN NANCE:** Yes, you may.

37
38 **DR. NEER:** Okay. Ryan, I wasn't saying that -- While I agree
39 that, yes, there was an assessment, it doesn't really matter if
40 it was used for management or not, so much as that there was an
41 assessment. One of the underlying tenets is that, if you are
42 changing the methodology that you're using, basically coming up
43 with a new approach, new modeling, it should go through a
44 benchmark/research track.

45
46 Now, research tracks do not have to take two years. They can
47 be designed to do whatever needs to be done. If you want to
48 use the time that was put in, penciled in, for an operational

1 assessment and have the Science Center spend that time on
2 triaging, that's perfectly acceptable with SEDAR, and we would
3 just take it off the SEDAR schedule, and then the Science Center
4 and the council can discuss how you would like to reallocate
5 that time, but I'm just saying that I don't think we can -- That
6 data triage doesn't have to come through the SEDAR process.

7
8 In fact, I think it shouldn't come through the SEDAR process.
9 I think the data triage is something the Science Center will do
10 on its own and report back to you guys with regard to what they
11 think can be accomplished moving forward, because I agree that
12 we do need to do something for these species, for sure, because
13 it's been a while, and it is increasing in popularity, and we
14 need to see what's going on with them.

15
16 I was just trying to lay out that I don't think you could do an
17 operational assessment, since it sounds like we're trying to
18 change the modeling approach, how things are done, but note that
19 a research track does not have to take forever. Research tracks
20 can be -- They are developed and set up with a schedule and a
21 process for whatever we need them to be for the species or the
22 group of things.

23
24 Actually, I wanted to point out, after your discussion yesterday
25 with regard to red tide, one of the things that was initially
26 put forward with research tracks is that you could use a research
27 track slot to develop say how to handle red tide for four species
28 in the Gulf of Mexico, and that could be something you could
29 do, and research tracks do not have to be always single-species
30 assessments.

31
32 They were initially designed to be pretty flexible with regard
33 to what we need to do and how to design them in such a way that
34 they can accomplish what we need, and they don't have to be a
35 one-size-fits-all. A research track for tilefish would probably
36 not look anything like the research track that we're doing for
37 red snapper right now, as an example, and so I hope that
38 clarifies what I was trying to say. Thanks.

39
40 **MR. RINDONE:** Thanks, Julie, and I guess, just looking at Dr.
41 Simmons in the back here, and knowing that Dr. Frazer is
42 listening, maybe, on the margins there, let's go ahead and
43 pencil that in for a discussion item for the next SEDAR Steering
44 Committee meeting, for the Gulf Council to have a little bit
45 more discussion about that approach for looking at tilefish.

46
47 **DR. NEER:** Certainly.
48

1 **CHAIRMAN NANCE:** Thank you. I am more leaning towards having a
2 data triage first, and I think that would give us a lot better
3 look at where we want to go with the assessment. I think that
4 really is a necessary first step, but I will wait for these
5 other three individuals, and then we can talk about that. Luiz.

6
7 **DR. BARBIERI:** Thank you, Mr. Chairman. Trevor has already
8 brought up the issue that I was going to mention. Thank you,
9 Trevor, for bringing that up, and so the NAS report has just
10 been released, and you probably saw the announcement that came
11 out, and we are in the process of scheduling briefings with all
12 the different councils and interested commissions.

13
14 There will be an opportunity, in the not-too-distant future,
15 sometime this fall, to come and present this to the Gulf Council,
16 and perhaps even the SSC as well, and, in that report, and, by
17 the way, Sean Powers and Steven Scyphers are also members of
18 that committee, and so they can probably help me discuss some
19 of these issues, when that presentation is given.

20
21 In that report, there are some options that are brought up that
22 specifically focus on addressing some of these rare-event
23 species, like the deepwater groupers and the tilefishes, and so
24 it's not an easy issue to handle, and this is not a discussion
25 that is going to resolve everything immediately, but I think,
26 there, it will give us some options to discuss going forward on
27 how to address these, and not for the immediate future, but
28 perhaps in developing better data streams that can support
29 assessments and management in the future, and so stay tuned.
30 It's going to happen sometime this fall, and I will be talking
31 to council staff and coordinating for those presentations.
32 Thank you.

33
34 **CHAIRMAN NANCE:** Thank you very much. Harry.

35
36 **MR. BLANCHET:** This is going back a little bit, but one of the
37 things that we're talking about here is that, essentially,
38 eleven or twelve years ago, we had an assessment that did not
39 come out particularly well, and we had a set of recommendations
40 of how it could be improved, and we don't seem to be very far
41 along, in terms of data collection processes, that might help
42 improve the outcome.

43
44 While I appreciate the ability of the Southeast Fisheries
45 Science Center to do the best that they can with the data that's
46 available, I really think that we need to be taking a look, and
47 tilefish is one example of this, but we do have a lot of other
48 species that are not well captured by a general survey for the

1 recreational fishery, for instance.

2

3 I am just using this as one example of how the council's
4 responsibilities and the existing data systems may not jibe,
5 because, yes, we have a small subset of recreational anglers
6 who do not match the profile of the typical recreational angler
7 that's going after these folks, and it's really a challenge, if
8 you're thinking in terms of the thing that has been most often
9 suggested of a panel-type approach, and how do you maintain a
10 panel whose job, essentially, is to -- It will certainly be
11 perceived that the job of that panel is to provide the data that
12 the Gulf Council and NOAA is going to use to constrain the
13 fisheries that those people are currently enjoying.

14

15 There is no stick, and this has -- It's a voluntary recreational
16 approach, and I don't know how you get something that can be a
17 long-term data collection platform for these rare-event species,
18 and we have tried a few things, on a volunteer basis, and it
19 does not seem to be very widely adopted.

20

21 I heard Jack Isaac's suggestion of internet surveys, and,
22 obviously, those have some uses, in terms of flagging new
23 species of interest, but I don't know if that has become less
24 of a new curiosity and more of a regular occurrence, and I don't
25 know how much -- Again, I have concern over the consistency of
26 a long-term dataset there, but I think it can -- I guess where
27 I'm going here is that a lot of what we are working with now is
28 surveys that were intended to collect long-term information for
29 the most abundant species.

30

31 Those species, we've got pretty good grips on, and we're now
32 looking at stuff where we really don't have good information,
33 but we know something is happening, and, if we're talking about
34 things like tilefish -- If I recall correctly, the size of the
35 stock estimated from the most recent assessments were not all
36 that big, and so, if we're talking about realistic harvest rates
37 from the recreational sector becoming significant, this could
38 be important in a hurry.

39

40 I am just encouraging that we need to really think in terms of
41 beyond tilefish, but, also, for other rare events, how do we
42 get a good long-term system of collection? I mean, things like
43 Florida has got a system for tarpon that I don't know a whole
44 lot about, but that's the kind of thing that I am talking about,
45 and that's not something you're going to get a good estimate
46 for in MRIP, and so I'm just throwing out more questions than
47 answers.

48

1 **CHAIRMAN NANCE:** Thank you, Harry. Those are very good things
2 to think about, for sure. Benny.

3
4 **DR. GALLAWAY:** Thank you, Mr. Chairman. I will try to be brief,
5 and I want to go on record as supporting the data triage, as
6 has been suggested, and I'm assuming that there is no problem
7 with financially supporting that with funds that have been
8 allocated for a different type of assessment, and so those funds
9 would be used to support the data triage effort, is my
10 suggestion, or concurrence with people who have suggested that.

11
12 I also believe that Harry has just opened a big box that needs
13 serious thought, and so I would recommend that, as we go forward,
14 we address those issues in a systematic way and not kind of
15 shove them off to the side of the table. Thank you.

16
17 **CHAIRMAN NANCE:** Thank you. The data collection is something
18 we really need to think about for some of those other species.
19 I would like to entertain a motion. John.

20
21 **MR. MARESKA:** I just sent an email to Jessica, and so she'll
22 put the motion on the board that I drafted.

23
24 **CHAIRMAN NANCE:** Thank you very much.

25
26 **MR. MARESKA:** It's a brief motion, and so I hope that all the
27 lengthy discussion that was very good and covered a lot of
28 important details -- Hopefully that will just be captured in
29 the minutes.

30
31 **The motion reads: The SSC recommends a data triage report be**
32 **generated for tilefish, being golden tilefish, as the indicator**
33 **species for the tilefishes complex as a guide to the selection**
34 **of the model environment for the next stock assessment. On that**
35 **note, we can add "golden tilefish", so that it's a little bit**
36 **clearer for people.**

37
38 **CHAIRMAN NANCE:** I am going to ask this, and this is going to
39 be just -- Do we want to have "by the Southeast Fisheries Science
40 Center"?

41
42 **MR. MARESKA:** Yes, I will take that amendment, but I would like
43 a second, too.

44
45 **CHAIRMAN NANCE:** Yes, absolutely.

46
47 **DR. CRABTREE:** Second.

1 **CHAIRMAN NANCE:** Okay. Roy is the second for this. Any
2 discussion? David.

3
4 **DR. GRIFFITH:** Just to clarify, I am not really sure what data
5 triage means, and is it like a pilot study or something like
6 that?

7
8 **CHAIRMAN NANCE:** In my mind, it's to look at all the data that's
9 available and see what's available and how many years we have
10 and those types of things, to be able to allow us to see what
11 we can do in an assessment.

12
13 **DR. CRABTREE:** I think the promising thing here is, as Shannon
14 pointed out, they have really made a lot of progress in data-
15 poor assessment techniques, because I was part of what was going
16 on in the Caribbean, and it's far more data-poor than we are.

17
18 The problem with tilefish recreationally is the CVs on the catch
19 estimates are -- I suspect they're 100 percent in many years,
20 and, while it's good to talk about long-range plans for tags
21 and permits and all these kinds of things, that's going to take
22 years and years, and so I think it's those new techniques that
23 offer the most promise here.

24
25 **CHAIRMAN NANCE:** Ryan.

26
27 **MR. RINDONE:** Thank you, Mr. Chair. First to the motion, and
28 then to Roy's comment about the CVs, because I have the PSEs
29 pulled up, and so I can tell you about that, but, for the motion,
30 Dr. Simmons had mentioned that 80 percent of the landings right
31 now for the tilefish IFQ program, on average, were attributable
32 to golden tilefish, but that landings for blueline tilefish were
33 increasing.

34
35 Just to make sure that, whatever approach that the Science
36 Center ends up recommending, it is considerate of the three
37 species that are currently managed by the council, and perhaps
38 you guys would consider having that data triage focus on those
39 three tilefish species, and it may come to pass that,
40 specifically to goldface as an example, there isn't any, and,
41 to blueline, there is barely enough to talk about, and there's
42 enough for golden, but we still have 20 percent of the landings
43 to account for, and so, when forces are combined, then we have
44 something more comprehensive to look at, and so perhaps list
45 those three species out, and just say a report be generated for
46 the tilefish complex and then, in parentheses, list those three
47 species, just to provide as explicit direction as possible.
48 That's not to say that the Science Center probably wouldn't do

1 that anyway, but just so everyone understands.

2
3 **MR. MARESKA:** I am fine with that change, if you want to, but,
4 I mean, I think that's kind of been incorporated in the initial
5 discussion that you led off, that those were the three species
6 that are being considered here.

7
8 **CHAIRMAN NANCE:** I think it would be good to put this in
9 parentheses, so that we have that. My only other concern is,
10 in looking at this, does this read that we're asking the
11 Southeast Fisheries Science Center to do this report? We've
12 stuck the Southeast Fisheries Science Center at the end, and it
13 says, "for the next stock assessment by the Southeast Fisheries
14 Science Center", and so it doesn't really, in my mind, read that
15 we would like them to accomplish doing this report.

16
17 **DR. CRABTREE:** I think, Jim, what this amounts to is we're
18 recommending that the council ask them to do it. Then that will
19 probably have to be somehow negotiated in the context of the
20 SEDAR workflow, I would guess, but it's for the council to
21 figure out.

22
23 **MR. RINDONE:** Typically, what happens is you guys request
24 something like this, and then we send a memo to the Science
25 Center asking them about doing this after having a phone call
26 with them to understand what is actually able to be accomplished
27 and when, so that we're not asking them for something that is
28 not able to be accomplished.

29
30 Then, after that phone call, we send a memo, and they plug it
31 into their workflow as they can, and, since we don't have this
32 slotted for an assessment until 2022, it gives a little bit of
33 time to try to figure out -- Sorry. 2024. It gives us a little
34 bit of time and then a little bit of time to try to figure out
35 when to start poking around about this.

36
37 The other thing that I forgot to mention to you guys was about
38 the PSEs for tilefishes, and so this is for all three tilefish
39 species combined, and this is from the MRIP query page, and so
40 the PSEs from 2012 to 2020 range from 35.2 in 2020 to 104 in
41 2017, and the landings, in terms of pounds, for A and B1, range
42 from about 700 pounds to 323,000 pounds for recreational
43 landings, and so 700 to 323,000 pounds is a big swing, and so
44 the recreational landings are not going to be very informative,
45 I don't think.

46
47 **CHAIRMAN NANCE:** We have one more comment here from Luke.

1 **DR. FAIRBANKS:** I was just curious if the data triage report
2 could or would consider alternate methods for collecting some
3 of the recreational data, or is it exclusively just existing
4 catch and other data?
5

6 **CHAIRMAN NANCE:** I think, in my mind, it would be seeing what
7 data is available and then maybe recommend other ways to collect
8 data, if it's not available. Thank you, Luke. Harry.
9

10 **MR. BLANCHET:** To Ryan's point of the recreational harvest, I
11 think, when we started this whole discussion off, the first
12 point that was made was that MRIP is not a good vehicle for
13 collecting this data, because the people who are going out,
14 especially on the private side, are such a small fraction of
15 the total population that it's never going to be measured by
16 the standard MRIP survey.
17

18 You are not going to see these guys at the dock, and so there's
19 going to be zero catch to multiply by that effort value, and,
20 when you do catch one, you're going to catch -- It's going to,
21 as Roy pointed out, blow up the estimate. This requires a
22 different kind of survey if you're going to get some reliable
23 estimate, and I don't know the scale of those estimates, because
24 the people that are involved with that fishery are a different
25 group of folks than what you're going to see at a public boat
26 launch, or even a public marina. I think that, if we start off
27 with looking at MRIP data, we may be deluding ourselves.
28

29 **CHAIRMAN NANCE:** Roy, to that point?
30

31 **DR. CRABTREE:** Well, I mean, I think this is a longstanding
32 concern with rare-event species in the MRIP survey, and it's
33 not unique to the Gulf, and I know we've had a lot of
34 discussions.
35

36 The MRIP folks are looking at different ways to stratify the
37 survey, to produce better estimates, or at least to bring down
38 the CVs on the estimates, things like producing estimates only
39 every two years, so that you have more intercepts and things,
40 and so that's going on. I don't know where that will take us.
41

42 Unfortunately, in the Gulf, even for things that are common,
43 like red snapper, because the council has chosen to
44 geographically parse the whole thing down to ever smaller
45 regions, then we get in the situation where no one is happy with
46 the estimates of catch even for common things anymore, and that
47 stresses the system, and we devote all kinds of resources and
48 funding to dealing with those issues, and this one, because

1 these are rare-event species, it's not going to get the
2 attention, and it's not going to get the priority, but there
3 are things going on in the MRIP program to try and look at
4 different ways to handle this, but I suspect that resolution of
5 those issues is going to come after this exercise is done.

6
7 **CHAIRMAN NANCE:** Thank you. After Will and David, I'm going to
8 cut off our discussion. Will.

9
10 **DR. PATTERSON:** Jim, has this motion been seconded?

11
12 **CHAIRMAN NANCE:** Yes, and it was seconded by Roy.

13
14 **DR. PATTERSON:** Okay. Great. **I support this motion, and I**
15 **suggest a slight edit here and just to strike the text after**
16 **"generated" and through "species"**. I think that captures this
17 idea that we're not going to look just a golden tilefish, but
18 all the tilefishes, if that's acceptable to John.

19
20 Secondly, I totally understand the point that Harry is raising,
21 and I don't think it precludes the data triage, however. MRIP
22 and the private recreational data are one thing, and the age
23 composition information that exists in Panama City are different
24 sorts of information altogether, and then, also, I think the
25 for-hire sector recreational fishery data may be quite
26 informative here for how targeting has changed, perhaps, over
27 time.

28
29 I fully understand that it's an important issue for rare-event
30 species, as has been discussed, but I don't think it should
31 preclude at least looking at what data do exist and what they
32 might tell us.

33
34 **CHAIRMAN NANCE:** Will, one question. Did you want to have the
35 Southeast Fisheries Science Center still, or do you want that
36 cut out, also?

37
38 **DR. PATTERSON:** It doesn't -- If folks think that needs to stay
39 in there, great, but I just think that we shouldn't say only
40 for golden tilefish and that it should be for the complex.

41
42 **CHAIRMAN NANCE:** Okay. John.

43
44 **MR. MARESKA:** I have no objection to that edit.

45
46 **CHAIRMAN NANCE:** David.

47
48 **DR. CHAGARIS:** I was just going to say something along the same

1 lines as Will. The triage will definitely eliminate any major
2 deficiencies, but it's still good to do it, because it will have
3 an eye towards the assessment modeling approaches that might or
4 might not work, and then, with this discussion of MRIP and
5 recreational data, I just wanted to remind folks that there is
6 the for-hire electronic reporting system that will be eventually
7 going into place, and so there could be some future -- Some data
8 in the future on this species that might work better than MRIP
9 for us. Thank you.

10
11 **CHAIRMAN NANCE:** Thank you. Doug, I will let you in.

12
13 **MR. GREGORY:** Well, it was to this point. This is a golden
14 tilefish discussion, and I -- This may be picayune, but the
15 complex is a complex, and I assume that the Center will look at
16 golden tilefish as the indicator species, which is what we have
17 used it for since the beginning. I would hate to change that
18 trajectory.

19
20 **CHAIRMAN NANCE:** I think, the way it reads now, it will allow
21 them to do that and other things, and so I think this is a
22 better way to -- In my opinion, it's a better way to have the
23 motion.

24
25 **MR. GREGORY:** Okay. Thank you.

26
27 **DR. CRABTREE:** I mean, this is a recommendation to the council,
28 and staff ultimately is going to draft a letter to the Center,
29 and they know what we're talking about and can get the content.

30
31 **CHAIRMAN NANCE:** Okay. Let me go ahead and read the motion.
32 **The SSC recommends a data triage report be generated by the**
33 **Southeast Fisheries Science Center for the tilefish complex as**
34 **a guide to the selection of the model environment for the next**
35 **stock assessment. Any opposition for this motion?** Thank you.
36 **It looks like it passed without any opposition.**

37
38 I appreciate all the comments on this, and I think we've made
39 some good recommendations and also pointed out some critical
40 data needs for these rare species. Ryan, let's go ahead and
41 move to our next item, which is Item XIV, Interim Analysis
42 Schedule.

43
44 **INTERIM ANALYSIS SCHEDULE**

45
46 **MR. RINDONE:** Thank you, Mr. Chair. Up in front of you guys,
47 you see our interim analysis schedule through 2024, and we have
48 quite a few of these listed, especially for 2023 and 2024, and

1 you will see some common themes here, and red grouper shows up
2 every year, just like we had talked about yesterday, and red
3 grouper is an annual request of the council.

4
5 For next year, we've also requested greater amberjack, because
6 of its status determination as being overfished and undergoing
7 overfishing, and then, also, king mackerel for 2022, because
8 the terminal year for that assessment was the 2017/2018 fishing
9 year, and so, by that point, we're pretty far removed on king
10 mackerel, and we haven't actually done an interim analysis for
11 it yet, and so the Science Center will be investigating that
12 and seeing if the SEAMAP larval survey will be useful in that
13 regard.

14
15 When you're looking at that second column there of the index
16 listed for each of these species, that refers to the index that
17 was listed the last time the Science Center gave a presentation
18 on likely candidate indices of abundance for each species and
19 which ones might be able to be looked at for doing an interim
20 analysis.

21
22 The terminal year there, in that second column from the right,
23 is based on when the council is trying to receive that
24 information, which is that right-most column, and that delivery
25 date column is based on current management actions and the
26 fishing year and things like that of when the council would be
27 best positioned to start conversations about using updated
28 management advice from you guys, and so there's a lot of moving
29 parts in this particular schedule.

30
31 It's important to remember, as Science Center folks mentioned
32 yesterday, that the interim analysis process is divorced from
33 the SEDAR process, and so this table and the conduction of
34 interim analyses is a negotiation that occurs exclusively
35 between the council and the Science Center. Any input that you
36 guys have here would certainly be helpful.

37
38 **CHAIRMAN NANCE:** Thank you, Ryan. I do have a question, though.
39 It seems like I see red grouper as January, but it seems like
40 we see red grouper -- Last year, we saw it several times during
41 the year, and how does that fit into this interim analysis,
42 because it seems like they do it more than once a year.

43
44 **MR. RINDONE:** There was the update to the mean weight estimation
45 methodology for the recreational landings, which is why we saw
46 some different versions of the interim analysis for this year,
47 but, now that that methodology has been mapped out, and that's
48 what they're using from this point forward, our expectation

1 would be that, in late December, we'll receive the red grouper
2 interim analysis for you guys to consider in January of the
3 following year, and that will allow that catch advice, if any
4 is generated from that, to go to the council and for the council
5 to act upon that and try and get a framework action or something
6 like that done and get management changed, perhaps even before
7 the end of that calendar year or by early the following year.

8
9 **CHAIRMAN NANCE:** Thank you very much. Doug Gregory.

10
11 **MR. GREGORY:** Thank you. Yesterday, we talked about including
12 the SEAMAP trawl survey for red grouper in 2020, and so that
13 could be added to this, and this is a handful, and these are
14 problematic species, for the most part, in my mind, with the
15 exception of lane snapper, and so I would suggest reconsidering
16 trying to do five in 2023 and maybe keep it to the big four.
17 Thank you.

18
19 **CHAIRMAN NANCE:** Ryan, to that point?

20
21 **MR. RINDONE:** I will let the Science Center speak for themselves,
22 but, for some of these, like for red grouper, the processes are
23 pretty well mapped out at this point, and it takes probably
24 about as long to generate the report as it does to actually do
25 the interim analysis, and so, as more of these are done, the
26 automation of that process will improve for each of these
27 species, but we'll certainly let them speak to the perceived
28 workload associated with this.

29
30 **CHAIRMAN NANCE:** Thank you. Benny Gallaway.

31
32 **DR. GALLAWAY:** Thank you, Mr. Chairman. The Great Red Snapper
33 Count report is critical to many of these red snapper
34 assessments, and my understanding is that it's still in draft
35 form. When will a final report be available so that the data
36 can be used directly, as a final report?

37
38 **MR. RINDONE:** Mr. Chair, I will take a swing at that. The final
39 report is in its final editing stages, currently, and so soon
40 is what we have been told.

41
42 **DR. GALLAWAY:** Excellent.

43
44 **CHAIRMAN NANCE:** Thank you. John.

45
46 **MR. MARESKA:** Ryan, I was curious, and the gray triggerfish
47 looks like it's going to be done annually starting in 2023, and
48 that's the combined video index, and is that something -- What's

1 the time delay on that? When we see the combined video index,
2 is that going to be through the previous year or two years
3 prior?
4

5 **MR. RINDONE:** I have it listed right now as for the previous
6 year, and, if you look at the delivery date, we have a start
7 date that is later in the following year, to allow for the
8 processing of that video data to be done.
9

10 We have had this up and circulated a few times now, and so, if
11 the terminal years need to be adjusted, we would certainly
12 appreciate any input on that from the Science Center, but, at
13 this point, we haven't received anything to say that we should
14 push that back another year, but I would certainly lean on them,
15 since they're the ones that have to process those data.
16

17 **CHAIRMAN NANCE:** Thank you. John.
18

19 **DR. FROESCHKE:** Thank you. My comment, or perhaps question, to
20 the Science Center is based off the discussion we had yesterday
21 with red grouper, and, in our communications with the Science
22 Center, we're often asked to be as specific as possible with
23 these requests, and so the most recent iteration used a
24 different methodology, and earlier, and so I'm assuming we might
25 want to be specific about which methodology, unless the one
26 they're using now is, quote, unquote, the default, and then I
27 don't know if the weight adjustment that was done for red grouper
28 -- If that would be a similar issue for any of these other
29 stocks, but it would be nice to know, on the frontend, if it
30 was or if it isn't. I guess I was looking for a Science Center
31 response, perhaps.
32

33 **MR. RINDONE:** I see that Mandy has her hand up and Julie and
34 Skyler.
35

36 **CHAIRMAN NANCE:** Go ahead, Mandy.
37

38 **DR. KARNAUSKAS:** I believe Shannon and Katie had to hop off,
39 and I can't speak to all these issues, and I don't know if Sky
40 is on to provide some input.
41

42 **DR. SAGARESE:** John, just to follow-up with what you -- In terms
43 of the workload, some of the interims take less time, and so it
44 seems like we're good to go with red grouper, and I believe that
45 red snapper and triggerfish as well, and so I wouldn't worry
46 too much about the workload for some of those.
47

48 I think, when the combined video survey is used, and Ryan already

1 spoke to the amount of time, it takes a bit longer to process
2 that index.

3
4 Lane snapper uses the headboat index, and so that also takes a
5 bit more analyst time to develop that index, but the one thing
6 that did notice, looking at this, is the gag assessment actually
7 does not use the combined video survey, and so we'll have to
8 redefine what index is going to be used for that interim.

9
10 We did test sensitivity runs with the combined video, but so,
11 going forward, in terms of the index, I don't think you have to
12 be so specific, because I think we have specified the
13 methodology, and so, whatever methodology was approved and has
14 been used in the past now for red grouper, for red snapper, for
15 gray triggerfish, those approaches will be used going forward,
16 and so I wouldn't worry about adding too much detail.

17
18 I mean, of course, you're more than welcome to add what you
19 want, and then what was -- The issue with the weights, and so,
20 right now, we've only looked at that issue of potentially having
21 to adjust the weights up for red grouper, and what I think Katie
22 would say, if she was on this call, is just that we will
23 certainly look into it and determine whether it's needed for
24 the other species, but it's hard to say, at this time, if it
25 will or if it won't.

26
27 If it will, I would assume that we'll kind of do a similar
28 presentation and report, kind of documenting why it was needed,
29 if it was needed, first of all, and what was done to adjust the
30 catch advice, but that's sort of a -- Of course, it's going to
31 be a species-by-species issue that we'll look at each time we
32 do our interims.

33
34 **CHAIRMAN NANCE:** John.

35
36 **DR. FROESCHKE:** Thank you for that. I guess my question is
37 based on the feedback that we have received to make these
38 requests as specific as possible, and, for example, with the
39 red grouper, we made the initial request for an interim
40 analysis, and we never sent a request to change methodologies
41 or anything, and I don't object to improving the science, but I
42 do --

43
44 It can be problematic, for example, if you have the method that
45 we're using now, and, whenever the next method comes along, if
46 there's a switch that we're not anticipating, sometimes it's
47 difficult to understand what to expect, and then it causes these
48 communication problems, and so I'm just trying to close some of

1 these communication gaps, so everyone is clear what we're to be
2 expecting.

3
4
5 **CHAIRMAN NANCE:** Thank you, John. Mandy, you're up next.

6
7 **DR. KARNAUSKAS:** I was just trying to chime in on behalf of the
8 Science Center.

9
10 **CHAIRMAN NANCE:** Thank you so very much. Paul, you're next,
11 and then Julie.

12
13 **DR. MICKLE:** Just two things. if you look up on the terminal
14 years here, and looking at I'm assuming the data processing
15 that's causing a little bit of a lag here, and so the combined
16 video looks like about a year, and then the SEAMAP larval looks
17 like about two years for data, and I'm assuming it's processing
18 and QA and QC and getting the data into the form where it's
19 usable as an input.

20
21 To the combined video, we actually have a grant right now that
22 we're looking at automating it through software-based platforms,
23 and it's going really, really well, and I just wonder -- I know
24 nothing about the SEAMAP larval, even where it's done, and I
25 guess it's done in Pascagoula, but that's just a guess.

26
27 **CHAIRMAN NANCE:** It's done in Poland.

28
29 **DR. MICKLE:** Poland. Okay. Well, I just wonder if it would be
30 worth discussions of looking at automated techniques for the
31 SEAMAP larval, because a two-year data lag for that data stream
32 seems a little excessive in this day and age for the needs of
33 such a data stream. Thank you.

34
35 **CHAIRMAN NANCE:** You're welcome. Julie.

36
37 **DR. NEER:** Thank you. Just real quick, Paul, the automation -
38 - The development of the index itself for the larval survey is
39 not the lag, and it's the fact that the samples are identified
40 and sent out of the country to Poland for identification, and
41 that's where that time lag comes for the larval survey, but
42 that's not actually where I was going to talk.

43
44 I wanted to talk briefly about the combined video, and it's
45 actually not produced within the Science Center, and it produced
46 by the folks down in Florida, and so I'm sure that Ryan has
47 already spoken to them, when we're talking about workload
48 issues, how often and how many they need to do on top of the

1 ongoing assessments that they're working on.

2
3 One other comment on the combined video, and it actually has
4 never been used in a gray triggerfish assessment, yet. It was
5 considered a useful way to go in SEDAR 62, but, since SEDAR 62
6 actually never came to fruition, we don't know if it would have
7 made the cut and been an actual useful index, and so I just
8 wanted to point out that, like with gag, it's not used at all,
9 and we don't know that it would actually have made it in the
10 gray triggerfish as an appropriate index, once the model was
11 done, because it was not used in 43, and they were independent
12 indices that were used in 43.

13
14 Again, it's not until 2023, and that's fine. We'll be doing a
15 research track on gray triggerfish beginning in 2023, and so,
16 obviously, we'll have guidance on that, but I just wanted to
17 kind of put that little note in people's heads, that the combined
18 video may not be the best one that comes to be used for gray
19 triggerfish moving forward. Thank you.

20
21 **CHAIRMAN NANCE:** Thank you, Julie. Harry.

22
23 **MR. BLANCHET:** Thank you. The question that I have got may be
24 simple. All of these interims seem to be listing a single
25 index, and my concern is that what I really see as a benefit
26 with these interim analyses is that it formalizes a method of
27 ensuring that you're actually working with the most recent data
28 for management, and I really appreciate that.

29
30 With the bottom longline, I see that as a good tool for measuring
31 changes in abundance of animals that are available to the
32 fishery, but, with the red snapper, we have a bunch of other
33 indices that could also be used that could give us information
34 on other aspects, and the one that comes to mind is the trawl
35 index for a recruitment index, which could tell us a lot of --
36 It could give us more of a heads-up of what's coming down the
37 pipe.

38
39 I recognize that the trawl index is not perfect, but it's still
40 looking at a piece that we currently are not looking at if we're
41 only looking at the bottom longline, and I know that NOAA has
42 mentioned the possibility of using multiple indices in some of
43 these interim analyses, and I just didn't know if that was
44 something that they were considering for some of these or if
45 this was the only one that we're going to use. Thank you.

46
47 **CHAIRMAN NANCE:** Ryan, to that point?

48

1 **MR. RINDONE:** Thank you, Mr. Chair. I mean, the interim analysis
2 process was designed to be a faster snapshot, using a
3 representative index of relative abundance, and, when we start
4 considering multiple indices, we start trending pretty quickly
5 towards stock assessment territory, and, where the information
6 that's being evaluated -- I mean, it may as well just be
7 evaluated as part of a larger stock assessment effort.

8
9 The addition of each extra index requires those data to be
10 worked up, and especially if we're considering two, or even
11 three, indices for an interim analysis, it just -- Each
12 additional index greatly increases the scope of work, because
13 not all of the data processing has been automated for all of
14 these yet, like it has for say the NMFS bottom longline index.

15
16 The Science Center can certainly add to this comment, but I
17 think that we just have to be cognizant, and perhaps a little
18 careful, about how much we're adding to these, lest they drift
19 quickly towards operational assessment status.

20
21 **CHAIRMAN NANCE:** I agree with that. Go ahead, Harry.

22
23 **MR. BLANCHET:** I get that. My concern is that -- As I prefaced
24 this with red snapper, we have a ton of indices, fishery-
25 dependent and independent, that get incorporated into that
26 assessment, but I think that, if we have something like an index
27 of recruitment that can be used for guidance, and that's what
28 this is, and this is not an assessment, then I think that it's
29 something that should be taken a look at, and so, at the very
30 least, what would it take to begin the automation process?

31
32 I mean, a trawl survey is not requiring identification of larval
33 fishes, and I will talk about that another time, or reviewing a
34 whole bunch of videos, and all of those are very time intensive.
35 A trawl survey, you've pretty much got the raw material when
36 you walk off the boat. It seems like that's something that we
37 could use fairly quickly, and so that's where I'm going.

38
39 **CHAIRMAN NANCE:** Thank you very much, Harry. Any other comments
40 for discussion? Will.

41
42 **DR. PATTERSON:** Harry raises an interesting point about the
43 timeliness of the data, but another issue here is the
44 selectivity and what that information is actually telling us,
45 and so, typically, we use the trawl surveys to inform about age-
46 zero abundance, or recruitment level is used to index the
47 spawning stock.

1 Combined video, the selectivity is for fish sort of in their
2 middle age ranges, and so I think it's important not just to
3 think about the timeliness of the data, but what the data are
4 actually telling us a function of the selectivity of that
5 particular gear or approach.

6
7 **CHAIRMAN NANCE:** Thank you. Point well taken, Will. Mike
8 Allen.

9
10 **DR. ALLEN:** Thank you, Mr. Chairman. I guess I have a question
11 about just how are these interim analyses used, because I had
12 the same question about why is a single index mentioned here,
13 when I'm sure, for many of these species, there is multiple
14 indices, and I realize this is not a full assessment, but how,
15 ultimately, is this used in this process, for my understanding?

16
17 **MR. RINDONE:** I will take that one, Mr. Chair. The interim
18 analyses can generally serve two main purposes. They can be
19 used to update catch advice for the SSC to make updated catch
20 recommendations to the council, and they can also be used as a
21 health check, and so let's say that we're in between
22 assessments, and we have a species that's rebuilding, and the
23 council has passed a framework action to change the catch
24 limits, and that hasn't been implemented yet, but they're just
25 generally trying to have a thumb on the rebuilding pace of the
26 stock, to see if management is working.

27
28 Looking at an interim analysis that looks at a representative
29 index of relative abundance can help better inform the
30 directionality of that rebuilding progress, and it can tell the
31 council whether they need to plan to take additional action to
32 make adjustments to fishing mortality, or if everything looks
33 like it's going as intended, and so updating catch advice and
34 health checks.

35
36 **DR. ALLEN:** Okay. That's helpful, Ryan, and so a single index
37 here is meant to be a check on the trajectory, relative to the
38 trajectory of the stock, relative to the last assessment?

39
40 **MR. RINDONE:** Right. We're just peeking under the hood and
41 seeing what things look like without tearing the engine apart.

42
43 **CHAIRMAN NANCE:** It allows us an annual look at some of those
44 species, so we don't have to do full-blown assessments every
45 year.

46
47 **DR. ALLEN:** Okay. That's helpful. Thank you.

48

1 **CHAIRMAN NANCE:** Okay. I think we'll go ahead and move on to
2 the next topic, and I appreciate all the comments and discussion
3 on this, and it was very important. Now we're going to go to
4 the SEDAR Stock Assessment Schedule.

5
6 **REVISED SEDAR STOCK ASSESSMENT SCHEDULE**
7

8 **MR. RINDONE:** All right. The big one. I will just walk down
9 the list here. For 2021, the gag operational assessment is
10 getting all wrapped up, and you guys are going to review that
11 at the September meeting, and so that will be a big thing on
12 the September SSC agenda, which, by the way, go ahead and pencil
13 into your calendars the last full week of September. I will be
14 sending out a doodle poll on that after this meeting.

15
16 The scamp research track is still underway, as is the red snapper
17 research track, and, later this year, we will see FWC get a
18 mutton snapper benchmark assessment off the ground. In 2022 -
19 - We'll have the completion of the scamp research track, at the
20 end of 2021, and then, in 2022, we'll have the operational
21 assessment of scamp, which will give us that management advice.

22
23 The red snapper research track will still be going on, and
24 perhaps being completed by the end of 2022, and then we'll also
25 have operational assessments for Spanish mackerel and gray
26 snapper, and the mutton snapper benchmark assessment will be
27 completed by FWC.

28
29 For 2023, we'll be finishing up the red snapper research track
30 and then doing the operational assessment, and then we also have
31 listed an operational assessment for yellowedge grouper, which
32 hasn't been updated since SEDAR 22, using data through 2009,
33 and so it will be good to wipe the dust off of that one, and
34 then FWC will be kicking off a benchmark assessment for west
35 Florida hogfish at the end of 2023, and that will wrap up in
36 2024.

37
38 In 2024, right now, we have, on the list, a research track
39 assessment for gray triggerfish, and you guys might recall the
40 last assessment of gray triggerfish was terminated early, due
41 to some data issues, and we'll also have an operational
42 assessment of red grouper and vermilion snapper.

43
44 You guys just finished up approving the scopes of work for both
45 of those yesterday, and then we talked today about that tilefish
46 complex and how we're going to best approach that, and so Dr.
47 Neer currently has that listed as an operational assessment,
48 but we'll have the Science Center -- Based you guys'

1 recommendation, we'll ask the Science Center to look at that
2 data triage and see what's actually feasible, and the SEDAR
3 Steering Committee will look at what best to plug in there for
4 Gulf tilefish species in 2024.

5
6 Then, proposed for 2025, we have the completion of the gray
7 triggerfish research track, which, in 2026, will be followed by
8 an operational assessment, which is where we get that management
9 advice, and we have an operational assessment of lane snapper
10 on the books, and also for cobia and greater amberjack.

11
12 Then, by that point, hopefully we've made some strides in some
13 of the species identification issues between gag and black
14 grouper and we can take another swing at a benchmark assessment
15 for black grouper, with FWC at the analytical helm for that.
16 Busy.

17
18 **CHAIRMAN NANCE:** Okay. Any comments or discussions? Trevor.

19
20 **DR. MONCRIEF:** Forgive me if I'm a little bit naïve to the
21 process overall, but this question kind of popped up into my
22 head. Yesterday, when we were going over the vermilion snapper
23 scope of work, given its history, and I think it was defined as
24 overfished in the early 2000s, but, after an inclusion of data,
25 it was marked as good. All the assessments after that, it's
26 been in good shape, and there is no indicators that show that
27 the stock is being prosecuted in a way that would be ultimately
28 damaging.

29
30 When it comes to these schedules, and when you have species like
31 that that are of relatively small concern, compared to others,
32 it seems like you could continue to do interim analyses until a
33 trigger gives you some warning to do an assessment or anything
34 else like that, which will allow for more resources to go to
35 these species that are in a little bit more of the limelight, I
36 guess, and a little bit more concerned state, but that was my
37 question, the timing of it and the use of interim analyses for
38 species that are of little concern.

39
40 **MR. RINDONE:** The reason why we still have these things pop up
41 on the assessment schedule like this is just because, when we're
42 looking at an interim analysis, we're typically only considering
43 a single index of abundance with fixed recruitment and no
44 further investigation into growth and no evolution of any
45 knowledge about reproduction or anything like that, and so we
46 try to assess everything that's been assessed and that can be
47 assessed with some frequency, albeit not consistent frequency,
48 because the council priorities can cause there to need to be

1 some adjustments and things like COVID that can come up and
2 cause substantial delays.

3
4 We try to assess everything with some intermittent frequency,
5 just so that we can update all of that stuff. We don't want to
6 be doing an interim analysis say for yellowedge grouper that
7 hasn't had any of its stock-recruit information updated since
8 2009, and none of the trends in recruitment have been updated
9 since then, and growth hasn't been looked at since then, and
10 we're a little behind in getting that one done. We've just had
11 a lot of other -- As you alluded, some more contemporary
12 priorities that have caused us to ask the Science Center to
13 focus specifically on certain species, but getting these things
14 looked at in a more complete approach, through an actual stock
15 assessment, is definitely a good look for the science, to make
16 sure we're not letting any of the data that we're using get too
17 dated.

18
19 **CHAIRMAN NANCE:** Sean.

20
21 **DR. POWERS:** I understand your comments, Ryan, but I just want
22 to echo Trevor's concern, because we're constantly told about
23 the challenges that assessment teams face, and clearly they do
24 with the analysts' time and things like that, but, you know, I
25 mean, some of these, and lane snapper is another example, and,
26 I mean, these are species that, yes, it would be great to have
27 up-to-date assessment models for them, but, given some of the
28 other challenges we hear, about schedule and things like that,
29 at some point we need to prioritize.

30
31 I'm not saying we need to do that now, but it's just I share
32 Trevor's concern that, given that we hear about scheduling
33 difficulties and then see some of these species that we're not
34 as concerned about right now.

35
36 **CHAIRMAN NANCE:** Ryan.

37
38 **MR. RINDONE:** If you guys want to recommend different intervals
39 for assessing some of these things, that's certainly your
40 prerogative to provide that advice to the council and to the
41 Steering Committee, but just looking at some of these, and so
42 like lane snapper was last assessed in I think 2019 or 2020,
43 using data the year prior, and so, by the time it gets to 2025,
44 the data are six years old or so, and that is a -- For that
45 particular species anyway, that's a species of growing interest,
46 especially on the West Florida Shelf. Landings are scratching
47 close to a million pounds, and so it has definitely grown into
48 something that it wasn't before.

1
2 For species like vermilion, like Trevor had mentioned, they grow
3 like weeds has been a common comment during the assessment
4 process the last two times that species has been assessed, and
5 it is -- Based on our current perceptions, it's healthy, and so
6 it's certainly one that we could push to a later date, if you
7 guys thought that appropriate, to try to get something else
8 looked at in its place.

9
10 I would just caution letting things get to the age of say the
11 yellowedge grouper assessment, where, at the time that we
12 actually get to assessing yellowedge grouper here, we'll be
13 including twelve new years of data, which is -- Well, it's a
14 lot, and so that's one of our oldest assessments at this point,
15 and it certainly has a good layer of dust caked on it, and we
16 should endeavor not to let things get that dated, regardless of
17 what their last stock status was, because, truly, how are we
18 supposed to know what the true condition of that stock is if we
19 don't really take a good look at it once every decade or longer?

20
21 By all means, recommend to the council and the Steering
22 Committee alternatives for how to pace these things out, if you
23 guys think it appropriate to do so, considerate of your own
24 knowledge and expertise and the previous stock assessment.

25
26 **CHAIRMAN NANCE:** That really is the challenge, is you want to
27 make sure that things are assessed at a pretty good rate, but
28 it seems like there is other things that get in there ahead of
29 them sometimes, and so you've got like yellowedge that hasn't
30 been assessed for many years, but, yet some of them are assessed
31 every other, and those types of things, and so, go ahead, Sean.

32
33 **DR. POWERS:** Ryan, to build on your point, and I don't see any
34 reason to change the schedule or not, but just trying to have
35 some discussion to inform the council, in their negotiations
36 with SEDAR, where some of our priorities might lie, because,
37 obviously, we want everything, I mean, as a simple answer, and
38 everything as quick as possible, and so I don't advocate,
39 necessarily, for any changes, but I just wanted to be on the
40 record, like with Trevor, to give the council some background,
41 if they do have to go into negotiations on the SEDAR schedule.

42
43 **CHAIRMAN NANCE:** Thank you. Trevor, to that point?

44
45 **DR. MONCRIEF:** Yes, and I agree with that as well. I don't
46 think this is the time to be able to redo the schedule or
47 anything else like that, but there is going to be more and more
48 species that become of concern, and that's going to be a constant

1 thing that we have to deal with, and I think, as long as we have
2 the idea of what the priorities are, when the council wants to
3 push a species, or, if there's something of concern, we have
4 the species in mind that could kind of be moved to a later date,
5 because there was concern.

6
7 **CHAIRMAN NANCE:** Do you have any on the list right now?
8

9 **DR. MONCRIEF:** I think vermilion snapper sticks out in my head,
10 for sure. I mean, I'm kind of with Sean, and I know lane snapper
11 is building, but, to me, that's a small one, and then, the gray
12 snapper, I know there's concerns with the shore landings and
13 everything else that came out of the last one, but that's another
14 one that has probably had a little bit of range expansion over
15 the last decade or so, and there seems to be landings inshore
16 and offshore, but --
17

18 **CHAIRMAN NANCE:** Gray snapper is for 2022, and so that's on
19 there, but vermilion -- It looks like vermilion is 2024. To
20 that point, Roy?
21

22 **DR. CRABTREE:** Yes, and I can tell you, having sat on the SEDAR
23 Steering Committee since it was created, what is a priority
24 depends on where you're from and who is yelling at you and who
25 is on the council, and so it's a tough one to balance.
26

27 The one thing I would say is I think a kind of philosophical
28 discussion about how to approach the problem and all of that is
29 fine for down the road, but one thing that I think we have
30 really tried to do is stabilize the assessment schedule and not
31 make changes, because we've had a habit, over the years, of
32 flip-flopping and changing things, and that really throws a big
33 monkey-wrench into the whole process when you do it.
34

35 This has all been agreed to and negotiated, but I think having
36 discussions down the road -- There has been a lot of time put
37 into that stock assessment scheduling prioritization process
38 and all of that, and so we could revisit some of that, if folks
39 wanted to.
40

41 **CHAIRMAN NANCE:** Ryan, to that point?
42

43 **MR. RINDONE:** Thank you, Mr. Chair, and Dr. Crabtree is
44 absolutely correct, and so everything that you see that has
45 "final" next to it, there's going to need to be a real ecological
46 emergency to make changes at that point, and so, really, what
47 we're talking about is 2024 and 2025, especially more 2025 than
48 2024, and we can still consider changes for 2024, but we would

1 prefer not to, if possible.

2

3 It's just because there are so many moving parts in trying to
4 get the data set up for these assessments, and there are teams
5 and teams of people that have to be mobilized and dedicate time
6 towards preparing everything for these assessments, and so, when
7 we do make changes, we do need to be very deliberate about it,
8 as far in advance as possible, and we have tried to inform all
9 that pay attention to the schedule, and especially the council,
10 that changes are simply not permitted two years out from the
11 current date, unless there is, as I said, some dire ecological
12 emergency for changing the schedule, and it's locked in at that
13 point. I see Dr. Neer has her hand up as well, Mr. Chair.

14

15 **CHAIRMAN NANCE:** Julie, thanks for waiting. Go ahead.

16

17 **DR. NEER:** No problem. Ryan just said what I would say, is that
18 we are looking approximately two years out for finalizing
19 schedules, and it's really critical that we do that. As I
20 mentioned yesterday, the stock assessment enterprise for the
21 Southeast, unfortunately, is not just one center per one
22 council.

23

24 The Science Center has a lot on its plate, unfortunately, and
25 so, yes, as Ryan mentioned, 2024, we could maybe make
26 adjustments to something that's listed in there, because those
27 won't be final, but the 2024 schedule will be final in May of
28 2022, and so, if you guys feel strongly about 2024, and certainly
29 2025, now is a great time to share your thoughts, and perhaps
30 even talk about what you would like to see in 2026, because we
31 will start talking about what do you guys think is useful in
32 2026.

33

34 Now, of course, the SSC is making recommendations, and the
35 council is the one who actually sits on the Steering Committee,
36 and they will make their requests for 2026, but we'll start
37 talking about 2026 in October of this year, and so, if you feel
38 strongly about species, now would be a great time to let the
39 council know your thoughts. Thank you.

40

41 **CHAIRMAN NANCE:** Thank you, Julie. Carrie.

42

43 **EXECUTIVE DIRECTOR SIMMONS:** Thank you, Mr. Chair. Julie said
44 most of what I wanted to say. I think it would be helpful -- I
45 heard take lane snapper off and take vermilion off, but we have
46 to think about what can fit in that slot as an operational
47 assessment, and we can't do four research track assessments,
48 and so I kind of think, with vermilion, we're a little bit too

1 far along, and you just looked at the scope of work, and we're
2 not at terms of reference yet, but do keep in mind there were
3 things from the last assessment that are in that scope of work
4 that could not be addressed, and would not be addressed, in an
5 interim assessment, and so we have to think about balancing all
6 of those things.

7
8 Remember there is an issue with the shrimp trawl bycatch and
9 all those types of things that I think they were going to
10 investigate, and, Ryan, is that right, or am I getting confused,
11 in the vermilion snapper assessment, and so there's things like
12 that that we have to try to balance when we're thinking about
13 the schedule as well, and so it would be helpful if you have
14 some suggestions, especially for 2025 and into 2026. Thanks.

15
16 **CHAIRMAN NANCE:** Trevor.

17
18 **DR. MONCRIEF:** To that point, I wasn't encouraging removing
19 those right off the bat, right now, looking at the schedule,
20 but what I did want to highlight is we were talking about the
21 red snapper stuff and discussing timing and the workload and
22 everything else, and I do think it's more a philosophical
23 discussion, like Roy said, but, maybe in the future, when we go
24 through these schedules and we start to get into a crunch, we
25 can kind of look at these species and decide this one is a
26 priority, and this one is not as much of a priority, and kind
27 of use that to be able to gauge the schedule a little bit better.

28
29 **CHAIRMAN NANCE:** I think the point is though that the crunch is
30 three years away, and so that's the thing that we need to
31 recommend, is 2022 and 2023 are locked, and so, if we see a
32 crunch coming, we need to have it in there for 2025 or 2026.
33 David.

34
35 **DR. CHAGARIS:** I don't have any objections to the schedule as
36 it is. I mean, I can see one making an argument to remove one
37 species and put more effort into another, but, in general, I
38 would be concerned about substituting some of these operational
39 assessments for interim analyses, because, for a lot of these
40 species, we don't really have representative indices of
41 abundance, and so those interim analyses have a lot of
42 uncertainty baked into them, and we could be making management
43 recommendations just based off of noise in those, whereas the
44 assessments are going to kind of synthesize more information
45 for us.

46
47 Also, as Ryan was speaking earlier, there could be situations
48 where you have fisheries that are growing, and an interim

1 assessments that's based on an index, an index of abundance that
2 probably wasn't even designed for that species, it might not
3 detect that. It wouldn't give us that information, and so I
4 would just think carefully before we rely too much on the interim
5 analyses as a replacement for some of these operational
6 assessments on the schedule. Thank you.

7
8 **CHAIRMAN NANCE:** Thank you. Ryan.

9
10 **MR. RINDONE:** Thank you, Mr. Chair. Mandy or Sky, or I guess
11 particularly Sky, are you still around?

12
13 **DR. SAGARESE:** I am here.

14
15 **MR. RINDONE:** I'm thinking about some of the webinars that we
16 had recently for gag, and that maybe it wouldn't be such a bad
17 look to try to plug gag in 2025, and thinking about the lane
18 snapper operational assessment -- I know that you helped out a
19 little bit with that one, the last time, and it was either you
20 or Adyan, and I thought it was you, but, if we were to try to
21 add in gag in 2025, and, again, recognizing that that's a
22 proposed part of the schedule, and it's not finalized yet, and
23 I just want to hear you mentally chew on that for a second, if
24 you don't mind.

25
26 **CHAIRMAN NANCE:** We have gag in 2021, and we're doing it right
27 now.

28
29 **MR. RINDONE:** We do, but landings of gag have been trending
30 down, and we've had a couple of red tides, and, without the
31 review having taken place yet, I'm not going to go diving into
32 it just yet, but suffice it to say that it probably would not
33 be to the council's detriment to look at gag again in the not
34 terribly distant future.

35
36 **CHAIRMAN NANCE:** Skyler.

37
38 **DR. SAGARESE:** Ryan, I think you're right about we had a lot of
39 topics that came up with the gag assessment, and, in addition
40 to what you've already spoken about, we also have the issue of
41 the red tide, and we know that Dave Chagaris has done a lot more
42 work, in terms of how to incorporate that, and so I do think
43 that putting the gag assessment back on the calendar would be a
44 pretty good idea, in place of that lane snapper.

45
46 You're right that Nancie Cummings had done the update for lane
47 snapper, maybe last year, but, in terms of priority, it seems
48 like the gag grouper assessment is currently ongoing, but it

1 seems like it would not be a bad idea, in the next few years,
2 to plan on doing that.

3
4 **CHAIRMAN NANCE:** Sean.

5
6 **DR. POWERS:** Ryan, in the interest of keeping up with my
7 statement that we want everything, the cobia is scheduled for
8 an operational assessment, and has there been discussion about
9 making that a research track, or was the feeling there's not
10 enough out there new about cobia yet to warrant a research
11 track?

12
13 **MR. RINDONE:** Cobia is one of those stocks where we don't
14 actually have a fishery-independent index of abundance that gets
15 used for that, and we use the headboat index, MRIP to inform
16 the private recreational landings, which have quite a bit of
17 uncertainty around them, and then the commercial landings, which
18 only make up a very small fraction, annually, of the total
19 harvest.

20
21 Cobia landings have been trending down, and the most recent
22 research is close to several years old at this point on cobia,
23 and, if you think about some of the stuff that was done out of
24 the University of Southern Mississippi, like Jim Franks and Read
25 Hendon and some of those folks up there, and so I don't know
26 what problems we would be endeavoring to solve that we would
27 actually have the data to solve in a research track for cobia.

28
29 There might be some methodological changes that we could pursue,
30 but the assessment is already in Stock Synthesis, and the
31 metapopulation dynamics of cobia have already been considered
32 the last two times, and it's really a matter of trying to better
33 understand, at this point, where the stock boundary is for cobia
34 on the east coast of Florida.

35
36 We perceive it to be somewhere around Volusia County, but,
37 without a real definitive stock boundary up there, right now,
38 we've drawn the line at the Florida-Georgia state line, and
39 that's based on our current understanding of the genetics, and
40 so, yes, I really don't know what data would be available to
41 try to better elucidate that, and I know that there were some
42 research proposals, one that was recently completed in the Gulf
43 using pop-up satellite tags to look at cobia movement, and there
44 were a couple of proposals, and I don't know if they got funded
45 or not, for the same for the Atlantic, to try to better
46 understand movement and interconnectivity between that
47 metapopulation of Gulf cobia that goes up the east coast of
48 Florida and then the southern metapopulation of cobia from the

1 Atlantic stock that pushes down on that Georgia-Florida border.

2

3 **DR. POWERS:** I guess that was my question, and you kind of
4 answered it, and it's probably not enough there new to warrant
5 a research track, and I know it's of increasing concern for
6 everybody, and that's the only reason that I brought it up.
7 What was the last one for the Gulf? It was an update, right,
8 of SEDAR 28 or something like that?

9

10 **MR. RINDONE:** Yes, and it also migrated the data to FES, and
11 the stock ID process for the last Atlantic cobia assessment,
12 which I have to dig on the SEDAR website, and Julie probably
13 knows what it is off the top of her head, but that effort was
14 what helped to better define where the actual stock boundary
15 was, and, given the data that were available for a species like
16 cobia, that they were able to use the genetic data especially
17 to narrow it down to where they did, to that northeastern corner
18 of Florida, in my personal opinion, that was pretty remarkable
19 in and of itself. Then using the Florida-Georgia line was more
20 for simplicity for anglers, to know where the regulations
21 applied to them and for enforcement.

22

23 **CHAIRMAN NANCE:** Thank you. Mandy.

24

25 **DR. KARNAUSKAS:** Since Sean brought up cobia, I wanted to mention
26 that I have heard increasing concern about cobia in the past
27 few years, and I'm curious if this is just a unique localized
28 thing or if others have heard these concerns. I would say it
29 probably started about two or three years ago, like at MREP
30 workshops, and I heard about lack of cobia in Texas, and then,
31 more recently, we've been speaking to red snapper fishermen in
32 Alabama and the Florida Panhandle, and there are really serious
33 concerns.

34

35 People are saying things like the fishery needs to be shut down
36 for five years, and we just don't see them anymore, and so I
37 just thought I would throw that out there, and I'm wondering if
38 people have heard similar things across the Gulf or if there is
39 maybe a localized depletion issue going on.

40

41 **CHAIRMAN NANCE:** Roy.

42

43 **DR. CRABTREE:** I have heard a lot about it, primarily from
44 Alabama and the Panhandle of Florida fishermen.

45

46 **CHAIRMAN NANCE:** Sean.

47

48 **DR. POWERS:** I would agree, and we've heard some concerns for

1 probably the last two years that they've gotten -- It's
2 anecdotal, but, every year, we do this big deep-sea fishing
3 rodeo, and, this year, it was remarkable how few cobia we had
4 weighed in, and, like you said, Mandy, I don't know if that's
5 localized depletion or if that's Gulf-wide. I guess that could
6 be answered in the operational assessment as well. As Ryan
7 pointed out, since we don't have a fishery-independent index,
8 it's going to tough, and that's kind of why I wanted to think
9 about was there any potential to do a research track and whether
10 we could identify some fishery-independent indices, but it
11 doesn't seem like they're out there for cobia.

12

13 **CHAIRMAN NANCE:** Thank you. Benny Gallaway.

14

15 **DR. GALLAWAY:** Thank you, Mr. Chair. I think my question may
16 be out of place, and maybe reserved for later, but my question
17 that I wanted dealt with is have you guys been able to put
18 together, for the West Florida Shelf, the degree to which the
19 complete life history for red snapper is completed, or is that
20 still open to question as to whether it's being produced in
21 place or largely influenced by immigration, and, if this
22 question is out of place, just defer it. Thank you.

23

24 **CHAIRMAN NANCE:** Any comment on that one? I'm not sure, Benny.
25 Ryan.

26

27 **MR. RINDONE:** Benny, I actually worked on a paper with Todd
28 Kellison out of the NMFS Beaufort Lab a few years back on
29 connectivity between the Gulf and the Atlantic for red snapper,
30 and a large component of that work was a literature review
31 looking at the available data, and so there's a lot that is
32 stacked up in there, as far as looking at the research that has
33 been -- Like the peer-reviewed research that has been conducted
34 throughout the Gulf and the Atlantic.

35

36 As far as better characterizing what I think you're asking, I
37 feel like there's a lot of fishermen-contributed data that the
38 council has collected over a number of years related to what
39 historical fishermen have seen in the past off the West Florida
40 Shelf, and what we're hearing from those same folks now is that
41 the abundance levels of red snapper have certainly increased a
42 great degree compared to where they were ten or twenty years
43 ago, but the size of the fish isn't -- On average, in the eastern
44 Gulf, it still isn't on par with what it is in the western Gulf.

45

46 I think though that, like for red snapper -- Obviously, we have
47 more data available for red snapper than any other species in
48 the Gulf, by an order of magnitude at least, and so maybe a more

1 specific literature review, to your point, would be necessary
2 to better capture an answer to that question.

3

4 **DR. GALLAWAY:** To that point, if I'm allowed, Jim.

5

6 **CHAIRMAN NANCE:** Absolutely, Benny.

7

8 **DR. GALLAWAY:** My thoughts were -- Where I was really headed
9 with that, or thinking about, is we have SEAMAP data now where
10 we can look at juvenile survival, and is it indicated to be
11 consistent with what we know from the western Gulf, and is there
12 a high juvenile mortality, or does it appear to be density-
13 dependent mortality? Is recruitment from the juvenile sector
14 into the age-two, if they move to larger reefs, does that appear
15 to be consistent with juvenile survival rates, or is it more
16 influenced by, like I say, transported immigration from other
17 regions?

18

19 We have SEAMAP data, and I haven't seen -- Maybe it's there and
20 I just missed it, but juvenile survival is an important
21 consideration as well as the size distribution, which I think
22 is a really key point that needs to be very seriously addressed,
23 and I was wondering if people looking at the existing data are
24 pursuing those questions. Thank you.

25

26 **CHAIRMAN NANCE:** Thank you.

27

28 **MR. RINDONE:** Mr. Chair, I think Will is probably one of the
29 most expert to answer that.

30

31 **CHAIRMAN NANCE:** Will, go ahead.

32

33 **DR. PATTERSON:** In the red snapper population estimation study
34 that's wrapping up in the Gulf, we had about 760 natural bottom
35 sites from Pensacola to the Tortugas, and most of the fish that
36 we saw were fairly small, young fish, less than 600 millimeters,
37 and there's a long tail of larger fish, but relatively few.

38

39 We didn't see a whole lot of fish that we couldn't scale with
40 lasers, or with our stereo camera system, and so, with the
41 stereo camera system, we're not limited by the distance between
42 the lasers, but we didn't see a whole lot of fish on the reefs
43 or low-relief natural bottom sites that we examined that were
44 less than 200 millimeters, for example, that could be zeroes,
45 or even a whole lot of fish between 200 and 300 that could be
46 one-year-olds, more of those than the little guys.

47

48 In the trawl survey, although the trawl survey is occurring on

1 the West Florida Shelf, and has been, I guess, for about six or
2 seven years now, the issue is that there isn't a lot of shell
3 rubble habitat, like you have in the western Gulf, or off of
4 Mississippi and Alabama, even into the Panhandle of Florida a
5 little bit, where you have settlement habitat for the zeroes
6 that is trawlable.

7
8 I don't know -- I haven't looked at it specifically, and I'm
9 not sure who has, about the trawl data from the expanded survey
10 east into Florida that has occurred in recent years, the SEAMAP
11 trawl surveys, and whether they are picking up the zeroes in
12 that system.

13
14 As far as the self-recruitment versus subsidies from other
15 areas, I think the person that's been working on that question,
16 more than anybody else in recent years, is Ernst Peebles at USF.
17 They have been using eye lenses to try to estimate whether reef
18 fishes are locally produced or coming from other areas, using
19 an isoscape approach with stable isotopes.

20
21 I don't know where that work stands now, but earlier work with
22 otolith chemistry was inconclusive, and then, obviously, there
23 is some tagging studies that showed movement from the north
24 central Gulf along the Florida Panhandle and down toward Tampa,
25 but fish that move those great distances were just on the tail-
26 end of distributions, and conventional tags always stay on fish
27 for a year or so before they drop off and you can't use that.

28
29 The work that Matt Catalano did in the red snapper estimation
30 project in the Gulf, where there were fish tagged in each of
31 the regions, we didn't tag fish on the West Florida Shelf, and
32 we tagged them in the Panhandle, and none of those fish have
33 shown up in catches, or been reported from catches, on the West
34 Florida Shelf.

35
36 Unfortunately, as far as your question about local self-
37 recruitment on the West Florida Shelf versus subsidies coming
38 from other areas, I think that question is still very much open.

39
40 **DR. GALLAWAY:** To that point, Jim, I found your West Florida
41 Shelf report very informative and intriguing. Good job, and I
42 think these issues are close to resolution, and we seem to be
43 right around the edges of being able to say something, but not
44 quite there yet, and so I was trying to figure out how to get
45 there now, and so, anyway, thanks.

46
47 **CHAIRMAN NANCE:** You're welcome. Thank you, Benny. Will, did
48 you have anything else?

1
2 **DR. PATTERSON:** No. Thanks.
3

4 **CHAIRMAN NANCE:** Katie.
5

6 **DR. SIEGFRIED:** Thank you, Mr. Chair. I just wanted to add
7 something back to the cobia discussion, if I may, and so Mandy
8 had mentioned what she had been hearing from red snapper
9 fishermen, and Sean kind of validated that, and we do think that
10 the cobia stock is in -- It should be a higher priority than
11 like say the vermilion stock, and what Trevor mentioned earlier
12 about looking at a stock that's in pretty good shape, and what
13 are other ways to evaluate that, and it seems like the cobia
14 should be a higher priority, in general, than the vermilion.
15

16 I don't think it's actually too late to switch those in the 2024
17 and 2025 calendar, from what Julie said, and others said, and
18 so, based on the trajectory of the cobia stock, it was between
19 SSB SPR 30 and the MSST, and it was 1.11 of MSST and undergoing
20 overfishing, and so it does seem like a higher-priority stock
21 than vermilion, but Carrie is right that there were things about
22 the vermilion snapper assessment that would be good to attack
23 in an operational.
24

25 **CHAIRMAN NANCE:** Okay. Any comment? Carrie.
26

27 **EXECUTIVE DIRECTOR SIMMONS:** Real quick, and thank you, Mr.
28 Chair. Regarding cobia, we agree that it is a higher priority.
29 The tradeoff, again, that we have to consider here is the council
30 is currently working on ending overfishing and making major
31 changes to management for both sectors for cobia, and that
32 probably is not going to be implemented until 2022, early 2022,
33 and so, if we want to try to capture some of that in the next
34 assessment, we also need to keep that in mind as well, where
35 that is on the schedule. Thanks.
36

37 **CHAIRMAN NANCE:** Thank you. Any other comments? Okay. I
38 appreciate the discussion on this topic. We will go ahead and
39 break and come back at 10:55 Eastern Time. Thank you.
40

41 (Whereupon, a brief recess was taken.)
42

43 **CHAIRMAN NANCE:** It looks like we're ready to start. I think
44 our next discussion is Item Number XII, and it's the National
45 Standard 1 Technical Guidelines Sub-Group 3 Tech Memo. I will
46 go ahead and turn it over to Ryan, I guess. Are you going to
47 be discussing this one?
48

1 **DISCUSSION: NS 1 TECHNICAL GUIDANCE SUB-GROUP 3 TECH MEMO**

2
3 **MR. RINDONE:** This is actually going to be led by Marian
4 McPherson, who is on the line, and she is from NOAA Fisheries,
5 and she's going to walk you guys through this presentation that
6 she has put together on the National Standard 1 technical
7 guidance for this technical memo that they've put together to
8 help inform the councils about alternatives for approaching
9 catch limits for data-limited species, and so, Marian, as soon
10 as you're ready to run with it, it's all you.

11
12 **MS. MARIAN MCPHERSON:** Hi, everybody. Thank you, Ryan. I'm
13 Marian McPherson, and I work in the Office of Sustainable
14 Fisheries, and I'm a member of this National Standard 1
15 Technical Working Group Sub-Group 3 that drafted this technical
16 memo.

17
18 Here with me today is Jason Cope and Katie Siegfried and Skyler
19 Sagarese, who also have worked on this guidance, and they are
20 really more of the technical experts, and so I'm coming at you
21 from the policy side, but I'm happy to be here, and I'm glad
22 that you've had us here to discuss this with you.

23
24 To start with a little bit of background, basically, the
25 Magnuson Act has had the requirement for ACLs since 2007, and
26 2009 is when NMFS established the guidance in the National
27 Standard 1 Guidelines of how to implement ACLs, and they have
28 been helpful management tools, in most cases, but, particularly
29 with some of our data-poor stocks, there have been challenges.

30
31 There has also been progress, and so it's been a while since
32 we've looked back at that rule. In 2016, NMFS issued revised
33 guidelines for the National Standard 1 Guidelines and convened
34 this technical working group to focus on implementing the
35 advice, providing some advice on how to implement the revisions,
36 and so this draft technical memo is very specifically focused
37 on one paragraph of those revisions to the National Standard
38 Guidelines, and so I have put the title here to highlight how
39 specific our focus was in working on this guidance.

40
41 There is a paragraph in the National Standard 1 Guidelines that
42 is written down there, and it's the 50 CFR 600.310(h)(2), and
43 we are going to call that (h)(2), that sets forth flexibilities
44 for data-limited stocks for when the standard approach to ACLs
45 that NMFS provided in its National Standard Guidelines, when
46 there might be room for recommending an alternative approach,
47 and so that is what this sub-group looked at, and that is what
48 this memo is about.

1
2 Just to give you a quick status update, NMFS discussed this
3 draft with the CCC in May of 2021, and we have invited comments
4 by October 1 of 2021, and we are happy to be here working through
5 what this advice means with some of the SSCs, and you are the
6 third folks who have invited us to talk with you, and so, again,
7 I'm happy to be here, and I hope that we can be helpful.

8
9 Just a note about our sub-group, and, as I said, I am one of
10 the few policy people on this sub-group, and it's mostly
11 composed of people from S&T, and we've got folks from each of
12 the Science Centers who have worked on putting this advice
13 together.

14
15 This is an overview. The draft tech memo is organized into
16 three main areas. The first provides some of the legal context
17 of the Magnuson Act and the NS 1 Guidelines, differentiating
18 between the requirements that come from the Magnuson Act itself
19 versus the requirements that NMFS set up through our
20 interpretations. For ACLs, the Guidelines sets up a standard
21 approach, which has to do with ACLs defined in terms of an
22 amount of fish, weights in numbers, but it also provides
23 flexibilities, and so we'll talk about that.

24
25 Then the next section of the tech memo talks about the science
26 side, what are the data-limited assessment methods that we have
27 and how have they evolved since 2009, and there are two
28 categories of assessment methods that we talk about. There are
29 those that support developing an ACL the standard way, pursuant
30 to the standard approach in the guidelines, and that's an amount
31 of fish, and, when those methods are used, the tech memo provides
32 recommendations and considerations for dealing with
33 uncertainties and using those methods.

34
35 The tech memo also talks about other methods that we now have
36 that have been developed that do support good scientific advice
37 and could possibly support compliance with the Magnuson Act,
38 but not in the manner described in the standard approach for
39 ACLs, and so we'll talk about those methods.

40
41 Then the paper gets into the management advice, how to apply
42 these (h)(2) flexibilities, the ability to recommend an
43 alternative approach to reference points, ACLs, for data-limited
44 stocks, and then we'll talk about which stocks qualify, and then
45 we will talk about one potential alternative to an ACL,
46 expressed as an amount of fish, and that would be looking at an
47 ACL expressed as a rate.

48

1 Then we do briefly treat stocks that are data-poor and might
2 qualify for an alternative, but they don't even have data to do
3 rate-based management, and so that's the overview.

4
5 First of all, I want to note that nothing in this tech memo
6 exempts us from the Magnuson Act requirements, and those
7 Magnuson Act requirements are that the FMP must establish a
8 mechanism to specify an annual catch limit, and that catch limit
9 must prevent overfishing, and there must be accountability
10 measures. Those are the requirements of the Magnuson Act. We've
11 got to comply with those.

12
13 Then the NMFS guidelines set forth the standard approach to
14 ACLs, which is still NMFS' interpretation of the best way to do
15 this, and that would be to express your ACL in terms of an
16 amount of fish, a weight or a number of fish, and so the
17 guidelines set forth that standard approach, and then the
18 guidelines also provide flexibilities.

19
20 Those are the (h)(2) flexibilities, which is for certain stocks,
21 and those include these data-poor stocks that we're going to
22 discuss, and the council may recommend an alternative approach,
23 but the alternative still must comply with those Magnuson Act
24 requirements that are bulletized up at the top, and they must
25 be included in the FMP, and we must document the rationale for
26 why it complies with the Magnuson Act requirements.

27
28 Just to emphasize how (h)(2) is going to be relevant to us, it
29 allows flexibility from the National Standard Guidelines
30 approach for ACLs for these limited circumstances that include,
31 among other things, stocks for which the data are not available
32 either to set the reference point, and, by that, we're talking
33 about ACLs, in this context, or to manage to the reference
34 points pursuant to that standard approach. Again, the key is
35 going to get down to what data are available and what is the
36 best we can do with what we have.

37
38 Now we're going to get into talking about the science for a
39 little bit, and so, as I mentioned, since 2009, we've had
40 advances in stock assessments for data-limited stocks, and we
41 have new tools to more effectively use the data that we have.
42 We're able to identify manageable metrics, and we have increased
43 our understanding of uncertainties.

44
45 This is a flow chart that we put together that depicts what you
46 can do, what the methods are that out there, based on what
47 information you can feed into the method. Trying to get to a
48 standard ACL, expressed in terms of weight or number, you're

1 going to need to have minimum information about abundance.
2
3 This flow chart basically goes down the left-hand side of the
4 screen, assuming that you have the biomass, the abundance,
5 information needed to get you to a standard ACL, and so it's
6 just a question of what you have, and the yes/no questions get
7 you down to -- You can develop an ACL that is expressed in terms
8 of an amount of fish.
9
10 I want to put a flag down there at the very bottom, and you're
11 going down the left-hand side, but you have a bunch of no. The
12 bottom middle blue box, it's the catch estimator approaches,
13 and that is the worst-case scenario of what you can do if all
14 you have -- The least amount of data, and all you can do is just
15 a catch estimator approach, and we're going to flag that,
16 because we're going to have recommendations for that in a
17 minute, when we get to the recommendations section.
18
19 Now, all of this on the right-hand side of the screen are data-
20 limited methods that can give us good, measurable information,
21 but just not help us get to that standard approach where the
22 ACL is expressed in terms of an amount of fish, and so maybe
23 you have length information, or maybe you have other indicator
24 information, and you can plug these into the assessment methods
25 that we now have, and, if you have that information to plug into
26 these methods, that little purple box at the bottom says you're
27 going to want to look at (h)(2), an alternative to the standard
28 approach, and particularly the alternative we're looking at,
29 that come from these methods, would be a limit expressed in
30 terms of weight.
31
32 You guys, and ladies, may have a lot of questions about the
33 details on this, and I am going to just hold off on this for a
34 minute, while I walk through the presentation, and then Jason
35 Cope can really work through the details of this one, if you've
36 got questions on this slide, but this is the general vision of
37 the slide.
38
39 Before I move on, I do want to mention that we've sort of laid
40 it out in this simplistic visual for you, but we know, from
41 trying to work through this, and working with some of you and
42 the Science Center, is that it's not a cut-and-dried question,
43 in data-poor fisheries, of what data really are available for
44 doing what you want to do with them, and we recognize that
45 you're going to need to really look closely at what you're
46 wanting to do, talking with your science people, your managers,
47 your constituents, about what you can do with what you have,
48 but there may be a better way than catch estimators, and it's

1 worth looking into.

2
3 I mentioned that, assuming you're going down the left-hand side
4 of that slide, and you've got methods that can get you to a
5 standard ACL, you're still data limited, and there are still
6 caveats and considerations that need to be kept in mind. I am
7 not going to read these bullets to you. They are written down
8 in the paper, and you can read them, but they have to do with
9 being transparent about uncertainty and using appropriate
10 buffers, but I do want to highlight, at the bottom, this blurb
11 about the catch estimator methods.

12
13 As I mentioned on the last slide, we recognize that sometimes
14 this really is all you have. If it's your best scientific
15 information available and you're trying to get to ACLs, then
16 maybe that's what you have to do, but we're now encouraging you
17 to look at alternatives and consider whether an (h)(2)
18 alternative might be more appropriate.

19
20 If you're still going to be stuck using the catch estimator,
21 just be sure you're appropriate with your buffers and plan to
22 transition to another approach. These are recommendations in
23 this draft memo, and so things for you to chew on and give us
24 feedback on.

25
26 Those were the methods that get you to your standard ACL, and
27 then I mentioned that we have these other methods that provide
28 really good advice, but just not resulting in weight or amount-
29 of-fish-based advice, and so you've got length-based methods,
30 and you've got indicator-based methods, and they do provide
31 science-based metrics and reference points that can help us
32 establish limits, monitor to limits, and comply with the
33 Magnuson Act requirements.

34
35 The tech memo provides guidance on which data-poor stocks might
36 be appropriate for using the (h)(2) alternative. As a reminder,
37 it's focused only on alternatives for stocks that lack the data,
38 and these are the two sets of criteria that are mentioned in
39 the (h)(2) flexibility paragraph itself, that the data lack to
40 either specify or manage with an ACL, and so those are the two
41 considerations that we have to bear in mind in determining
42 whether we're going to qualify to look for an alternative under
43 (h)(2).

44
45 Here is another visual, sort of depicting the whole premise that
46 is set forth in our tech memo of which stocks qualify to use
47 alternative ACLs under (h)(2), and that's one question that
48 needs to be asked, and then the next question is, all right, so

1 you qualified and recommend an alternative. Is the rate-based
2 alternative right for you, or appropriate for you?

3
4 Again, it starts with what information is available, just like
5 on Slide 7, and you've got to have this core abundance
6 information to go down the left-hand side of the slide and get
7 to your standard ACL, and that information is bulletized up
8 there at the top, and it's about time series of removals, life
9 history information, et cetera, and so that's the first
10 question, is do you have the abundance information to start
11 with, so that you're going to be able to set your ACL, in terms
12 of an amount of fish.

13
14 If yes, then start proceeding down the left-hand side. If no,
15 if you don't even have that, then you can start looking -- The
16 right-hand side of the screen is going to be the (h)(2) world.
17 It's time to start looking at whether an alternative would be
18 appropriate for you.

19
20 Let's just say that, yes, you have that abundance information.
21 You're going to go down the left-hand side of the screen, and
22 you're not done. You're not automatically -- You don't
23 automatically have to go all the way to the weight/numbers-based
24 ACL, because you also have to be able to monitor and enforce
25 that. That's the other aspect of the (h)(2) paragraph.

26
27 Can you set the ACL, and can you monitor and enforce it? If
28 yes, then use the NMFS standard approach. Use your weight-based
29 ACL, and we still think that's the best way to go, but, if no
30 to either one of those, head over to the right-hand side of the
31 screen, and that big box in the middle, and that's where you're
32 starting to get into the (h)(2) world.

33
34 Like I said, this tech memo focuses on the alternative of
35 expressing the ACL in terms of weight. Just because you're in
36 (h)(2), and you can do an alternative, it doesn't mean that rate
37 is right for you. You're going to have to answer these
38 questions, and you're going to have to be able to estimate the
39 average fishing mortality rate, either having length composition
40 data or other indicators, and you're going to have to have the
41 proxy for F at FMSY to set the MFMT, the maximum fishing
42 mortality threshold.

43
44 If you have both of those things, then you should consider using
45 this rate-based ACL. It may be preferable to what you're doing
46 now, without better biomass information, and then the no box on
47 that side, that gets you down to the very bottom, yes, you
48 qualify for (h)(2), and you are very, very data poor, but you

1 don't even have weight info, and what are you going to do, and
2 so you're still required to find a way to comply with the
3 Magnuson Act, and we'll talk about that a little bit at the end,
4 but those stocks are still our most problematic.

5
6 The MSA defines overfishing as a rate or a level of fishing
7 mortality that jeopardizes the capacity to produce MSY on a
8 continuing basis, and so, while weight and numbers-based ACLs
9 are the standard approach, expressing the ACL in terms of the
10 fishing mortality rate and monitoring the actual fishing
11 mortality level against the reference point could provide an
12 alternative means of monitoring, to make sure that overfishing
13 is not occurring.

14
15 You could have the same management tools that are available for
16 managing under a weight-based ACL, or you could use the same
17 things for managing under a rate-based ACL, and just the trigger
18 would be expressed in terms of F rather than weights or numbers,
19 but, if you hit the trigger, you would still be able to apply a
20 time/area closure, trip limits, size limits, all potential
21 accountability measures that could be used as well for a rate-
22 based ACL as they can for an amount-of-fish-based ACL.

23
24 If you have a data-limited method that can provide you your F
25 and your MFMT, then the SSC and the council could apply buffers
26 to derive the ABC and ACL, just like we would do under a standard
27 approach.

28
29 Hypothetically, depending on what data you have that are
30 collected, and maybe you have length data, this might be an
31 indicator that could be useful and could be incorporated into
32 management, and so, if the SSC can correlate an indicator with
33 a rate, and management controls could be designed to maintain
34 the stock within that indicator range, that might be a way to
35 go, and so, hypothetically, here's an example.

36
37 If your stock assessment provides information that your OFL, or
38 your MFMT, is 9.4 inches, and that comes out of the assessment,
39 then the SSC might look at that and apply an uncertainty buffer
40 to say your rate-based ABC might correlate to ten inches, and,
41 similarly, the council could do a rate-based ACL correlating to
42 10.2 inches, to get to the F_{ACL} . We started using these
43 abbreviations with the F in front of the reference point to
44 indicate that it's a rate-based reference point. Then, as I
45 mentioned, the same management options would still be available.

46
47 As we mentioned, the FMP must describe how the monitoring would
48 ensure compliance with the Magnuson Act. Our group thought of

1 different ways to potentially do monitoring, and one
2 hypothetical we examined with the Caribbean is we looked at
3 setting up a length-based indicator system and doing a data-
4 limited assessment method using lengths, and the thought process
5 was that it might be -- Once that method was set up, it might
6 be just as easy to run the method on an annual basis and compare
7 the F to the ACL.

8
9 On the other hand, a potential approach, if you had a good
10 indicator, might be such as length, just to monitor the
11 indicator reference point versus the indicator of what you're
12 finding in your samples, and then it's important that there
13 would be accountability measures.

14
15 Another thing to think about is, in setting up such a system,
16 would be how frequently you would want to monitor. We did not
17 provide guidance on in-season monitoring in this draft tech
18 memo, but that's definitely something that people had kicked
19 around and chewed on a little bit.

20
21 Finally, I talked about these stocks that are very data poor,
22 and they lack data for effective management, the standard
23 approach, and they also lack weight data, and so what do we do
24 with these stocks? We still have to comply with Magnuson, doing
25 the best that we can, and these might be stocks that end up in
26 the catch estimator box, but the paper recommends considering
27 whether a data collection program could be set up that it would
28 be cost effective to start moving towards a rate-based ACL
29 system and whether there could be a step-wise plan to progress
30 towards a standard ACL. Start with your rate-based, and start
31 some kind of data gathering, with the goal of progressing
32 towards the standard approach.

33
34 That is the broad overview, and, as I mentioned, we do have some
35 technical experts on the line and here, if you've got questions
36 or comments.

37
38 **CHAIRMAN NANCE:** Marian, thank you very much. That was a great
39 presentation. Any comments from the committee? Rich.

40
41 **DR. WOODWARD:** Thanks very much. This was very interesting.
42 As somebody with very little experience in all of this, I am
43 just -- A couple of questions came to mind. First of all, is
44 there any use of fishery-dependent data when you're dealing with
45 some of these questions, and, if so, how is that incorporated
46 into the analysis?

47
48 Secondly, I was sort of surprised that there was no mention of

1 -- The word "Bayesian" did not show up in any way, shape, or
2 form in the document, and so I would think that a Bayesian
3 approach would make a lot of sense in situations where you are
4 very data limited, and so two questions.

5
6 **MS. MCPHERSON:** These are definitely going to be questions for
7 Jason.

8
9 **DR. JASON COPE:** Thank you for those questions. The second
10 question you mentioned, the Bayesian -- Well, let's start with
11 the first one about the fishery-dependent data, and those
12 sources are often critical in these data-limited situations,
13 because you often don't have fishery-independent surveys or
14 designs or the money to kind of set up those sorts of things,
15 and so, often, all you have is fishery-dependent data, and so
16 absolutely all of those -- If you think about that very broad,
17 or generalized, flow chart, that diagram of assessment methods
18 that Marian shared, with --

19
20 **MS. MCPHERSON:** That was Slide 7, if you want to go back to
21 that.

22
23 **DR. COPE:** You can if you want, but I just want to highlight
24 the fact that -- Oftentimes, the critical piece of information
25 that you do have to work with, or if you're just starting to -
26 - Oftentimes you coming from that first, and then you try to
27 build off of that, maybe some fishery-independent information,
28 and so, yes, very much -- Even though you have to respect the
29 fact and the caveats that it may not be designed to measure
30 exactly what you would hope to measure, it's all you have, and
31 we have to work with it, and so that's fine.

32
33 There are actually methods that are specifically designed to
34 use fishery-dependent data, and you kind of can mess things up
35 if you use fishery-independent data, and those would be examples
36 that -- Thank you for showing this.

37
38 **CHAIRMAN NANCE:** Jason, we're hearing about every fifth word.

39
40 **DR. WOODWARD:** I have a quick follow-up, and I think I got the
41 gist of what Jason --

42
43 **DR. COPE:** Did I lose folks there?

44
45 **CHAIRMAN NANCE:** Yes.

46
47 **DR. WOODWARD:** Let me just ask a quick follow-up question on
48 that, and so economists spend a lot of time thinking about what

1 we call the data-generating process, in terms of what are the
2 incentives and the source of the data, and is that type of
3 analysis included when you're using fishery-dependent data?

4
5 **DR. COPE:** I think our angle here is basically looking at what
6 is available, and so, however that data were generated is kind
7 of outside the thought process, and we're just seeing what we
8 have and what we can do with what we have. Now, part of this,
9 as you can see, as you read through the tech memo, is building
10 up from where you are, and so all sorts of analyses would then
11 go into there, including economic analyses of data generation
12 and all of that, and so it's absolutely a critical point to
13 this.

14
15 What we're mostly highlighting here is that we find ourselves,
16 depending on the stock that we're looking at, in some
17 challenging data situations that we either can just bypass, and
18 just make decisions from something, and I don't know what, or
19 try to use that available information as best as possible, but,
20 likewise, you should always be thinking on how can you build
21 from where you're at, and that's really, I think, the
22 encouragement here, is that, wherever you are, there is
23 something you can do that can lean on fisheries science, the
24 history, the theory, whatever it is, as you mentioned, Bayesian
25 techniques, eliciting priors from experts.

26
27 You can do all of these things and do the best that you can with
28 what you have and simultaneously try to figure out where you
29 want to go next and what are you going to need and what's the
30 cost-benefit analysis of moving to the next level of data
31 collection, what should that look like, how are we going to do
32 that, how are we going to get cooperation, et cetera, and so it
33 builds from that, and I hope that I'm addressing your question
34 head-on. I am attempting to.

35
36 **DR. WOODWARD:** No, that's great. Thank you very much.

37
38 **DR. COPE:** I don't know if I -- I kind of cursory there mentioned
39 the Bayesian part, and absolutely. A lot of these methods
40 either use Monte Carlo approaches or Bayesian approaches, and
41 all of that stuff is wrapped up in the particular method, and
42 so there's a lot of sort of prior information, as you can
43 imagine, going in, expert opinion, all that sort of stuff, and
44 we're trying to mine as much information as possible in some of
45 these data-limited situations, and so absolutely Bayesian
46 approaches are critical here.

47
48 We didn't go into the deep depths of description on these

1 methods, and we mostly outlined them, to show these are the
2 types of things, and here are some references, but it definitely
3 includes Bayesian considerations.

4
5 **CHAIRMAN NANCE:** Thank you. John.

6
7 **DR. FROESCHKE:** Thank you. Thank you for producing the report
8 and providing the presentation. When I looked at this, and I
9 was trying to look at it through a bit of a regional lens, I
10 guess, and how this information would apply, or could apply, to
11 the Gulf stocks, and a couple of takeaways.

12
13 Originally, if you look at that flow chart on the screen, most
14 of our data-poor stocks we measure with the landings-based ACLs,
15 which is, I guess, the catch estimator approaches, and, if you
16 look at that top box, we have available records, and removals
17 are monitored, and so, essentially, based on that criterion
18 alone, the way I see it, all of our stocks would be in the yes
19 side, the left side, of that flow chart right away, which is
20 where we already are.

21
22 I am not sure how applicable this is. That bottom one, where
23 it says the index, and then it has the fork between the stock
24 production and the catch estimator, and so the landings is where
25 we are. I guess, if you had an index, then you would try to go
26 to the stock production. The way I was interpreting that would
27 be akin to the data-limited stock assessment, i.e., the SEDAR
28 49, and what we've done for lane snapper.

29
30 When we did the SEDAR 49, what we found out, based on the methods
31 used in there, was that most of our data-poor stocks didn't have
32 enough information for those kinds of things, and so my
33 interpretation of this is it's a low bar to get to the yes side,
34 where you're going to have the catch estimators, but there is
35 still a pretty big gap between there and what could be done for
36 the data-limited approaches, unless there is some new
37 information, or methods, for the stock production that I am not
38 aware of.

39
40 The other thing that struck me was the use of the mean length
41 as an indicator, and I guess I just have some concerns that in
42 a period -- If you had a particular stock, and you were
43 monitoring that approach, and you had a big recruitment event,
44 you're going to drive the average size down, even though that's
45 a good indicator of the fishery, and it's likely going to lead
46 to an overfishing signal, and then, conversely, you have periods
47 of failed recruitment, and you're going to be fishing on older
48 fish, because that's all that there is, and so everything is

1 going to be looking good, when, in fact, that's probably not
2 the direction you want to be going to. Those are just some
3 thoughts from our region, as I see them, and I would just be
4 curious on the collective response.

5
6 **DR. COPE:** I'm happy to add a little bit to that. All excellent
7 observations, and one thing to bring out sort of to the forefront
8 is, in that very top box, where it says "do you have available
9 removal records for basically most of the fishery", the other
10 key part of that is that you're actually able to monitor those
11 catches well, and, in some fisheries, that's where a lot of
12 folks kind of find the biggest challenge, is monitoring catches,
13 whether it's a mix of commercial and recreational, or whatever
14 it is.

15
16 You really need both, because, if you set an ACL, but you really
17 can't monitor it well, then maybe that isn't the good indicator
18 of the fishing level that you want to measure to see if
19 overfishing is occurring, and so that's one thing to highlight.

20
21 Now, if you are in that situation, where you're finding that
22 you are able to monitor and track catches with little problem
23 for all FMP stocks, and you have a full time series, then it
24 just -- Like you said, it kind of just depends on where you land
25 with the rest of your data what you can do.

26
27 Now, the big warning though in our tech memo is that some of
28 these catch estimator methods are assuming some really big
29 things that you know about the population, such as what the
30 current stock status is and other things that are huge
31 assumptions and that the results are very sensitive to, and so
32 definitely, that warning in the tech memo, we want to highlight
33 that.

34
35 On the side of the mean length and length-based methods, you're
36 absolutely right that those are -- All of these methods are
37 suffering from certain assumptions, and like the catch
38 estimators can suffer from not knowing what the current stock
39 status is, and mean estimators are very sensitive to the
40 assumptions of equilibrium. As you mentioned, a big recruitment
41 can really mess up your signal and so you want to recognize
42 that, and, for some stocks, maybe that isn't -- Even though you
43 could do it, it may not be the most appropriate thing to do,
44 because of such an occurrence of big recruitment that might mess
45 things up, and so those are things that you want to think
46 through.

47
48 I think what we want to provide here is the guidance that says

1 here are things that you can do, and, if that does occur, you
2 just want to work that into your interpretation of the results.
3 If you have a big drop in mean length, you want to ask yourself,
4 do we have recruitment? If so, that's a good sign, probably,
5 and not a bad sign.

6
7 You can work that into the way that you interpret the results,
8 but I just want to encourage that, and that's the exact type of
9 thought that you want to have. Be very critical in the
10 consideration of these methods, because they all have
11 weaknesses, but they can -- When those are respected, when those
12 assumptions and caveats are respected, you can do some powerful
13 things, even in extreme data-limited situations, that can also
14 highlight what you want to start to collect next, as far as
15 data, to get you out of that particular trouble that you might
16 find yourself in.

17
18 Of course, we would like to have, ideally, right, integrated
19 stock assessments with multiple data types that all give the
20 same signal. The problem with our integrated assessments is
21 that, and I can speak firsthand to this, you have a bunch of
22 data, and they are giving you different signals, and which is
23 the right, quote, unquote, signal.

24
25 Any time we put length compositions into our assessment, we
26 might suffer -- If we get the selectivity wrong, or we
27 misinterpret them, even our integrated stock assessments can
28 lead us astray a bit, and so all of these things need to be
29 thought through, and these questions here are really nice to
30 hear, because these are very thoughtful, critical questions that
31 are needed when thinking through this, and we hope that we just
32 provide guidance that folks feel like, if they do find
33 themselves in the neck of the woods where there aren't a full
34 time series of catches, or you can't really monitor those
35 catches, there is still something that can be done to try to
36 figure out if overfishing might be occurring and provide some
37 guidance to the managers.

38
39 **MS. MCPHERSON:** That's a very good -- All of those are good
40 points, and so I do want to just add on just a bit. I had that
41 one slide with sort of the summary of recommendations, if you're
42 going to be using the assessment methods on the left that can
43 get you to those standard ACLs, and there is -- If anyone has
44 got the tech memo, or if you just want to take a note for your
45 review, when you go back, it's on page 7 is our section on
46 recommendations when you're using those methods on the left,
47 and I don't know if I copied every bullet, but there is a bullet
48 that talks about kind of, when you think you have the data, but

1 you're uncertain with it, and there's a section on this in the
2 tech memo, on page 7.

3
4 It might be worth just reading the whole thing, but there is a
5 bullet about, if the results are driven by weakly-justified
6 expert opinion, poorly-known parameters, severely-limited data,
7 consider one of the other methods, and so explore the
8 uncertainty in your inputs.

9
10 Like, if you have something that you can say fits the box, but
11 you're super uncertain about it, you might want to look down on
12 the other side of the slide and see if one of the other methods
13 might -- We keep hearing in these data-limited fisheries that -
14 - You've really got to ask among yourselves, and the answer is
15 within you and within your community of do we trust this data
16 to do what we're asking of it.

17
18 It's this second-bullet-from-the-bottom is the one that I was
19 just reading from, but all of these might be worth considering
20 when you're providing us your comments.

21
22 **CHAIRMAN NANCE:** Okay. Thank you very much. Roy Crabtree.

23
24 **DR. CRABTREE:** Thanks, Jim, and thanks, Marian, for the
25 presentation. I have seen this a number of times over the
26 years, and I don't know where this ultimately goes out, because
27 I think there's a lot of questions about whether this complies
28 with the statute or not, but that's for the lawyers to sort out
29 somewhere along the way.

30
31 The fishery that comes to my mind though that this might be
32 helpful to us is spiny lobster, and we have really struggled,
33 over the years, with how to set the ACL for spiny lobster, and
34 we have struggled with the accountability measure for spiny
35 lobster, which is essentially we convene a review panel and
36 review it if we go over and all.

37
38 Because of the peculiarities of the spiny lobster fishery, I
39 think the gist has been, over the years, that having a size
40 limit is sufficient to protect things, because the recruitment
41 comes from elsewhere, and so the notion that somehow you can
42 substitute a size limit in some fashion for the ACL -- That's
43 the one that comes to my mind as a place where this approach
44 might be worth looking at.

45
46 I think part of what will come up with the council though is I
47 think a lot of constituents are going to argue that we can't
48 monitor and enforce ACLs adequately for any of our recreational

1 fisheries, because the timing issue is so far off, and we
2 certainly have fisheries where the season is over before we get
3 any recreational catch estimates, and so how you argue that
4 that's what you can monitor and enforce I think is a pretty
5 tortured argument.

6
7 It's interesting, but I do think, given some consideration of
8 how we might better deal with spiny lobster, because we've never
9 closed the fishery down because the catch was too high or too
10 low, and we have always concluded that the high catches didn't
11 threaten the stock in some fashion or another, because things
12 are driven by other drivers, and so that's my thought on it.

13
14 **CHAIRMAN NANCE:** Thank you. Will Patterson.

15
16 **DR. PATTERSON:** I am really curious about this idea of utilizing
17 rate-based approaches. It doesn't seem to have gotten as much
18 treatment, or consideration, as the landings or mean-size-based
19 approaches for data-limited stocks when integrated or lesser
20 assessments, more quantitative assessments, can't be
21 accomplished.

22
23 I am curious, and we have the situation, I think, for some
24 stocks in the Gulf of Mexico, that isn't often encountered,
25 where you have a time series of landings estimates that are
26 fairly unreliable, yet there is also considerable otolith
27 samples that have been collected through time, and so the age
28 composition of the landings is possible, but it's tough to put
29 them together so that you have -- You have, I guess, a reliable
30 estimate of what the landings actually were, but you do have
31 the age composition data.

32
33 Earlier, we were having a conversation, a related conversation,
34 before I think Marian and Jason got on the call, but, in the
35 Nathan Taylor paper from 2005, where they were looking at
36 likelihood approaches to estimating von Bertalanffy growth
37 equations, or growth parameters, they actually show an approach
38 to taking age composition data and simulating what the
39 population must have looked like, given assumptions about
40 selectivity.

41
42 I am curious if, in Jason's experience in particular, like what
43 your group has been working on, if anything, in that realm, and
44 it seems to me probably a pretty rare case where you have age
45 composition, but no other reliable data, and so I'm just curious
46 what's been going on in that realm.

47
48 **DR. COPE:** That is a really great question, and we do have some

1 exciting stuff that's going on in that realm, and you're right
2 that it is a unique situation to have kind of a treasure trove
3 of age data and not much else, but that age data is so potent
4 in its ability to kind of tell you what's going on with the
5 population, as you said, as long as you can kind of understand
6 roughly what that selectivity curve is.

7
8 What that falls into is the category of basically those length-
9 based approaches, and the length-based approaches are really
10 there to approximate ages, and that's what those approaches are
11 doing. Now, if you have ages, you have an even better way of
12 tracking what's going on in the underlying demography of the
13 population and the age structure and so forth.

14
15 Understanding selectivity, you can pretty powerfully understand
16 what the status of the stock is and pull out some sort of long-
17 term fishing mortality that has driven that stock to that
18 particular age structure, and, with that, if you have any other
19 indicators of the stock, in addition to the -- So maybe you
20 don't have a really good catch record, but maybe you have other
21 ancillary data that could indicate some aspect of the
22 population, whether it's recruitment or something, and you can
23 put those together in a multi-indicator approach.

24
25 What's really interesting is, working internationally, this is
26 exactly the type of stuff that folks do, because they aren't
27 focused on setting catch limits, and they're focused on just
28 coming up with the best indicator or way to measure the status
29 of the stock that they can do, and they come up with a lot of
30 these creative situations, and I think spiny lobster was a
31 really good example of how this gets done in other places as
32 well, because they have the same problem of setting catch
33 limits, and they often go to some sort of size or length-based
34 approach to get a stock status and get an estimate of F and move
35 on from there.

36
37 Yes, within -- I mean, this is an aside, and I will just invite
38 anyone who wants to get into the technical stuff -- If you want
39 to talk to me about how you can implement these things in Stock
40 Synthesis, these super data-limited approaches, such as purely
41 just ages, without a real good catch history, I'm happy to talk
42 and show you how to do that, but, yes, you can do that sort of
43 stuff, and it can be really powerful, to be honest, having a
44 bunch of ages.

45
46 **DR. PATTERSON:** Thanks. Jim, can I just follow-up, real quick?

47
48 **CHAIRMAN NANCE:** Yes, Will. Go ahead.

1
2 **DR. PATTERSON:** Thanks, Jason. That's really cool stuff, and I
3 will follow-up with you offline and send a recent paper that we
4 published on warsaw grouper here in the Gulf, and I would really
5 like to talk about some of these other Stock Synthesis
6 approaches, to try to code that up, and so, anyway, thanks for
7 the input, and I look forward to interacting later.

8
9 **CHAIRMAN NANCE:** Thank you. Luiz.

10
11 **DR. BARBIERI:** Thank you, Mr. Chairman, and thank you, Marian
12 and Jason, for the presentation and the discussion. It's very,
13 very helpful and super interesting stuff, and I think very
14 useful. I really want to compliment the working group for going
15 through this process and putting this together, and, obviously,
16 you were dealing with a super complex issue and a very, very
17 tough problem to solve, and I think that you did a great job
18 pulling together a lot of different approaches and considering
19 a pathway that I think provides very helpful guidance, and so
20 congrats on that.

21
22 I had a lot of the same questions and concerns that others have
23 brought up, for obvious reasons, and I know pretty much all of
24 you who have worked with this working group, and I know that
25 you're aware of all those concerns and all those questions and
26 the use of this data and the availability -- I mean, the use of
27 these methods and the availability of the data, et cetera, and
28 so I think everything that you explained there, Jason, and went
29 through, in responding to John Froeschke and to Will and others,
30 I think that helps clarify the tone of this.

31
32 I like the fact that you present this as a variety of approaches
33 and methodologies and pathways that can be followed to deal with
34 some of these issues, but it's not very prescriptive to use this
35 one or use that one, and so I like that a lot, and so my only
36 question here then is did you go through the process, because I
37 think it will be helpful, to develop some example applications
38 of this? Was there time to get some of that done, just so we
39 could see some of the situations where this may have actually
40 been tested, to some extent, and shown to provide some useful
41 guidance? Thank you.

42
43 **MS. MCPHERSON:** Thank you for your comments. Have we gone
44 through examples? I will say, in developing the paper, we did
45 sort of a hypothetical case study exercise with some internal
46 data that we haven't -- But we are -- We have talked with the
47 Southeast Region and the Western Pacific Region about possible
48 pilot projects, and I think there is some interest, and I don't

1 know if anyone from the Southeast Region is here to talk about
2 possibly doing something like this for queen triggerfish. I
3 don't know if any decisions have been made about that, but there
4 is definitely interest at NMFS in having some kind of pilot
5 projects done, but we're not there yet.

6
7 **DR. BARBIERI:** Okay. Sounds good. Thank you.

8
9 **CHAIRMAN NANCE:** Thank you. Steven Saul.

10
11 **DR. SAUL:** Thank you, Mr. Chairman, and thank you, Marian and
12 Jason. I was just going to add that I certainly agree that
13 these approaches, when properly matched, due to the data
14 structures and such that you have, can be a powerful tool. Some
15 colleagues and I completed an assessment of about fifty
16 different reef fish species in Indonesia, together with the
17 Ministry of Fisheries, and one thing that I found useful that
18 we've done is we've taken a handful of these approaches that
19 are appropriate and ran the data through those multiple
20 approaches and then blended the results and the outputs, in
21 order to understand some level of model uncertainty, given that
22 there are a variety of different approaches, and there is really
23 no one size-fits-all, and no approach really is perfect. By
24 sort of blending multiple approaches and blending the outputs,
25 that's kind of one good way that you get at model uncertainty.

26
27 What we found from doing that is some stocks sort of straddle
28 the fence, in terms of where they were more relative to FMSY
29 and BMSY and such, but others, when you look at the ranges, were
30 either clearly doing very, very well or clearly not, and so you
31 can really steer your management approach based on some of these
32 approaches when clear signals can sort of be derived. Thank
33 you.

34
35 **CHAIRMAN NANCE:** Thank you, Steven.

36
37 **DR. COPE:** Can I just say one thing with what Steven said? He
38 said some really, really good stuff there, and I appreciate that
39 example of applying it in Indonesia, and I just want to highlight
40 one thing he noted, is that sometimes these methods give you -
41 - They do give you clear answers as to what's going on.

42
43 If we're asking these really data-limited methods to parse out
44 kind of really fine details on what the population is doing, we
45 might be asking too much, but there are many instances where
46 they can give you very clear signals that will help guide
47 management, and, in the instances where they don't, I think this
48 is where we fall back onto our risk structure, and this probably

1 falls into the SSC's realm and the council's realm of defining
2 risk and what do we do when there is a bunch of uncertainty
3 about status, and how do we approach it.

4
5 I think lots of councils have talked about how do you structure
6 your risk approach when you have data limitations, and so,
7 coupling that with these methods, I think we couple the science
8 with the risk-based approach, and we can make good informed
9 decisions, even under highly uncertain situations.

10
11 **CHAIRMAN NANCE:** Thanks, Jason. Before we leave this topic,
12 are there any specific SSC recommendations that we have for the
13 council? Trevor.

14
15 **DR. MONCRIEF:** Just real quick, I mean, would it be useful to
16 at least have some candidate species? I mean, we mentioned
17 spiny lobster and stuff like that, but would it be useful to
18 have some sort of list of applicable species that could fall
19 under this?

20
21 **CHAIRMAN NANCE:** I think that would be very good, and so
22 certainly spiny lobster is a candidate for this, for this
23 approach. Any others? I think we had some very good information
24 here, and good flow charts and everything else, to allow us to
25 be able to utilize this methodology for our assessments. Will.

26
27 **DR. PATTERSON:** I just think there are some deepwater species
28 for which there is quite a bit of age comp data, and perhaps
29 unreliable catch, or even size comp information, that I am
30 curious what Jason said here about using SS in those situations,
31 but I think there's a possibility that we could explore some of
32 that, using the more recent data-limited approaches.

33
34 **CHAIRMAN NANCE:** Yes, I agree. Certainly some of those topics
35 that we discussed this morning would be able to be used here,
36 maybe. Roy.

37
38 **DR. CRABTREE:** I guess I have a question for Marian, in terms
39 of the timing and getting to an actual rulemaking, because this
40 would require revising the National Standard Guidelines, and
41 can you give us any sort of notion as to what the agency is
42 considering, in terms of timing?

43
44 **MS. MCPHERSON:** Sure. At this point, this is in the form of a
45 technical memo, and our thoughts, at the moment, are to continue
46 moving forward with this process, and I believe NMFS has gone
47 on record saying that you don't need to wait for us to finalize
48 this advice, because the exception is already in the National

1 Standard 1 Guidelines, in (h)(2), in 310(h)(2), and it
2 specifically says the council can recommend an alternative
3 approach for a rate-based ACL.
4

5 (h)(2) is focused on limited circumstances, and the idea, the
6 hope, is that we will get a couple of pilot projects going, and
7 we do have in mind that, as this becomes more widespread and
8 used, if there is a desire to use it for more than just limited
9 circumstances, there could be a need for rulemaking.

10

11 **DR. CRABTREE:** Marian, the current guidelines also specify that
12 catch is an amount of fish, and so a catch limit is an amount
13 of fish, right?

14

15 **MS. MCPHERSON:** The guidelines set up a standard approach for
16 ACLs, and that's the language used throughout the guidelines,
17 is "standard approach", and it's within that context that it
18 says -- In the paragraph that defines the ABC and ACL, that
19 paragraph says, for these two purposes, we're saying catch means
20 the weight of fish.

21

22 Then, later, in the paragraph (h)(2), it says there may be
23 limited circumstances where we need to propose an alternative
24 way, alternative to what we said, in that definition of a
25 standard approach, and so this is what the sub-group has been
26 working on, is providing advice on what that might mean. What
27 might an alternative approach look like that could still comply
28 with what's in the Magnuson Act, an annual limit that prevents
29 overfishing and that triggers accountability measures, but might
30 not be effectively able to be done under that standard approach,
31 where the ACL is an amount of fish.

32

33 **DR. CRABTREE:** Okay. I guess the question becomes how much time
34 do you want to invest in looking at this, and it seems to me
35 that what the council needs to do is have a real discussion with
36 NOAA Office of General Counsel about what they would be willing
37 to clear or not, because my concern with this is that you could
38 go way down this path and then find out that you can't get it
39 through the attorneys, and so it really becomes a question as
40 to how far you want to go in the absence of something more
41 concrete, in terms of the guidelines.

42

43 **MS. MCPHERSON:** We do have the green light from the attorneys
44 to proceed along with this approach, for the purposes of this
45 tech memo, and it is fully contemplated that, if it becomes more
46 widespread, there may be a need to do a rulemaking in the future,
47 but, at this point, it's NMFS' position that the technical memo
48 provides advice on implementing (h)(2), and (h)(2) is already

1 there.

2

3 A limited basis of alternatives could be submitted, and, as
4 you're saying, that's going to be where the rubber hits the
5 road. Specifically, what do we come up with, and (h)(2) also
6 really specifies that you're not exempt from Magnuson, and you
7 have to demonstrate in your record how the approach you've
8 described is going to satisfy those pieces of Magnuson, an
9 annual limit that can prevent overfishing and that can trigger
10 accountability measures.

11

12 **CHAIRMAN NANCE:** Okay. Thank you, Marian. Steven Saul.

13

14 **DR. SAUL:** Thank you, Mr. Chair. I was just going to mention
15 what Will did about some of the deepwater species, and so no
16 worries. Thank you.

17

18 **CHAIRMAN NANCE:** Okay. Thank you. Mike Allen.

19

20 **DR. ALLEN:** I just wanted to make the point that data-limited
21 stocks doesn't necessarily mean that the outcome of those
22 evaluations has high uncertainty or bias. Some of the
23 historical size structure data from back in time, relative to
24 current day, can be really, really informative for the current
25 fishing mortality rate, and so I think it's just important to
26 think about some of these data-limited stocks aren't necessarily
27 any more, or to much degree, more uncertain than stocks where
28 we have a lot of datasets that may not be informative.

29

30 **CHAIRMAN NANCE:** Thank you. Any more recommendations or
31 comments? Jason and Marian, we sure appreciate your time and
32 that presentation.

33

34 **MS. MCPHERSON:** Thank you for having us.

35

36 **DR. COPE:** Thank you, everyone.

37

38 **CHAIRMAN NANCE:** We will go ahead and break for lunch now, and
39 we'll come back at 1:00 p.m. Eastern Time.

40

41 (Whereupon, the meeting recessed for lunch on August 10, 2021.)

42

43

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44

45

August 10, 2021

46

47

TUESDAY AFTERNOON SESSION

48

1
2
3 The Meeting of the Gulf of Mexico Fishery Management Council
4 Standing and Special Reef Fish, Special Socioeconomic & Special
5 Ecosystem Scientific and Statistical Committees reconvened on
6 Tuesday afternoon, August 10, 2021, and was called to order by
7 Chairman Jim Nance.

8
9 **CHAIRMAN NANCE:** It looks like we're getting ready to start.
10 It's one o'clock, and so everyone can get reassembled, and we're
11 going to go on to king mackerel. It's Item Number XVIII, and
12 we're having a presentation from the Southeast Fisheries Science
13 Center. I'm not sure who is in line to give that one.

14
15 **MR. RINDONE:** Shannon or Katie, are either one of you there?

16
17 **DR. CALAY:** Sorry about that. I was muted by an organizer, and
18 so I could not speak for myself. I apologize.

19
20 **CHAIRMAN NANCE:** I told them to do that.

21
22 **DR. CALAY:** Well, ordinarily, you would be right, for sure.

23
24 **CHAIRMAN NANCE:** Welcome, Shannon.

25
26 **REVIEW OF KING MACKEREL HISTORICAL HARVEST AND CATCH LIMITS**

27
28 **DR. CALAY:** Thank you, and so I think I am on the hook. I would
29 like to acknowledge Michael Schirripa, who did most of the work
30 associated with these two presentations, and I am -- I drew the
31 short straw, because Michael is on leave today.

32
33 The first presentation was from Council Request 9583, and this
34 is the influence of the Coastal Household Telephone Survey
35 versus the FES statistics for the management advice for Gulf
36 king mackerel. This has been presented to the council, at least
37 in a brief format, and so I think this has been in the meeting
38 materials before, perhaps.

39
40 The Science Center was asked to provide a few sensitivity runs
41 of the Gulf of Mexico king mackerel stock assessment to
42 demonstrate the effects of the changes that were made to the
43 recreational statistics, and so the major changes for this
44 update assessment were to change from the Coastal Household
45 Telephone Survey to the FES statistics, and there was also a
46 change in the shrimp bycatch estimation.

47
48 We did have an earlier attempt to address this request very

1 directly by putting the FES statistics directly into the 2014
2 base model, but that produced a model that was unstable, and it
3 did not produce reliable results, and so this is the second
4 attempt to address this request.

5
6 **MR. RINDONE:** Shannon, if you're talking, we cannot hear you.

7
8 **CHAIRMAN NANCE:** We'll wait for a minute for Shannon to get back
9 online. Roy.

10
11 **DR. CRABTREE:** Ryan, what is it that the council is trying to
12 get at with this? I mean, what is the issue?

13
14 **MR. RINDONE:** The council is interested in what the catch limits
15 would have been coming out of SEDAR 38 in 2014 had that model
16 used FES instead of CHTS for the recreational catch and effort
17 data, and so what the simulation shows is the four model runs
18 that you see tabulated here on the board.

19
20 They just wanted a better understanding of how things would have
21 looked for kingfish had FES been used in the original SEDAR 38
22 assessment, which used different spatial delineations for
23 kingfish than was used previously, and so this set of
24 sensitivity runs was designed to get at that and answer that
25 question, and it does.

26
27 **CHAIRMAN NANCE:** Shannon, are you back online?

28
29 **DR. CALAY:** Yes. My apologies for that. I will go ahead and
30 move into the sensitivity runs that were conducted to look at
31 the effects of the various changes to the king mackerel model,
32 and so, essentially, we ran four model runs.

33
34 A model run is simply the baseline SEDAR 38 stock assessment as
35 it was configured in 2014, no changes, and so the terminal year
36 of that stock assessment was 2012, and it is the SEDAR 38 stock
37 assessment base run, and they have used the Coastal Household
38 Telephone Survey recreational statistics and the shrimp bycatch
39 estimate produced in 2012.

40
41 Now we're going to make step-wise changes to the model to look
42 at the effects of those changes, and so, in Model 2, the only
43 change is that we are now using -- Well, the few changes are
44 that we're now using the SEDAR 38 update base case with FES
45 statistics and the 2012 shrimp bycatch estimate, and we're
46 truncating the data in 2012 so that it's most directly
47 comparable with the SEDAR 38 base run.

1 Then, in Model 3, we're again using the SEDAR 38 update
2 assessment, a terminal year of 2012, the FES statistics, and
3 the shrimp estimates from the 2020 assessment procedure, and so
4 now we've got both the change to FES statistics as well as
5 shrimp bycatch, and then Model 4 is simply the SEDAR 38 update
6 base run, which has all of the updated data through 2017, the
7 SEDAR 38 update base model FES statistics, and shrimp bycatch
8 from 2020 estimation.

9

10 Like the SEDAR 38 and SEDAR 38U assessments, the OFL and ABC
11 were determined from projections, and the OFL is the 50th
12 percentile from a projection of FSPR 30. FSPR 30 was the proxy
13 for FMSY for king mackerel, and ABC was simply a P* of 0.43,
14 which is equivalent to the 43rd percentile of the projection of
15 FSPR 30.

16

17 The results are tabulated here, if you are interested, but I am
18 going to go ahead and show you, visually, what these changes
19 look like, and then we can always go back to this slide, if need
20 be.

21

22 First, I will show you some comparisons of the differences, and
23 so this table shows the acceptable biological catch, the ABC,
24 and the percent difference from the SEDAR 38 assessment that
25 each model configuration change caused, and so, in this
26 particular case, I am looking at the first column of this table,
27 which I have put the mark "Baseline SEDAR 38", and those are
28 the baseline SEDAR 38 ABC recommendations for the years 2015 to
29 2027.

30

31 Now I am comparing them to Model 2. Now, remember that Model 2
32 is essentially the SEDAR 38 update model truncated at 2012 and
33 using the FES rec stats, and so the major difference here is
34 the use of the FES rec stats with the SEDAR 38U model
35 configuration, and you see here that the difference between
36 Model 1 and Model 2 are relatively small for the Model 2
37 comparison.

38

39 It's been a while since I looked at this, and I do need to
40 clarify that these changes are in fact due primarily to small
41 revisions that were made in headboat landings of discards.
42 Okay. Now the next comparison.

43

44 **CHAIRMAN NANCE:** Shannon, just one -- Can you wait just one --
45 Roy has just a question.

46

47 **DR. CRABTREE:** Model 1 uses the CHTS, the old survey, and then
48 Model 2 uses the FES, and so presumably the rec landings in

1 Model 2 are much, much higher, yet the ABC comes down a little.
2 Am I misunderstanding something?

3
4 **DR. CALAY:** Well, Roy, I don't think that you are. I think
5 that, in fact, there is a clarification needed to what Model 2
6 is, and I think this has more to do with the changes made to
7 the headboat landings themselves, and I think that the CHTS
8 statistics were actually retained in this case, and so I will
9 look into that, but I think that the major change here is just
10 due to the headboat landings and discards and the revisions made
11 to those in particular.

12
13 **DR. CRABTREE:** Okay, and one other. Are these runs now being
14 done in Stock Synthesis?

15
16 **DR. CALAY:** These are all done in Stock Synthesis.

17
18 **DR. CRABTREE:** But, back in 2012, or 2014, it would have been
19 done in something else, right?

20
21 **DR. CALAY:** In 2014, this model was also done in Stock Synthesis.

22
23 **DR. CRABTREE:** Okay. All right. Thanks.

24
25 **DR. CALAY:** I am going to have trust Michael on this one and
26 say that, in fact, that these are in fact the FES estimates,
27 and there are a number of changes in this model. The FES
28 statistics is only one of them, and another change was that the
29 magnitude of the shrimp bycatch changed considerably, and
30 another one was that the additional years of data have changed
31 your perception.

32
33 Rather than attempting to modify the interpretation of this
34 slide, which has been reviewed by Michael carefully, I would
35 say that, in fact, these are the changes from the FES data, in
36 Model 2, and that the changes are relatively small only because
37 they are also affected by the change to the shrimp bycatch and
38 the additional years of data, which also change your perception
39 of the model results.

40
41 **CHAIRMAN NANCE:** But, Shannon, it looks like shrimp is the same
42 in Model 1 and 2.

43
44 **DR. CALAY:** Correct.

45
46 **CHAIRMAN NANCE:** The only difference is we've gone from the
47 telephone survey to FES.

1 **DR. CALAY:** Yes.
2
3 **CHAIRMAN NANCE:** My question is, when we say SEDAR 38 update,
4 that indicates to me that there has been some internal changes
5 in the model between SEDAR 38 and the SEDAR 38 update without
6 changing to FES and those types of things, and is that correct?
7
8 **DR. CALAY:** That is correct. There were a number of changes
9 made to the model structure to essentially have a model that
10 was fully convergent and passed all the routine diagnostics,
11 and so that could be easily teased out, and that was the reason
12 why, when we tried the original approach, which was just to take
13 those FES statistics and put them into the old model, it did
14 not succeed, because there are a number of changes in the model
15 structure that confound your interpretation of the FES
16 statistics themselves.
17
18 **CHAIRMAN NANCE:** While we see just -- It looks like just FES
19 changed between Model 1 and 2, and there were probably some
20 internal things in the model that had to be changed, and so the
21 model that is used in 1 is different than the model that is used
22 in 2. Is that a fair statement?
23
24 **DR. CALAY:** That's correct, and, when you introduce those higher
25 FES statistics into Model 2, a number of the parameters are re-
26 estimated in that model, and, essentially, what has happened is
27 that you don't see that expected change, where FES statistics
28 necessarily equals more catch recommendation in this particular
29 case, because of the changes made to the update model itself as
30 well as changes made to shrimp bycatch estimation, which were
31 quite sensitive in the model.
32
33 **CHAIRMAN NANCE:** Okay. Jason, we'll go ahead and let you ask
34 your question, and then, Shannon, after that, we'll let you
35 continue. Thank you for that.
36
37 **MR. ADRIANCE:** Thank you. Shannon, I was wondering if there
38 was any consideration -- I noticed that the shrimp, the 2012,
39 jumps right into the FES, but if there was any look at the CHTS
40 with the shrimp 2020, just to see what that impact may have been
41 prior to going to the FES and the shrimp 2020. Thanks.
42
43 **DR. CALAY:** The only model runs that we did for this council
44 request were those that are listed here, and so, no, that was
45 not done in this case, or at least it was not done for this
46 request. It could appear in the stock assessment report as a
47 sensitivity run. I would have to look into it.
48

1 **CHAIRMAN NANCE:** Okay. Thank you, Jason. Okay, Shannon. Thank
2 you for that.

3
4 **DR. CALAY:** Okay, and so now, in Model 3, it's still the 2012
5 truncation, but now we do have both the FES statistics and the
6 new estimate of shrimp bycatch.

7
8 You can see that's where you start to see substantial increases
9 in the OFL and ABC, is when we're including both the FES
10 statistics and the new estimates of shrimp bycatch, and so the
11 shrimp bycatch is a very important change in the stock
12 assessment model.

13
14 Then, finally, in Model 4, we are making -- In the next slide,
15 you'll see Model 4 results, and that is all of the changes
16 simultaneously, and so now we have FES statistics, the new
17 shrimp bycatch estimates, and all of the data through 2017, and
18 so that leads us to Model 4, which is in fact the base model
19 configuration for the SEDAR 38 update assessment.

20
21 **CHAIRMAN NANCE:** We're only seeing, on this one, the percent
22 increase in ABC?

23
24 **DR. CALAY:** You are only seeing the percent increase in ABC in
25 this particular case, and that's correct, but all of the results
26 for all four tables are in a slide in this presentation, if you
27 want to look at the OFL estimates as well.

28
29 **CHAIRMAN NANCE:** Benny, go ahead and ask your question here.

30
31 **DR. GALLAWAY:** Thank you. Shannon, can you characterize the
32 distribution of the shrimp bycatch, and that is, is there any
33 standout patterns of distribution that shows where this bycatch
34 is occurring? Is it western Gulf or --

35
36 **DR. CALAY:** It is western, primarily.

37
38 **DR. GALLAWAY:** Okay. What depth zone? I'm just curious.

39
40 **DR. CALAY:** I don't recall the specifics. I would have to look
41 at the SEDAR document to see what depth zones were included in
42 that estimation.

43
44 **DR. GALLAWAY:** Okay. Very good. Thank you. You did a great
45 job.

46
47 **DR. CALAY:** Thank you. I do appreciate the thanks.

48

1 **CHAIRMAN NANCE:** Doug Gregory.
2
3 **MR. GREGORY:** Thank you. I will be quick. This is quite
4 interesting, but I just want to point out that, while we followed
5 the ABC Control Rule for SEDAR 38, we did not for the SEDAR 38
6 update, and so these ABC numbers won't match what we recommended
7 to the council for Model 4, because we used, I think, some X
8 percent of F of MSY for our ABC, and that's a minor point, but
9 I just wanted to point it out though. Thank you.
10
11 **DR. CALAY:** I thought that I checked the SSC document and matched
12 the numbers in the table in this presentation to your
13 recommendation, but we could double-check that.
14
15 **CHAIRMAN NANCE:** Ryan.
16
17 **MR. RINDONE:** Shannon, I'm looking at the SSC summary report
18 from September of 2020, and the ABC was set at the yield at F
19 at OY, or 85 percent of F at MSY.
20
21 **DR. CALAY:** All right. My apologies.
22
23 **MR. GREGORY:** But that's a minor point. If somebody is comparing
24 numbers, that would be why they wouldn't be the same, and I
25 don't think it affects any of this discussion otherwise.
26
27 **DR. CALAY:** That's correct.
28
29 **CHAIRMAN NANCE:** Doug, thank you for pointing that out. Dave
30 Chagaris.
31
32 **DR. CHAGARIS:** Thank you. I am just trying to understand this
33 a little bit better. Shannon, can you give us some idea of the
34 magnitude of change going from the CHTS to the FES, as well as
35 the difference between the 2012 and the 2020 shrimp data?
36
37 **DR. CALAY:** Well, the difficulty really is that that direct
38 comparison is very difficult to make. When we use Model 2 and
39 substitute in the FES statistics, and so we're doing a direct
40 replacement of CHTS with FES, the difference looks relatively
41 small, but we have changed, to some extent, the configuration
42 of the stock assessment model, and so, rather than looking
43 ideally --
44
45 **DR. CHAGARIS:** I was actually asking about the input data.
46
47 **DR. CALAY:** The FES statistics show more removals, and so it
48 basically is higher landings from the recreational sector out

1 of the FES estimates, but, when you put those higher numbers
2 directly into the SEDAR 38U model, you don't see -- When you
3 look at the comparisons between Model 1 and Model 2, you don't
4 see that expected change that we've seen with some other stock
5 assessments, where you get that corresponding large increase in
6 OFL and ABC.

7
8 In this particular case, it has to do with the changes made to
9 improve the SEDAR 38 update model and the shrimp bycatch
10 estimate, which was very different, and so the shrimp bycatch
11 estimate for -- Well, that gets into the Model 3 configuration,
12 and so we'll just look at Model 2 and Model 1 right now. It
13 really has to do with the changes made to reconfigure the SEDAR
14 38U update model to improve its stability, and it confounds, to
15 some extent, that expected difference in OFL and ABC that we
16 have seen in other stock assessments from the introduction of
17 FES statistics. It does not look like a very large change in
18 the SEDAR 38 model.

19
20 **DR. CHAGARIS:** I understand all of that. I was wondering like
21 are the FES estimates double the Coastal Household, or are they
22 10 percent? Was it a big change, because, for some species,
23 the change going from Coastal Household to FES was really large,
24 but, for others, it wasn't, and so I'm just trying to get an
25 understanding of what would be the expected change. This is
26 one of the cases where FES results have been really -- I'm sure
27 this was presented at another meeting, but I'm just trying to -
28 -

29
30 **DR. CALAY:** I'm going to see if I can answer your question. I
31 was booted off the internet entirely, and so I'm literally
32 talking at my cellphone, and I'm going to try to look that up
33 for you now, assuming I can access the internet.

34
35 **MR. RINDONE:** Shannon, I actually have this up and can answer
36 these questions, if you like.

37
38 **DR. CALAY:** Thank you.

39
40 **MR. RINDONE:** Dave, generally speaking, FES results in about a
41 twofold increase over CHTS for Gulf kingfish, and, if you guys
42 look at the SSC meeting materials, you will see the couple of
43 links on there for the past SEDAR stock assessment reports,
44 under Item VXIII, and Item XVIII(d) is the SEDAR 38 update stock
45 assessment report, and, if you go to Figure 5.1, you can see
46 where Michael isolated some of the main changes to -- Going from
47 SEDAR 38 to the update, to show you the effects of those,
48 including FES, the changes to the headboat index, and then the

1 change to the estimation of shrimp fishery bycatch.

2
3 Those are -- The effect of those on estimates of spawning stock
4 biomass through the 2012/2013 fishing year are demonstrated by
5 comparison in those plots there, and so, if you're talking
6 specifically about the change in the shrimp fishery bycatch,
7 generally speaking, it gives you a larger initial estimate of
8 spawning stock biomass at the beginning of the model start time,
9 and then it drops more precipitously towards about -- Call it
10 1990. Then it trends back up to about the mid-2000s, and then
11 it drops in the last couple of years, but it generally follows
12 the same trend as SEDAR 38's original model.

13
14 **DR. CHAGARIS:** Okay. Thank you for that, Ryan. I was able to
15 follow and see those figures, and so, in general, these are much
16 larger increases than removals that are being added between the
17 models, and that's what I was trying to get at. Thank you.

18
19 **CHAIRMAN NANCE:** Trevor.

20
21 **DR. MONCRIEF:** I will just follow-up, and I had the same
22 question, Dave, and not just for this, but for the upcoming
23 agenda item as well, but I think it is useful, at least, when
24 we're making these large-scale changes in removals, to at least
25 look at the proportional change in removals compared to the
26 proportional change in the ABC, just to be able to have an idea
27 of the magnitude of change between both.

28
29 **CHAIRMAN NANCE:** Okay. Thank you. Go ahead, Shannon.

30
31 **DR. CALAY:** Okay. These just show you graphical representations
32 of the change in ABC and also the difference in the ABC of the
33 various model runs, and so it's just a graphical presentation
34 of the results in those tables, and you can see that Models 1
35 and 2 are similar in the way that they behave, and then Model 3
36 and 4 are much higher, and that does appear to be -- An important
37 aspect of that is the shrimp bycatch estimation.

38
39 This first bullet point, which I admit that I probably modified
40 somewhat from what Michael had initially said, I don't think
41 it's fair to say that they are primarily due to the FES
42 statistics, and we do see some changes in OFL and ABC due to
43 the use of FES recreational statistics, but that is confounded
44 by the additional changes that were made to the stock assessment
45 parameterization to improve model stability.

46
47 We also see changes in the result due to new years of data since
48 the previous assessment, the revised shrimp bycatch estimates,

1 which were quite sensitive in the model, and revisions to the
2 headboat landings and discards, which also caused changes in
3 OFL and ABC. It is rather difficult, in this case, to actually
4 sort out the change in FES. Because of the other changes in
5 model configuration, it is simply not as apparent as it has been
6 in some other stock assessments. Are there other questions
7 about this presentation?

8
9 **CHAIRMAN NANCE:** Any additional questions, please? Roy.

10
11 **DR. CRABTREE:** I am sorry if I am dense, but I having a really
12 tough time understanding how this could be, and so you went into
13 the model and effectively doubled the recreational catches, in
14 a stock that is principally -- Most of the harvest is rec, yet
15 the ABC comes down a little, and so, Shannon, is what you're
16 saying is the catches were way high up until 2013, and then they
17 plunged down, because the ABC went down, and, if so, does that
18 mean those high catches drove the stock status down, because I
19 am not seeing where this is showing it. It just doesn't follow,
20 to me, how you can double the catches, all other things equal,
21 and have the ABC actually go down, and something is just not
22 computing.

23
24 **CHAIRMAN NANCE:** Ryan.

25
26 **MR. RINDONE:** Thank you, Mr. Chair. I think there's a couple
27 of things to remember here, especially for kingfish. One, we
28 had a very large mixing zone that we resolved in SEDAR 38 to be
29 constrained only to be south of the Florida Keys and only -- So
30 that reduced a little bit of the scope of the recreational
31 effort that was going into the fishery.

32
33 Two, prior to the migration of the FES, the CHTS landings were
34 pretty comparable to the commercial landings in many years, in
35 terms of the magnitude by fishing year, a few million pounds,
36 give or take, with some variation in and around that, but,
37 generally speaking, the commercial and recreational landings
38 were not that different.

39
40 The migration to FES increased those landings, along with the
41 effort, but, prior to, they were pretty comparable, and kingfish
42 is -- Third being that kingfish is unique in that, unlike many
43 other species that we manage, the recreational sector does not
44 catch its ACL for kingfish, and hasn't for well over twenty
45 years, and so, every time the model is predicting that, all
46 right, in 2020, you can catch X, and in 2021 you can catch X,
47 in every successive year, we're actually underestimating what
48 could be caught, all other things being equal, because the

1 recreational sector is not harvesting those fish.

2
3 In the case of kingfish, also, for the last decade, recruitment
4 has been poor. It's been terrible, and so that's so that's
5 another thing to try to resolve with respect to where the
6 spawning stock biomass is against what the landings are, even
7 after migrating to FES. There is more interesting things, I
8 think, at play here than there are typical of some of the other
9 species that we see.

10
11 **DR. CRABTREE:** I think that has to be the case, that there's a
12 lot of stuff going on here, but I can't tell what any of it is
13 just by looking at the ABCs.

14
15 **CHAIRMAN NANCE:** I think, Shannon, from what you were saying,
16 and hopefully I got this right in my head, but when -- From
17 Model 1, when you introduced the FES values, the model wasn't
18 converging, and you had to make some changes to the model in
19 order for FES to be input in there and get convergence, and is
20 that correct?

21
22 **DR. CALAY:** Well, I have some answers to these questions.

23
24 **CHAIRMAN NANCE:** Okay.

25
26 **DR. CALAY:** So Model 1 is the SEDAR 38 model that was conducted
27 in 2014. The other model runs all use the SEDAR 38 update model
28 as the base, and that update model did have changes that were
29 introduced during the update process, right, and so those
30 changes were made to enhance the model stability because, in
31 the SEDAR 38 update, when we switched to FES statistics, the
32 model essentially did not -- It showed diagnostic behavior that
33 was unacceptable, and so some updates needed to be made to the
34 way that was parameterized.

35
36 Only Model 1 of this particular comparison uses the SEDAR 38
37 configuration, and all the others, Models 2, 3, and 4, have
38 those SEDAR 38U configurations.

39
40 Now, in answer to Roy's question, when we went to SEDAR 38U,
41 and we put the FES statistics into that model, what happened
42 was that the model estimates a much higher spawning stock
43 biomass in the unfished condition, but it actually estimates
44 very similar spawning stock biomass in the terminal year, and
45 so it's basically saying that the stock is more depleted now
46 than the SEDAR 38 model had suggested.

47
48 **DR. CRABTREE:** Well, that kind of makes sense, and that's what

1 I was wondering if wasn't happening here, is those higher
2 removals we fished the stock down.

3
4 **DR. CALAY:** Exactly, and so that's why you're not seeing the
5 bigger changes in OFL and ABC that we might have expected.

6
7 **DR. CRABTREE:** I've got you.

8
9 **MR. RINDONE:** That is part of it. When you think about the
10 recruitment situation also, and the fact that, right now, our
11 spawning stock biomass, while above the minimum stock size
12 threshold, is still below spawning stock biomass at MSY, and so
13 the OFL and ABC recommendation that you guys approved in
14 September of last year is on an increasing trend, and it's
15 because, theoretically, the stock should be rebuilding to SSB
16 at MSY under that catch advice.

17
18 **CHAIRMAN NANCE:** Thank you. John.

19
20 **DR. FROESCHKE:** Thanks. I just wanted to bring up one other
21 point that is relevant, and it's on this Figure 3.8 in the
22 report, and it shows the difference between the shrimp bycatch
23 in there, and so the way that I interpreted this is, in the
24 SEDAR 38U, the shrimp bycatch historically was much larger, and
25 so, in order to have the observed landings, the productivity of
26 the stock must have been higher.

27
28 Going into more recent times, that shrimp bycatch has largely
29 gone away, or essentially they are similar between the models,
30 and so that's when you start picking up the additional removals
31 related to that historical productivity, and so I think, along
32 with Shannon's answer, that is how I understand those pieces
33 fit together.

34
35 **CHAIRMAN NANCE:** Okay. Thank you very much. Doug.

36
37 **MR. GREGORY:** I wanted to thank Michael and the Center I guess
38 for doing all of this. The original request coming from my
39 friend, John Sanchez, who was a council member, was for the
40 Center to go back and put FES back into SEDAR 38, and that could
41 not be done, as Shannon has explained, and so I guess the Center
42 said how can we try to figure out what the effects might be,
43 and so we have this document in front of us, which, in the end,
44 is not very helpful, because of all the confounding factors,
45 but I applaud the effort to try to piece that out.

46
47 What John was trying to figure out was, given that FES causes
48 the ABC to go up, it should have also allowed the commercial

1 sector ABC to increase, and how much would that have been, and
2 that was a big conundrum, because you just can't do that, and
3 so I appreciate all of this. It's kind of insightful, but, at
4 the same time, I don't think we can do anything with it, going
5 forward. Thank you.

6
7 **CHAIRMAN NANCE:** Thank you, Doug. Jim.

8
9 **DR. TOLAN:** I will put my hand down. I think Ryan covered a
10 lot of the points that I was going to make about the recreational
11 side quite eloquently, and so I don't really have anything to
12 add. Thank you.

13
14 **CHAIRMAN NANCE:** Thank you, Jim. Josh.

15
16 **DR. KILBORN:** I am curious, and is it possible to use the CHTS
17 values in the SEDAR 38U configuration, or does that also result
18 in a destabilized model?

19
20 **CHAIRMAN NANCE:** Can you repeat the question?

21
22 **DR. KILBORN:** The question was, to kind of have a directly
23 comparable Model Number 2 to Model Number 1, could you have used
24 the CHTS values, in lieu of the FES, in the new 38U configuration
25 for the Stock Synthesis, or does that also break the model,
26 basically?

27
28 **DR. CALAY:** It does not break the model. The SEDAR 38U model
29 is fairly robust to those types of changes, but, because of the
30 mixing zone and the way the stocks are distributed across, it's
31 not something that I can get directly from S&T on their website,
32 necessarily, and so it would take a little bit of effort from
33 our data providers to get those estimates in CHTS units, but I
34 do think -- I am not positive, but, in our perturbations of the
35 SEDAR 38U model, it did appear to be a fairly robust
36 configuration, and so I would like to understand the --

37
38 **DR. KILBORN:** I think that would provide a more --

39
40 **DR. CALAY:** The trick is to understand specifically what the
41 council's question is and what sort of information the Science
42 Center might possess to help them address that question, because
43 it seems like the work that we have conducted to-date so far
44 has not really helped them address the question at-hand.

45
46 **DR. KILBORN:** So, I mean, that might help to kind of shed some
47 light on what the new model configuration kind of did, and then
48 we would be able to tease out some of those changes when we look

1 at these other configurations that you have here for Model 2,
2 3, and 4. That's all.

3
4 **CHAIRMAN NANCE:** Thank you, Josh. Any other questions or
5 comments? Benny.

6
7 **DR. GALLAWAY:** I was impressed by the shrimp trawl bycatch
8 decline and the consistency between the two approaches, and, in
9 the report, which I have not read, is it explained what those
10 changes were? Obviously, there is a reduction, a huge
11 reduction, in effort, but when and where might be very important
12 as well, and is that addressed at all in the report, or is that
13 something that one would have to go tease out? Thank you.

14
15 **DR. CALAY:** So, unfortunately, and this was something that we
16 were very honest about during the SEDAR 38 update process, those
17 SEDAR 38 shrimp bycatch estimates that are used in the stock
18 assessment are not explained with the document, and they are
19 not reproducible, and we did have a variety of people attempt
20 to reproduce those estimates, and we could not reproduce them
21 at all, and so, unfortunately, it seems to be not possible, at
22 this time, for us to explain, and the analyst responsible no
23 longer works for the agency, and so I apologize for that
24 extremely unsatisfactory answer, but that is the honest answer.

25
26 **DR. GALLAWAY:** That's the important answer, and so thank you.

27
28 **CHAIRMAN NANCE:** Jack.

29
30 **DR. ISAACS:** This really is just more of a question, for my
31 curiosity, and, Ryan, I thought you did a pretty good job of
32 explaining the fact that, when you switched from the old system
33 over to the FES, you saw this doubling in recreational landings
34 for the king mackerel, and am I correct? Did you see with other
35 species?

36
37 **MR. RINDONE:** The degree to which the increases between CHTS
38 between FES are observed vary by species and by year. It really
39 depends on the species, and you have to look at them in
40 particular, but, in almost all cases, it is an increase of some
41 amount.

42
43 **CHAIRMAN NANCE:** Roy, did you have a comment?

44
45 **DR. CRABTREE:** Remember it's a broad effort survey is the change.
46 This is all interesting, to give you a sense of the changes and
47 all, but it's also complicated in these models, and there are
48 so many different things changing, and I guess it's just not

1 clear to me where we could go from here, in the absence of some
2 specific question that the council is trying to get at with it,
3 and I'm just not sure where we -- I mean, I appreciate all the
4 work that the Center did, and they did a great job with it, but
5 I'm just not clear where we can go with it.

6
7 **CHAIRMAN NANCE:** Go ahead, Ryan.

8
9 **MR. RINDONE:** I think part of where the council was looking for
10 some insight here was just to try to have, in their minds, an
11 image of, if we had used the data we have now back then, what
12 sort of catch limits would we have had back then, versus what
13 we have now, and I think, and Shannon has definitely talked to
14 this point, that the stock is depleted from where it was when
15 we assessed in 2014, using data through the 2012/2013 fishing
16 year.

17
18 There is a number of reasons for why this might be, but,
19 generally speaking, like some of the things that we could
20 certainly point to would be trends in recruitment are below the
21 long-term average for the last ten years, and they have remained
22 there for the last ten years, and so a couple of boom years of
23 recruitment can certainly turn things around for any fishery,
24 but that just hasn't happened yet for kingfish.

25
26 We've also seen the consistent pressure applied to the stock,
27 in terms of the commercial sector just about always landing its
28 ACL, and, in some years, the recreational sector lands a little
29 bit more than normal, but the recreational effort is certainly
30 not limited either, and the council recently increased the bag
31 limit for the recreational sector to three fish per person, but,
32 despite doing that, we didn't really see a change in the
33 recreational landings as a result.

34
35 If there is a decrease in abundance, despite an increase in the
36 predicted size of the stock, as a result of using the FES, at
37 least from my seat, I'm eyeballing recruitment as being somewhat
38 culpable and without an explanation as to why.

39
40 **CHAIRMAN NANCE:** Jason.

41
42 **MR. ADRIANCE:** Thank you, Mr. Chair. Ryan, thinking about the
43 question the council is supposed to ask, if we were able to look
44 at this back in time, and I guess the big question is could the
45 commercial sector have harvested more, and I'm certainly not an
46 economist, and I would be curious, but wouldn't we have to also
47 go back and look at the capacity of those fleets, and would they
48 even have been able to harvest it, given that they don't

1 currently --

2

3 **CHAIRMAN NANCE:** Go ahead, Ryan.

4

5 **MR. RINDONE:** Thanks, Jason. Based on our understanding of the
6 performance of the commercial fleet for kingfish historically,
7 I think it's very reasonable to say that, if given a larger ACL,
8 that they would be able to harvest it. For many years, we've
9 curated the history of the quota closures associated with the
10 different commercial zones, and, with few exceptions, those
11 zones almost always close early, due to those zone quotas being
12 met.

13

14 Obviously, at some point, if you inject enough quota into that
15 sector's ability to fish, the season is going to end before they
16 catch everything, but I am confident in saying that there is
17 still extra capacity in that fleet to catch more fish, if given
18 the opportunity to do so.

19

20 **MR. ADRIANCE:** Thanks.

21

22 **CHAIRMAN NANCE:** Doug Gregory.

23

24 **MR. GREGORY:** Ryan answered the question. Thank you.

25

26 **CHAIRMAN NANCE:** Tom Frazer.

27

28 **DR. FRAZER:** Thank you very much. Again, I missed a couple of
29 minutes of this conversation, but I just wanted to make sure
30 that people understood the request that was coming from the
31 council, and I think they do.

32

33 Essentially, what was asked is whether or not we could hindcast
34 the data, right, using the FES equivalents to look at the ABC,
35 and then, when you had an adjusted ABC, and then you applied
36 the allocations to the two sectors, it was just being able to
37 provide an idea of the magnitude of the fish that might have
38 been available to the commercial sector historically, and so I
39 just wanted to make sure that we're all on the same page here.

40

41 **CHAIRMAN NANCE:** Okay. Tom, thank you. I guess let me ask you
42 this, from my perspective for the SSC, and what do we need to
43 do? Do we need to do anything with these results to help the
44 council?

45

46 **DR. FRAZER:** You know, I guess I would ask Shannon, and so, if
47 we were to look -- Do we have the data in-hand that would allow
48 us to go back into the historical catch record and look at the

1 adjusted ABCs that were adjusted using the FES numbers, right,
2 to figure out what a potential harvest of the commercial sector
3 might look like with those numbers, given the allocation split?
4

5 **DR. CALAY:** Tom, I admit that I'm not entirely certain what
6 you're requesting. Are you just asking for us to examine the
7 statistics themselves and let you know what the allocations
8 would have been historically if we had been using FES
9 statistics, or are you --

10
11 **DR. FRAZER:** That's what I'm asking, and so, if you use the FES
12 numbers, right, and you applied them to the historical record,
13 and you had an adjusted ABC, based on the allocation at the
14 time, what would the number of fish be that would have been
15 available to the two sectors? That's the question. That's what
16 people are interested in knowing.

17
18 **DR. CALAY:** That's a very involved analysis. What you're
19 essentially asking us to do is to do a hindcasting approach
20 where we remove, sequentially, a year of the data, back in time,
21 and re-project the OFL and the ABC based on that new
22 understanding of the FES and CHTS about the recreational and
23 commercial allocations, and, in the past, when we've had that
24 conversation about that proposed body of work, it didn't rise
25 to the priority where the Center felt that we could afford to
26 put the staff time on it to do it justice, with our other
27 obligations in mind.

28
29 If the council does still desire that, we can have another
30 conversation about what work could be done and how long that
31 work would take, but it's not the request that you're asking
32 for.

33
34 **DR. FRAZER:** I appreciate that, and I'm super sensitive to the
35 workload that the Science Center has, and I think it would be
36 good to explain that at the next council meeting, what process
37 is involved, how many resources might be involved, and why it
38 hasn't risen to a priority within the agency, and it may be, in
39 fact, very well justified, but I just think some explanation,
40 either coming through the SSC's report to the council, I think
41 would be welcomed.

42
43 **CHAIRMAN NANCE:** Ryan.

44
45 **MR. RINDONE:** Tom and Shannon, I am looking at Table 2 in Item
46 XVIII(b) in the report for the analysis, and, Tom, I think this
47 is about as close a stone's throw as you're going to get to what
48 the OFL and the ABC would have been projected in the out years

1 from the beginning of the SEDAR 38, the original assessment,
2 and that projection period.

3
4 If you think about -- If you're looking at those annual
5 projections for OFL and ABC, given the parameters for Model 2,
6 which, again, is the SEDAR 38 update model using a terminal year
7 of the 2012/2013 fishing year, using the MRIP-FES data and the
8 2012 estimate for shrimp bycatch, and so this -- Model 2 is
9 using SEDAR 38 and everything else, and FES and -- The SEDAR 38
10 parameterization, but everything else is basically the same,
11 and so it's not exactly apples-to-apples to what the council
12 was asking for, because, like Shannon said, you can't just plug
13 FES into SEDAR 38, and there were other changes that were
14 necessary, but it gives you some idea.

15
16 If you apply the allocation there, 32 percent of that ABC,
17 that's about what would have been available to the commercial
18 fleets, and it looks like, if we're thinking about contemporary
19 time series here -- So 11.65 million pounds times 0.32 is 3.728
20 million pounds landed weight, and so it's not terribly more than
21 what is being projected right now under a status quo allocation
22 with the SSC's updated OFL and ABC recommendations, but it is a
23 little bit more, but we also have to be cognizant of where we
24 think the status of the stock is now, and we think it's a little
25 bit more depleted than it was at the end of the 2012/2013 fishing
26 year. That's just something to chew on, I guess.

27
28 **DR. FRAZER:** I agree that it's a helpful or useful exercise to
29 look at those model projections, I guess moving forward, but I
30 am good with this discussion, and I think that, again, we can
31 provide a summary of the discussion and highlight some of the
32 key points in the SSC report to the council, so they can
33 understand that we in fact did consider the request, and, if
34 they want more than that, if they think it will be extremely
35 valuable, given the large number of things that are on
36 everybody's plate to pursue, then that's a discussion they would
37 have, but they would benefit, certainly, from this discussion.

38
39 **CHAIRMAN NANCE:** Thank you, Tom. Doug Gregory.

40
41 **MR. GREGORY:** Thank you. The presentation on the website is
42 not exactly the same that Shannon is presenting to us. On the
43 website, there's a mistake with the ABCs for Model 4, and that's
44 minor, and it doesn't affect the discussion at all, but I just
45 think we should have the corrected document on our website, and
46 I wholeheartedly agree with the council chair, Tom, what he's
47 asking.

1 It would provide a lot of insight, and, relative to what Ryan
2 was saying about this stock being more depleted now than before,
3 recall that we're only catching maybe two-thirds of the ABC over
4 the years, and so something is going wrong in this stock.

5
6 If recruitment is going down that much over this time period,
7 we need to take a closer look at this and maybe start doing some
8 more frequent assessments, because the stock used to extend into
9 the Atlantic, and that was based on research done in the 1970s,
10 when it was extremely cold weather.

11
12 Now that we've got climate change and the warming temperatures,
13 the king mackerel stock in the Gulf doesn't really swing around
14 the south end of Florida and go up the east coast anymore. In
15 fact, the gillnet fleet, which fishes in January, seems to be
16 going more and more north every year, by a mile or two or three,
17 just to find the concentrated schools of fish.

18
19 This population -- In SEDAR 38, I didn't hear any discussions
20 of the population shrinking or the population getting more dense
21 on the Gulf side, but that was a dramatic change, but maybe we
22 need to look into it more and see what the dynamics of this
23 fishery is, because us fishing so much below the ABC -- We
24 shouldn't be having a declining stock. Thank you very much.

25
26 **CHAIRMAN NANCE:** Thank you, Doug, for those comments. Any other
27 comments or recommendations? Ryan.

28
29 **MR. RINDONE:** Thank you, Mr. Chair. Shannon, just looking at
30 the difference in the Table 3 in the presentation versus this
31 table here in the report, it looks like, for Model 2, that there
32 are some differences there, as far as what the ABC would have
33 projected to have been by year. I think that probably would
34 have affected what those percentage differences shake out to be
35 in that red box.

36
37 **DR. CALAY:** We can get an update presentation to Ryan soon.

38
39 **CHAIRMAN NANCE:** So what's different, Ryan?

40
41 **MR. RINDONE:** The numbers of the projected ABC that are on the
42 table that are in front of you, and this is from the simulation
43 report for Model 2, for the ABC, for that right-most column
44 there, for the Model 2 table, and those values are higher than
45 those that are presented in Table 3 of the presentation. Those
46 values are higher than those presented for the ABC here, and so
47 it may just be a matter of redoing that table in the
48 presentation.

1
2 **MR. GREGORY:** Also, if I may jump in, the ABC and the OFL in
3 Model 4 are identical, and that's what I was looking at earlier.

4
5 **CHAIRMAN NANCE:** What was that, Doug?

6
7 **MR. GREGORY:** In this table that came from the website, in Model
8 4, the OFL and ABCs are identical. That's what caught my eye
9 earlier, where I requested an updated table.

10
11 **CHAIRMAN NANCE:** So it looks like, maybe in the report, when it
12 got copied to the slide, Shannon, it got -- It didn't come over
13 correctly or something.

14
15 **DR. CALAY:** Is it just Model 3?

16
17 **CHAIRMAN NANCE:** No, and it looks like Model 4. In Model 4 on
18 your slide, it's -- The OFLs and the ABCs are identical to one
19 another, and then, on Model 2, like for example the OFL is 8.63,
20 and, in the other one, it was fourteen-something, and so
21 something went on with the --

22
23 **DR. CALAY:** Okay. We will make the needed corrections and post
24 correct documentation soon.

25
26 **CHAIRMAN NANCE:** Okay. You can see that one that's on the
27 screen now, Shannon?

28
29 **DR. CALAY:** Yes.

30
31 **CHAIRMAN NANCE:** You can see that Model 2 says fourteen-
32 something, and, on the other one, it was eight. Then, on this
33 one, on Model 4, the OFLs and the ABCs are different.

34
35 **DR. CALAY:** This came from a council request that I think was
36 in March, and so it's possible that there is essentially a
37 disconnect between the draft document and the presentation, but,
38 in any case, it's an easy fix, and we'll get corrected and up-
39 to-date documentation to the SSC archive as soon as possible.

40
41 **CHAIRMAN NANCE:** Thank you very much. I appreciate that.
42 Anything else from the SSC? Dr. Frazer.

43
44 **DR. FRAZER:** Thank you. I don't want to prolong the discussion,
45 but I just want to ask a few questions that would help me think
46 about this a little bit. In the model, I am curious how the
47 discard mortality is handled, particularly with regard to the
48 recreational fishery.

1
2 As people have indicated before, they are not necessarily
3 landing their allocated catch, but we know that effort is
4 increasing, and there is likely to be very high encounter rates,
5 and that's one of the attributes of the fishery that folks have
6 recognized, a positive attribute, at least from the recreational
7 side, but, with that increasing encounter rate certainly comes
8 increased mortality, and I am wondering if that potentially
9 plays a large role in some of the model output.

10
11 **DR. CALAY:** Was that you, Tom?

12
13 **CHAIRMAN NANCE:** Yes, Shannon. That was Dr. Frazer, yes.

14
15 **DR. CALAY:** I'm sorry, but could you restate your question, real
16 quick?

17
18 **DR. FRAZER:** Again, it's pretty brief, really, and so one of
19 the things I'm interested in is how discard mortality,
20 particularly from the recreational sector, is handled in the
21 model, and the reason that I ask that is because, even though
22 that sector hasn't historically landed its allocated quota, it
23 certainly has increased pressure, and, associated with that,
24 increased encounter rates and discards, and so I am wondering
25 if that plays a large role in some of the model output, or the
26 model findings.

27
28 **DR. CALAY:** This was an update assessment, and so the discard
29 mortality was unchanged between SEDAR 38 and SEDAR 38U, and the
30 discard mortality that was selected for the recreational
31 components were 22 percent from headboat and 20 percent from
32 charter and private boats, and so those assumptions were
33 retained between SEDAR 38 and 38U. Is there more?

34
35 **DR. FRAZER:** Well, my question then would be those values of
36 twenty-plus percent were empirical data, and I'm just wondering,
37 from the SSC, if there were any other more recent information
38 that might provide insight into perhaps more realistic discard
39 mortality numbers for that particular fishery.

40
41 **CHAIRMAN NANCE:** I am not aware of any, but there may be others
42 that may.

43
44 **DR. FRAZER:** Okay. I will just sit and listen. If there's no
45 input, that's okay.

46
47 **CHAIRMAN NANCE:** Okay. Thank you. Trevor.

48

1 **DR. MONCRIEF:** I mean, I don't have any more information or
2 anything else about that, but I did want to point out -- I mean,
3 looking at the Model 4, it certainly seems like it could be just
4 a little bit of an oversight, but I would be very interested in
5 Model 2 and how -- Which results are correct and which ones
6 actually are selected, because, if the document is correct, and
7 it shows a pretty common, or at least some comparability between
8 the increase in landings and the overall increase in the ABC,
9 and so I think Model 2 needs a little bit of focus, to make sure
10 it's correct.

11
12 **CHAIRMAN NANCE:** Okay. Thank you, Trevor. John.

13
14 **DR. FROESCHKE:** I guess I was sort on in that same vein, in
15 that, if the fourteen million pounds for Model 2 is correct,
16 then I think that changes how we interpret that table that steps
17 through the various models, and so that would change my thinking
18 on that quite a bit, and perhaps make it more interpretable to
19 directly answer the council's question, based on the information
20 we have at-hand.

21
22 **CHAIRMAN NANCE:** Okay. Anything else from the SSC? I want to
23 commend the Center. It was a great job on this analysis, and
24 so we appreciate that. Without anything else, let's go ahead
25 and move on to the next, which is Review of King Mackerel
26 Historical Commercial Harvest Differences. It's Item XIX. Do
27 you have the short straw on this one too, Shannon?

28
29 **DR. CALAY:** I believe I do.

30
31 **CHAIRMAN NANCE:** Okay.

32
33 **DR. CALAY:** This one is a little bit simpler though, and Ryan
34 can certainly tag-team, if this is the one that I believe it to
35 be.

36
37 **MR. RINDONE:** It should be XIX(a). Hold on. Tell you what.
38 It's XIX(f).

39
40 **CHAIRMAN NANCE:** All right, Shannon. It's showing. You've got
41 an apple and an orange.

42
43 **REVIEW OF KING MACKEREL HISTORICAL COMMERCIAL HARVEST**
44 **DIFFERENCES**

45
46 **DR. CALAY:** A little cheeky there, but we were asked,
47 essentially, to look at a table that was presented at the June
48 council meeting which implied that the commercial landings were

1 in fact quite different between SEDAR 38 and SEDAR 38U, the
2 update, and I will just give you the short answer first.

3
4 They are not different. These were a variety of essentially
5 misunderstandings that evolved from documentation that
6 potentially could be improved, to some extent, and so here's
7 the picture that shows you that the commercial landings data
8 for SEDAR 38 and SEDAR 38U are in fact virtually identical.

9
10 You can see a little hidden bit of red there popping out from
11 place to place, where there is a small difference between 38
12 and the update assessment, but there is nothing important --
13 There are no important differences there.

14
15 **MR. RINDONE:** That's the terminal year of SEDAR 38, also, by
16 the way.

17
18 **DR. CALAY:** Right, and so that was due to some incomplete
19 reporting, most likely. The table that was in question is shown
20 here, and you can see that, in the area that's outlined in red,
21 there was a column that was marked Gulf of Mexico commercial
22 handline landings and gillnet, and it was summed to produce a
23 commercial total landings for SEDAR 38, but, in fact, those
24 numbers did not -- They did not come from the Science Center,
25 and they were put together from various documents and not --
26 They are, essentially, not correct as added together.

27
28 I think the next slide will tell you a few reasons why, and so,
29 essentially, those data that were shown in the council table
30 contain errors that were attributed to differences in how the
31 data were presented in the stock assessment report and used in
32 the stock assessment.

33
34 However, when they are summarized in a consistent manner,
35 meaning if you had taken the input data from the two assessments,
36 the commercial data are essentially identical.

37
38 We do have a variety of different ways of summarizing data in
39 the documentation process of a stock assessment, and so, for
40 example, during the data workshop, the data may be summarized
41 by gear or by region, but they're not necessarily summarized in
42 the way that they were input directly into the stock assessment,
43 and so, in this particular case, what was actually added
44 together in that table presented to the council contains several
45 errors, one of which was that data that were actually the total
46 landings for the Gulf of Mexico region were added to gear-
47 specific landings for the same region, essentially double-
48 counting some information.

1
2 We also had an offset, where one set of tables was produced in
3 calendar year, meaning the sum of the monthly data from January
4 to December, but the stock assessment model actually uses the
5 fishing year in the Gulf, and so the data input into a stock
6 assessment are summarized from July 1 to June 30, and so we were
7 able to systematically make each of these corrections and show
8 that the input data for SEDAR 38U and SEDAR 38 are essential
9 and that, in fact, the table had a variety of misunderstandings
10 that arose from essentially the rather difficult nature and
11 lengthy nature of our stock assessment documentation.

12
13 I don't have to say the Bullet Point 1 again, I don't think,
14 and what I do want to say is that there may have been some
15 confusion introduced by the way we present information
16 throughout the stock assessment process and from the way those
17 numbers can be pulled by interested parties for use in, for
18 example, documents that might accompany management actions.

19
20 In addition, there were some changes made between SEDAR 16 and
21 SEDAR 38, to the spatial extent of the mixing zone, and those
22 changes were actually made during the assessment workshop
23 process, and so the data workshop itself may have used different
24 assumptions than were used during the final assessment modeling
25 in SEDAR 38 that may have also caused confusion.

26
27 What the Science Center is working on, and it's a rather lengthy
28 process, is to create standardized documentation that will make
29 it very homogenous how data are presented in our future stock
30 assessment reports, so that it's very clear to the user what we
31 are tabulating and how that data should be used.

32
33 This is certainly a work in progress, but we do -- We will be
34 showing you some of our automated documentation. We have, and
35 we will continue, to show you that documentation, and, if you
36 do find that there are improvements that can be made to improve
37 its clarity, we would welcome your input.

38
39 Kind of how do we avoid these sorts of misunderstanding in the
40 future? I mean, the Science Center is very willing, and well
41 equipped, to help you explore any data issues that you might
42 find, or that might arise, and we do routinely respond to
43 requests for data and for analyses from the council and from
44 other management partners as well.

45
46 Essentially, what our recommendation is, it's that, if there is
47 an issue in the future, that it appears that there is a big
48 discrepancy in a stock assessment, the Science Center would be

1 very happy to take a look at that and to try to work that out
2 prior to presentation, so that we avoid kind of the confusion
3 that can arise when we are essentially unprepared to answer a
4 council member's questions at a hot mic. I think that's the
5 last slide.

6
7 **CHAIRMAN NANCE:** Perfect. Yes, and that happened to me many
8 times over the years, and it can cause a great deal of going
9 back and making sure that everything is correct, and so I think
10 the bottom line is that the data are the same, and I think
11 that's the key point. Then I think, as you go into automation,
12 it will help for any future issues like that. Doug.

13
14 **MR. GREGORY:** Thank you. Thank you, Shannon. I got caught up
15 in this with king mackerel, and the standardization is an
16 excellent idea, and I was going to ask for that, at least between
17 the assessment and the following update assessment, because, so
18 many times, we want to go back and see what changed or whatnot,
19 and, a lot of times, I've found that landings might be reported
20 in gutted weight for some species, for one assessment, and whole
21 weight in another assessment and metric tons in one assessment
22 and pounds in the other.

23
24 It gets difficult, and, like you said, fishing year versus
25 calendar year, and it gets to the point where you cannot compare
26 one assessment to the other, as far as the output data, and then
27 you've got, sometimes in the assessment report, the report that
28 is the estimated landings from the model and not the input data.

29
30 I guess the input data should be provided and made clear if
31 there's any estimated landings that are in the report as well,
32 and so the standardization will fix all that, and I appreciate
33 that.

34
35 The other question I have that SEDAR 38 has caused me to think
36 about, and Ryan and others, is how do we account for the
37 historical landings when the geographic area of the Gulf group
38 king mackerel has changed dramatically beginning in 2014, and
39 we stumbled across that when we went back to see what percentage
40 of the quota has the commercial fishery fulfilled.

41
42 Like Ryan said earlier, usually they are closed before the
43 season is over, and so the commercial fishery pretty much takes
44 90 to 100 percent of their quota, but, in some of these reports,
45 or tables, they were taking 60 percent or 50 percent of the
46 quota, and so, historically -- This is a question, I think, for
47 you, or for us, to think about.

1 When we're looking at the landings and the ACLs prior to 2014,
2 in my mind, we should include the east coast of Florida in all
3 of that, because that's what the ACL was based on, but then,
4 after 2014, we do not include the east coast of Florida in those
5 landings, because the ACL now is based only on from south Florida
6 into the Gulf, and so that was one point of confusion that
7 wasn't obvious to some of us, and that should be part of, I
8 think, the description in the assessment and all documents, that
9 this change has been made, and, again, it begs the question of
10 did the population decrease, or did the population just become
11 more dense and shrink, or both? Thank you very much.

12

13 **CHAIRMAN NANCE:** Ryan is going to take a crack at it first.

14

15 **MR. RINDONE:** Sure. Thanks, Doug, and it isn't that the
16 population shrank or became more dense, but it's just the area
17 in which we were measuring the population changed, and so, when
18 we made that initial data request for the commercial landings
19 for kingfish, the landings that were sent to us were under the
20 auspices of the new mixing zone, as was revised for SEDAR 38,
21 but the historical quotas, going from the 2015/2016 fishing
22 season back in time, they still included that Florida East Coast
23 Zone for each fishing year from November 1 through March 31.

24

25 The data that we received, again using that new mixing zone
26 information, they didn't include that zone anymore, and so we
27 were missing several hundred thousand pounds a year of landings
28 from the data that we ultimately received.

29

30 I have since been working with the Southeast Regional Office
31 and S&T, and yesterday, or this morning, I received the data
32 that we were looking for, which is the commercial landings for
33 the Florida East Coast Sub-Zone for November 1 through March 31
34 for each of the fishing years, and so I will be working on
35 updating all of our tables in the CMP 33 document to reflect
36 that.

37

38 At a quick glance, looking at those data, I am pretty confident
39 that it dots all the I's and crosses all the T's, as far as
40 resolving that gap in the landings that we thought that we were
41 missing, and so, where initially you saw that the landings table
42 was showing that there was a -- That the commercial sector was
43 not landings its ACL, that will be resolved, and it will be more
44 accurate to show that the commercial sector has -- As we know
45 that it has, because of the history of the quota closures for
46 each of the commercial zones for the last twenty-five years,
47 and so we have those data, and we'll be working on that.

48

1 **CHAIRMAN NANCE:** Doug.

2
3 **MR. GREGORY:** Thank you, Mr. Chair. One quick response. Please
4 straighten this out before you start calculating percentages
5 for allocation changes. It makes a big difference.

6
7 **MR. RINDONE:** Thanks, Doug, and it will all shake out in the
8 tables when I update all the landings data, and so I have
9 everything set up to automatically populate that information if
10 those data are updated, and so all of that information
11 throughout the document is going to have to be updated, but it's
12 just going to take a minute.

13
14 **CHAIRMAN NANCE:** Shannon, did you have any response to Doug?

15
16 **DR. CALAY:** I think that my main response is that we are aware
17 that our documents can be very dense, and they are mostly --
18 The purpose of them, the data workshop and assessment workshop
19 reports especially, is often just to give us the information we
20 need to duplicate an assessment a few years later.

21
22 We worked very hard on creating an executive summary of the
23 assessment results that can be read by a non-technical audience,
24 and I think what we need to do now is just look at that same
25 information from the assessment report and the data workshop
26 report that you would like to have created in a standardized
27 format, and we will add that to our automation tasks, because I
28 think that there's a real power in creating those automated
29 documents, and it will avoid some of these misunderstandings in
30 the future, and so we are very happy to work on that with the
31 SSC and with the council and council staff.

32
33 **CHAIRMAN NANCE:** Thank you very much. Any other questions from
34 the SSC? Shannon, thank you for those two presentations. I
35 appreciate it.

36
37 **DR. CALAY:** You are very welcome, Jim.

38
39 **CHAIRMAN NANCE:** We will go ahead -- Our next one is amberjack,
40 and it's going to take a while, and so we're going to have a
41 fifteen-minute break right now, and then we'll come back and do
42 Item XX, which is Review of the Greater Amberjack Historical
43 Harvest and Catch Limits. That will take a little bit of time,
44 and so we'll go ahead and come back at 2:40. Thank you.

45
46 (Whereupon, a brief recess was taken.)

47
48 **CHAIRMAN NANCE:** We're going to go ahead and get started here.

1 We're going to go ahead and do Item Number XX, Review of the
2 Greater Amberjack Historical Harvest and Catch Limits. The
3 presentation is by the Southeast Fisheries Science Center.

4
5 **MR. RINDONE:** Is this Katie or Shannon again? I think it's
6 Katie this time.

7
8 **DR. SIEGFRIED:** It's by Matt Smith.

9
10 **CHAIRMAN NANCE:** Matt Smith. Okay. Thank you.

11
12 **REVIEW OF GREATER AMBERJACK HISTORICAL HARVEST AND CATCH**
13 **LIMITS**

14
15 **DR. MATT SMITH:** My name is Matt Smith. For those new members
16 on the SSC that maybe are not familiar with me, I am a lead
17 assessment analyst with the Sustainable Fisheries Division. My
18 previous works have included red snapper and vermilion snapper,
19 and I will be co-leading the SEDAR 74 red snapper research track
20 assessment going forward.

21
22 Today, we're not talking about that, and we're talking about
23 greater amberjack, and I was asked to step in and update these
24 projections with the FES data, because it was something that
25 came out of the vermilion snapper assessment, SEDAR 67, when we
26 started making these comparisons, to try and help the SSC and
27 the council make sense of changing quotas in the face of changing
28 landings data.

29
30 This is a relatively short presentation, and so we're not really
31 going to spend a whole lot of time on details and specifics,
32 but what we ended up doing here is taking the SEDAR 33 update
33 assessment model, which was not the last greater amberjack
34 model, and that was SEDAR 70, and this was the one before that,
35 where the CHTS data was used for the recreational fleets.

36
37 I took just the basic model, and the only things that I changed
38 in there were the private, charter, and headboat landings, as
39 well as the discards, and I replaced those with the FES-based
40 statistics that were produced for SEDAR 70 and used in SEDAR
41 70. The headboat information was changed because some of the
42 calculations in there are depending on the MRIP estimates, and
43 so I updated the headboat one as well.

44
45 What couldn't be changed for this are the indices of abundance,
46 and we do, oftentimes, include fishery-dependent recreational
47 indices in these stock assessments, and there wasn't time, as
48 part of this council request, to rework that index and input it

1 in here, and so only the landings were changed, in this sense.
2
3 I know, from the previous conversation surrounding king
4 mackerel, there were questions about other model configurations,
5 and nothing else was changed in this base model. When I updated
6 the data and refit the model, obviously, it re-estimated some
7 of the parameters, but there weren't any convergence issues or
8 things that came up that required further tweaking in the model
9 to get it to function, and so the only things that happened here
10 were those landings and discards being updated.
11
12 For the projections, I followed what was done in the SEDAR 33
13 update, to try and make them as comparable as possible, and that
14 included using a three-year average to establish the relative
15 Fs, which was 2013 through 2015, and recruitment was derived
16 from the stock-recruitment curve, and this is something that
17 has changed recently.
18
19 With newer versions of Stock Synthesis, we have the ability to
20 do more refined and different approaches to how we handle
21 recruitment in the projections, but, in the SEDAR 33 update, it
22 was an older model of SSC, and the stock-recruitment curve was
23 used to predict recruitment in the projections.
24
25 Selectivity and retention, all the biological functions were
26 taken from the most recent time period, and then, as was done
27 in SEDAR 33, the 2016 landings, sometimes we get landings
28 information that comes after the terminal year, that trickle in
29 kind of late in the process, and then we end up fixing those in
30 the projections, in order to give management advice starting in
31 the next actionable year.
32
33 In the SEDAR 33 update, 2016 was fixed in the projections, and
34 so I did that again here, and I just pulled the FES data for
35 2016 from SEDAR 70 and input those landings directly into the
36 forecast module of Stock Synthesis.
37
38 A couple of projections that were done that were in the request.
39 There was an OFL projection, which here was an equilibrium
40 projection of FSPR 30 percent. There was also a request for F
41 rebuild, which, in this case, is an ABC projection that achieves
42 30 percent SPR in 2027, and then, to try and make this more
43 comparable to SEDAR 33, or at least provide the information, I
44 did two additional projections.
45
46 One was of FSPR 40 percent, and the other was a projection of
47 75 percent of FSPR 30. Those were the two projections that were
48 put forward as possible ABCs in the SEDAR 33 update, which have

1 shown here in this table on the far-right, and the last three
2 columns are the OFLs and ABCs from the SEDAR 33 update. Just
3 so we could have a direct comparison with those old ABC options
4 and what they would look like with FES, I did those runs as
5 well.

6
7 Shown here in the table are what would have come out of the
8 SEDAR 33 update with FES information included for 2017, 2018,
9 2019, and 2020. The first four columns there are the new data
10 with FES, and, like I said, the last three columns are just to
11 show you what came out of CHTS and the SEDAR 33 update.

12
13 I believe I have one more slide, and this was just kind of a
14 clarification. It came to my attention, when I was tasked with
15 doing this, that there was some confusion around these tables,
16 and this one is from greater amberjack, but it's based on
17 something that I produced from SEDAR 67 for vermilion snapper
18 and then did a couple other versions of, and this was just kind
19 of an on-the-fly attempt to try and give some additional
20 information to the SSC and the council about what things would
21 have looked like, and it was kind of a cruder version of the
22 analysis you just saw.

23
24 It seemed as though people were taking the far-right column
25 here, the equilibrium yield column, as being comparable to an
26 OFL, and so I wanted to include this, just as a point of
27 clarification for anybody listening. In these tables, that last
28 column is essentially the equilibrium yield, or what you achieve
29 in a long-term hundred-year projection, when all the variations
30 in the age comp and the constant recruitment smooths itself out
31 and you get this constant equilibrium yield.

32
33 That final column there is not directly comparable to an OFL,
34 and it was simply included in these as a way to get a quick look
35 at whether or not the new advice, in this case from SEDAR 70,
36 that bottom row -- Is that an actual increase, or is that a
37 decrease, compared to what it would have looked like in the
38 past?

39
40 I guess, for the point of the discussion around these numbers,
41 if there is any, the previous slide is the table that has the
42 information to be considered today, and that last slide is just
43 put in there as a point of clarification, because it seems as
44 though the initial intention of that last table was maybe
45 getting misconstrued a little bit.

46
47 With that, that's it for me, and it was a relatively
48 straightforward council request, and I'm happy to answer any

1 questions I can, and I believe some of the people who are more
2 familiar with the nuances of greater amberjack are also
3 available, if there's questions regarding species-specific
4 problems, and so thank you very much, and I will answer any
5 questions that may come up.

6
7 **CHAIRMAN NANCE:** Matt, thank you for that presentation. I just
8 want to remind us that, for this, we're not expected to make
9 any new OFL or ABC recommendations, based on this analysis, and
10 so are there questions that are occurring just on the
11 presentation itself and anything that would help the council in
12 viewing this one? We'll take questions now. Trevor.

13
14 **DR. MONCRIEF:** This is going to follow, essentially, the king
15 mackerel questions, but this is another species where the MRIP
16 landings increased around I think a little over 100 percent, on
17 average, and we see an OFL increase of about 60 percent, but I
18 was wondering, and do you know what the proportional change in
19 total removals were after the change from CHTS to FES?

20
21 **DR. SMITH:** I was listening into the previous call, and I tried
22 to look some of those up, real quickly, and so, when I looked
23 at the percent differences from CHTS to FES for the MRIP fleet,
24 and so the private charter, and you're looking from 1981 to
25 2015, because, prior to 1981, that's the historic stuff, and
26 the statistics I looked at were there was a minimum difference
27 in those years of 13 percent, a maximum difference of 200
28 percent, an average difference of 87 percent, and a median
29 difference of 84 percent.

30
31 Then the change in the ABC recommendation from the SPR 40 percent
32 and the 75 percent was roughly 65 percent, and, depending on
33 which one you look at, it was 62 or 67, and the F rebuild
34 represents an 81 percent increase over the previous ABC values.
35 I hope that helps.

36
37 **DR. MONCRIEF:** That was perfect, and so, essentially, what about
38 -- If you take into account the commercial landings didn't
39 change, but that's a part of the removals as well, and what
40 would be the total proportional change in all removals, I guess
41 is what the question is?

42
43 **DR. SMITH:** The total proportional change in all removals, that
44 one I don't know off the top of my head. I don't have that in
45 front of me, Trevor, unfortunately.

46
47 **MR. RINDONE:** Matt, I think you would have to run it back through
48 to generate that. I don't see that as something that could be

1 pulled out of here.

2

3 **CHAIRMAN NANCE:** Matt, thank you. Doug Gregory.

4

5 **MR. GREGORY:** Thank you. I don't recall what we did before with
6 greater amberjack. What I see here is three different potential
7 ABCs, and could somebody remind me what ABC -- What we used for
8 ABC? Was it F rebuild, FSPR 40, or 75 percent of SPR 30?

9

10 **CHAIRMAN NANCE:** Nancie, can you answer that?

11

12 **DR. NANCIE CUMMINGS:** Thank you very much. I was the lead
13 analyst on greater amberjack, and I looked through the previous
14 question, regarding what was the percentage change in total
15 removals, and I would like to refer you to the SAR report, pages
16 88 and 89, and that gives you a really good pictorial of the
17 percentages of the differences, rather, in the recreational and
18 commercial catches, as well as the discards, and Matt has
19 already touched on the -- It was pages 88 and 89, Figure 3 and
20 4. Matt has already given you a good idea as to the recreational
21 proportional change.

22

23 The commercial from SEDAR 33 to SEDAR 70, up to the same years,
24 were almost nearly identical, and so there was really no
25 proportional difference. We were able to replicate those
26 landings, and then, obviously, we added 2016, 2017, and 2018
27 for SEDAR 70.

28

29 To the second question, and so that is Figure 3, and those are
30 the observed landings, and so the top two are the commercial,
31 and the bottom two are the recreational, and so you're focusing
32 on particularly the FES and the charter/private. To the second
33 question, I think from Mr. Gregory, it was what was used for
34 ABC, and that was 75 percent of OFL, which is F 30, in the SEDAR
35 33 update. Did that help?

36

37 **MR. RINDONE:** It's F rebuild.

38

39 **DR. CUMMINGS:** F rebuild was defined as 75 percent of OFL, F
40 30, in the SEDAR 33 update.

41

42 **CHAIRMAN NANCE:** Okay, and so it's F rebuild that we're looking
43 at is what is currently --

44

45 **DR. CUMMINGS:** F rebuild currently is the fishing mortality rate
46 that will rebuild the stock back to SSB at SPR 30 in the current
47 SEDAR 70 assessment.

48

1 **MR. RINDONE:** That's to be done by --
2
3 **DR. CUMMINGS:** Correct.
4
5 **MR. GREGORY:** That's what we chose as ABC, was the F rebuild?
6
7 **DR. CUMMINGS:** For SEDAR 70, yes.
8
9 **MR. GREGORY:** But not 33?
10
11 **DR. CUMMINGS:** Not 33 or the 33 update.
12
13 **MR. GREGORY:** Okay. That's where I was confused, because, until
14 recently, when it was explained to us, I think we were taking F
15 rebuild as a sort of different OFL, and we were reducing that
16 and calling that an ABC, but then, later, it was explained, I
17 think through Shannon and Rick Methot, that F rebuild itself is
18 an ABC.
19
20 **DR. CUMMINGS:** We actually calculated it. In the SEDAR 33
21 update, I calculated it, at the request of Steven Atran, but it
22 was not used. It was 75 percent of OFL.
23
24 **MR. GREGORY:** Thank you.
25
26 **DR. CUMMINGS:** You're very welcome. Any more questions about
27 that proportional change in total catch, total landings?
28
29 **CHAIRMAN NANCE:** Thank you, Nancie. Shannon.
30
31 **DR. CALAY:** Thank you. Doug is quite correct that, at one time,
32 we were basing OFL on an F rebuild trajectory, but, in fact,
33 the current guidance is that, in the situations where a stock
34 is overfished and requires a rebuilding plan, that rebuilding
35 plan would essentially be an ABC.
36
37 **CHAIRMAN NANCE:** Okay.
38
39 **MR. GREGORY:** Mr. Chair, may I say something?
40
41 **CHAIRMAN NANCE:** Yes, Doug.
42
43 **MR. GREGORY:** Thank you, Shannon. I wanted to share a little
44 bit -- This is more for tomorrow, for the next discussion with
45 amberjack, but I have become quite concerned about greater
46 amberjack, as I'm sure other people have, and it seems like, no
47 matter what management measures are put in place, amberjack just
48 doesn't recover, and we currently have I think an estimated

1 spawning stock biomass way below, significantly below, our MSST,
2 and our MSST is at 50 percent of BMSY, and, if you're to believe
3 any of the theory that gives us MSY, that means the spawning
4 stock population is somewhere below 25 percent of the virgin
5 biomass. That is where we've been talking about this biomass
6 critical point, where dramatic actions are taken, even the
7 consideration of closing the fishery.

8
9 I just wanted to leave that with everybody to think about for
10 tomorrow, and I'm leaning toward really pushing this idea of
11 doing something draconian to try to rebuild greater amberjack.
12 Thank you.

13
14 **CHAIRMAN NANCE:** Okay. Any more questions? Go ahead, Carrie.

15
16 **EXECUTIVE DIRECTOR SIMMONS:** Thanks, Mr. Chair. Just real
17 quick, Nancy, in the presentation, or I guess Matt, sorry, for
18 OFL in the FES units -- I see that it's different in yours. I
19 apologize, because what we have for the SSC -- I got it. Never
20 mind. Thank you.

21
22 **CHAIRMAN NANCE:** Okay. Will.

23
24 **DR. PATTERSON:** Thanks, Jim. Doug, you make a really good point
25 here, and I'm curious. I don't still Mandy still on the call,
26 but maybe -- She is. I'm sorry. I'm wondering -- Maybe this
27 will come up in the next agenda item, but, since Doug has already
28 sort of brought this subject to the table here, to the floor,
29 I'm wondering --

30
31 In the council's -- Not the council's, but the Southeast
32 Fisheries Science Center's work with different constituencies,
33 fishing constituencies, and trying to understand the perception
34 of anglers and fishers on the water about different populations
35 of different stocks of fish, I'm wondering what feedback they're
36 getting on greater amberjack, because different groups that we
37 work with in the Panhandle of Florida, and then a little farther
38 to the west, have expressed a lot of concern about amberjack.
39 I am just curious what anecdotal information that's been
40 collected perhaps in a more objective fashion indicates, as far
41 as population status and trend.

42
43 **DR. KARNAUSKAS:** We have not done a systematic analysis of
44 amberjack, as we've done for some other species, and so the
45 short answer is I don't have any information. Again, as I
46 mentioned earlier, at the red-snapper-focused calls, cobia came
47 up as unprompted, and we have not had any unprompted mentions
48 of amberjack, as I remember, and so I don't know if that's

1 helpful at all, but that's about all the information I have.

2

3 **MR. RINDONE:** From the public comment perspective from the
4 council side, what we typically hear is that, the deeper you
5 go, the greater the odds of being able to find larger ones, and,
6 when you're around wrecks and things like that, you certainly
7 can get into them on occasion, but, typically, what we hear,
8 from the recreational fishermen anyway, is that it can sometimes
9 be difficult to find greater amberjack that are at or above the
10 minimum size limit, which has brought on a little bit more of
11 the impetus for trying to improve the discard mortality
12 associated with those fish.

13

14 Depending on how long they're fought, they can be released
15 pretty heartily even from the depths of say twenty to thirty
16 meters, but, when you get into depths deeper than that, there's
17 probably some latent mortality associated with internal injuries
18 from barotrauma, from being brought up from those depths.

19

20 It's kind of hard to piece together though, because your average
21 fishing trip offshore, fishing for reef fish species, is more
22 likely to encounter various snapper or grouper species with
23 greater consistency, it would seem, at least on the West Florida
24 Shelf, where we have a lot of interaction with anglers and
25 greater amberjack, and so other areas of the Gulf may report a
26 little bit different observations, but, by and large, what we
27 hear is that it's growing to be a little bit more difficult to
28 catch legal-sized amberjack. They can be found, but they're
29 not common.

30

31 **CHAIRMAN NANCE:** Thank you. Benny.

32

33 **DR. GALLAWAY:** Our paper on absolute abundance for federally-
34 managed reef fish around Gulf of Mexico offshore petroleum
35 platforms has now been accepted for publication and will be out
36 soon. A pre-print acceptance version can be found at the *North*
37 *American Journal* website, and it suggests that, based on the
38 number of amberjack on the platforms, essentially from Alabama
39 to Texas, it suggests a much larger stock than is being suggested
40 by the stock assessment.

41

42 We also have a study in progress, and it's not available. It's
43 got to the point where it's under peer review, but where we
44 look at, off of Louisiana, a wider distribution of habitats and
45 amberjack, and those will also provide enlightened results, and
46 so I think -- Or different results anyway, and I think the stock
47 size estimates, in this case, should be reevaluated, and I think
48 there's a study in progress to do exactly that, and so I would

1 say more information might be necessary before any final
2 decisions are made about stock size, and how accessible those
3 stocks are is another matter. They may be larger, based on our
4 experience. Thank you.

5
6 **CHAIRMAN NANCE:** Thank you. Any other questions or comments on
7 this particular item? Will.

8
9 **DR. PATTERSON:** Just in response to Benny's statement about
10 estimates that LGL has made on Louisiana habitats, including
11 petroleum platforms that extend farther to the east, this idea
12 came up during the peer review of the red snapper population
13 estimation study in the Gulf, that the data can suggest
14 truncated age distribution, and issues with egg production that
15 are associated with that, while, at the same time, population
16 sizes not be scaled correctly in the assessment, and so they're
17 not mutually exclusive.

18
19 There was some discussion during the SSC deliberations about
20 how to utilize the information from the preliminary report on
21 the red snapper population estimation study about this, but I
22 am curious if Matt is still on the line, because Matt is the
23 lead analyst for red snapper, and then, although Nancie was the
24 lead for greater amberjack, Matt clearly is familiar enough with
25 the model to produce these projections.

26
27 I am curious, and we have three examples now of congressionally-
28 appropriated funding coming in to set RFPs to fund projects to
29 estimate population sizes of reef fishes in the Southeast.
30 There is the red snapper project from the Gulf, and there is a
31 new red snapper project that I am the PI of in the Atlantic,
32 and then there's this RFP for greater amberjack that -- I don't
33 think that's been announced yet, but I could be wrong there.

34
35 Anyway, with these three projects, we're going to -- If they
36 occur in the future, there will be estimates of population size
37 produced outside of the stock assessment process, and so I'm
38 wondering, with respect to amberjack here, because it will be
39 the next one in the Gulf that has to -- That management will
40 have to factor in this external estimate, if there's been any
41 more thought about how to incorporate or scale the assessment
42 models using this external information.

43
44 I mean, it can't be as simple, I don't think, as just putting
45 in a prior in the assessment model that has to do with what the
46 population size estimates are from this external source, and
47 maybe it can be as easy as that, but it seems like there will
48 be other reconciliation processes required, and so I'm just

1 wondering what the thinking is with respect to that and how that
2 might be incorporated.

3
4 I don't have any idea whether these types of processes are going
5 to continue and what the prospects are for the future, but we
6 do have these handful that are either currently underway or
7 recently completed in the region, and so I'm just wondering,
8 from a stock assessment perspective, if any more thought has
9 been put into how those results can be incorporated.

10
11 **DR. SMITH:** I will chime in with what I have, and then, if
12 Shannon and Katie want to jump in and walk through it some more,
13 they can follow me up here. We haven't sat down and really come
14 up with a concrete plan. I have played around with the red
15 snapper stuff a bit, because, obviously, in, my mind -- We'll
16 have to sort it out at the data workshop, how best to approach
17 it, but I don't think it's going to be as easy as we had hoped,
18 based on my initial exploratory runs.

19
20 The approach we were trying to take, or that I have tried to
21 take, is to incorporate that information as an index of
22 abundance with a selectivity across the appropriate age classes,
23 and so, in the case of the red snapper, it was age-two-plus, is
24 what is being looked at there, and the issues that I have run
25 into that have nothing to do with incorporating it into Stock
26 Synthesis, is getting the model to respond to those singular
27 data points.

28
29 There is so much other information in that model that it seems
30 that, from this likelihood standpoint, forcing it fit to that
31 little nugget of information in the sea of other information is
32 not as straightforward as I thought, and I tried imposing
33 different lambdas on the data and tried to upweight it and
34 downweight other things, and I have yet to get the model to
35 fully respond to the input on the abundance estimate.

36
37 We're certainly not throwing our hands in the air. We're going
38 to continue to attack it, but it was not, at least at first
39 glance, as straightforward as we had hoped it would be to build
40 it into the assessment, and it is something we're going to have
41 to sort out, how best to use it, because as you said, there's
42 not only red snapper, but there is other ones of these coming
43 down the pipe, and we'll probably continue to see them, because
44 they have been well received and are extremely valuable, for a
45 number of reasons. If Katie or Shannon want to chime in, or if
46 Mandy wants to jump in, please do.

47
48 **DR. KARNAUSKAS:** I was going to jump in and add to that, Matt,

1 just a couple other lines of research that we have in trying to
2 make use of those results, and there's the obvious question of
3 connectivity, both from the biological perspective, but from
4 the how the fishery operates perspective.

5
6 On the biological side, a big question is the spawning of
7 offshore biomass, or biomass that isn't immediately accessible
8 to fishery, and how does that seed areas that might get depleted,
9 and so we have the larval connectivity modeling that we're using
10 to try and get estimates of how much non-depleted areas would
11 be a source of larvae to depleted areas, and so that's one sort
12 of research activity we have going on.

13
14 Then, also, with the participatory work that we're doing, we're
15 trying to get a sense for connectivity and how currently
16 underutilized areas might be utilized in the future, and so, if
17 and when areas become depleted, how far would fishermen go to
18 access other areas, what are the sort of factors driving those
19 decision points, and so those are a couple of lines of research
20 that we have that might also help guide us in terms of how we're
21 able to use the information.

22
23 **CHAIRMAN NANCE:** Katie.

24
25 **DR. SIEGFRIED:** Thank you, Mr. Chair. I just wanted to add to
26 what Matt and Mandy said, just a small part, and so we did hire
27 a SEMIS associate that's working with Mandy on that connectivity
28 work, and so the Center has made that a priority, scientifically
29 and financially, and then the other thing is it's going to be
30 incredibly important for the Great Red Snapper Count PIs to
31 participate in the red snapper data workshop portion and
32 subsequent assessment webinars, and so we're really going to
33 lean heavily on those folks to work with us in figuring out a
34 way to incorporate these data into the next assessment. That's
35 it. Thanks.

36
37 **CHAIRMAN NANCE:** Thank you very much. I think that's a great
38 idea. Any other discussion on this particular topic? Shannon.

39
40 **DR. CALAY:** Thanks. I just wanted to clarify a point I heard
41 Will say. Nancie has been the lead of the greater amberjack
42 assessment for a number of SEDAR cycles, and she is certainly
43 very familiar with the stock assessment projections and the work
44 that's been done.

45
46 The reason why Nancie is not presenting this today has more to
47 do with the fact that, in our realignment, she's been assigned
48 now to the Caribbean branch, and so is leading SEDAR 80, which

1 is queen triggerfish, and so I just wanted to explain that we
2 are still very much collaborating with Nancie and she still is
3 very much available to assist us, as needed. It's mostly
4 workload. We're just roped Matt in to help us out.

5
6 **CHAIRMAN NANCE:** Thank you for the clarification. Benny.

7
8 **DR. GALLAWAY:** I do want to point out that, for most or all of
9 our collections, and I am at home right now, and I don't have
10 it in front of me, but we have length and weight and otolith
11 and sex and maturity data for most of the federally-managed
12 species that we collect. A lot of that hasn't been processed,
13 but it's been collected, and so we're able to sort size and sex
14 as well for our estimates around platforms and other structures.
15 Thank you.

16
17 **CHAIRMAN NANCE:** Okay. Nancie.

18
19 **DR. CUMMINGS:** I just wanted to say thank you to Shannon, but
20 also to Matt, for stepping in and running those extra
21 projections. I just wanted to speak out to some of our input
22 data, because, as we've seen in a couple of other assessments,
23 some of our fishery-dependent indices have not been as
24 informative going forward, because of certain other regulations,
25 and so we had a --

26
27 If you will look at your -- If you will read the SAR report,
28 you will see that, from the SEDAR 33 update to 70, we actually
29 did not use the commercial vertical line index, but we were we
30 able to retain the longline index, but I would like to say that
31 we're looking forward to the continued development of that
32 combined video index, and so I think that -- I want to say the
33 answer is still not there, in terms of whether the stock
34 assessment is doing what we think it's doing, or is not doing
35 what we think it's doing, but we certainly know that, as the
36 data inputs get better, and the combined video index becomes
37 more informative for this stock as well, that we'll probably
38 see benefits, in terms of the information content, and so I just
39 want to speak out to that index, and it's a very, very important
40 index for the stock. Thank you.

41
42 **CHAIRMAN NANCE:** Thank you. With that, I think we're going to
43 move on to Item XXI, which is really a continuation of this,
44 which is Review the Updated Greater Amberjack Projections.
45 Matt, are you going to be doing that one also?

46
47 **DR. SMITH:** No, I don't believe I'm on point for this one. We're
48 all taking a stab at greater amberjack today, and somebody else

1 must have it.

2
3 **CHAIRMAN NANCE:** Nancie, are you going to do that one?

4
5 **DR. CUMMINGS:** Yes, Jim. Thank you very much.

6
7 **CHAIRMAN NANCE:** You're very welcome. Thanks for doing it.

8
9 **REVIEW OF UPDATED GREATER AMBERJACK PROJECTIONS**

10
11 **DR. CUMMINGS:** For those of you that are new to the process, to
12 the SSC, welcome to the group, and I look forward to working
13 with you, although I'm working also in the Caribbean, again.
14 I'm Nancie Cummings, and I've been with Southeast Fisheries for
15 a few years now, and I have worked, amongst other things on
16 mackerels, Spanish and king, and some of the tuna work, cobia,
17 and dolphin, early on, and I've been working on amberjack since
18 probably the mid-1990s, 1990s.

19
20 This presentation was prepared in response to a request from
21 the council staff for updates on projections using some
22 alternative sector allocations. The current sector allocation
23 is -- Basically, it's the 27/73, 27 percent commercial and 73
24 percent recreational, and so we were asked to look at
25 projections from I think it was four allocation of scenarios.

26
27 1981 to 2004 is 84 percent recreational and 16 commercial. 1993
28 to 2019 is 80 percent recreational and 20 percent commercial.
29 Another from 1993 to 2007 is 78 percent recreational and 22
30 percent commercial, and then, finally, we were asked to look at
31 another set of projections, leaving the commercial annual catch
32 limit, the ACL, at 484,380 pounds whole weight, and then to
33 calculate the remaining sector allocations after that, and so
34 they would be variable.

35
36 Then, for continuity purposes, I updated the SEDAR 70
37 projections. Again, those were 73 percent recreational and 27
38 percent commercial.

39
40 Again, I have repeated here the same slide that was provided to
41 you in the SAR report, as well as in the Executive Summary, and
42 what that is is it's the pertinent relevant settings, the
43 projection settings, for the SEDAR 70 assessment, stock
44 assessment, and these are the relative Fs, selectivity and
45 retention, and those parameters were taken as averages from the
46 last three years of the assessment, reminding you that the
47 terminal year was 2018.

1 In the most right-hand column is sort of a more descriptive
2 characterization of what that parameter is. The recruitment is
3 the average of the last ten years of the time series, 2009 to
4 2018, and the 2019 landings were taken as reported to us, and
5 the 2020 and 2021 landings were the average landings between
6 2016 and 2018, and that's a normal convention that we use in
7 our projections, and that is to use the -- 2019 is one year
8 beyond the terminal year, and that's usually a preliminary
9 estimate, and we think that -- when it was provided to us, and
10 then 2020 and 2021 are averages of the last three years. Again,
11 for the projection time series, it was 27/73, in terms of that
12 allocation ratio.

13
14 Just kind of to give you a little bit of a rundown on software
15 and notations, I just want to point out that the SEDAR 70 base
16 model results are achieved through a two-part process. It's an
17 iterative search, using an R script, for the fishing mortality
18 -- To attain the fishing mortality at SPR 30 over 100 years,
19 while maintaining that sector allocation, and also then Part B
20 is to run the base model in the forecast mode, applying fixed
21 Fs from Step A for forecast years of interest, i.e., we would
22 take those from the first ten years.

23
24 Also, results for F rebuild were achieved by iterating the
25 annual F that would rebuild the stock to SSB at SPR 30 by 2027,
26 but I would like to point out that we may want to use -- For
27 SEDAR 70, that was mainly done through Stock Synthesis only,
28 except for the part where, in Part B, you take the fixed Fs from
29 the last -- Instead of equilibrium years, and those are input
30 into the model to forecast forward for the OFL.

31
32 I would like to point out that, for the updated projections,
33 and that's for what we just presented, or are presenting to you
34 today, all of the results for OFL, ABC, and F rebuild were
35 achieved using a new F script, and it was written by Nathan
36 Vaughan, who works with us as a contractor, and it was to achieve
37 MSY proxy, the annual F, and the sector allocation targets
38 according to the specified allocation scenarios.

39
40 We have learned that we have some improvements, and we're able
41 to maintain those sector allocations a little bit more
42 accurately, by using this new R script.

43
44 Results for OFL are obtained by achieving SPR 30 percent at
45 equilibrium and the constant FSPR 30 in all years and those
46 fixed allocation scenarios, whether they are the base 27/73 or
47 the alternative ones. Results for ABC were achieved by
48 simultaneously achieving a constant F of 0.75 of F 30 and then,

1 again, maintaining those fixed sector allocations in all years.
2
3 Then F rebuild was achieved by iterating to identify the annual
4 F value that would rebuild the stock to SSB SPR 30 by 2020,
5 while simultaneously maintaining the sector allocations, and so
6 it's a little tricky new script. For amberjack, it ran pretty
7 quickly. For some stocks, it doesn't run as quickly.
8
9 This is a summary, and I will walk you through the setup. This
10 is a summary of the updated projections, and you're going to
11 find three sets of projections. They are the OFL, which is the
12 projection under F 30, the ABC, which is the projection at 75
13 percent SPR, as defined here, and I just want to point out that
14 this was not ABC in SEDAR 70, as specified under the terms of
15 reference. ABC, as specified in the terms of reference, was F
16 rebuild, and this is just an extra set of projections that were
17 giving you with the second block.
18
19 Then, if we have the scenario, which would be OFL, ABC, which
20 is 75 percent of SPR 30, or F rebuild, and I would like to --
21 The final column then directs you to the sector allocations,
22 and this was our current. The first row in each block will be
23 our SSC 2021 projection, which is the 27/73. The final set of
24 column -- Number 5 is the projected yield in millions of pounds
25 whole weight, going from 2022 to 2026, and so Row 2 in each
26 block is the updated projection, which we've given you here,
27 with the new code, which utilizes Dr. Vaughan's new R scripts,
28 which effectively maintains those allocation ratios more
29 accurately.
30
31 Then that's maintaining the same sector allocation as the base
32 model, and then the final four rows in each block guide you to
33 the alternative allocation that we were asked to consider, and
34 then the projected yields for each scenario, projection
35 scenario, are 2022 to 2026, and so what we're looking at, in
36 terms of the updated projections in this model would be Row 2,
37 giving you the OFL of 2.1 million pounds in 2022 and slightly
38 increasing out to 2026, and then you would be looking at Block
39 3, which is the ABC equal to F rebuild, and the Row 2, which is
40 the base model that was accepted by the SSC with the new
41 projection code, and, again, the projected yields from 2022 to
42 2026 being slightly below that of the OFL. Again, the F rebuild
43 is defined as the annual F that would get you to rebuilding by
44 2027. That's the last slide. Any questions?
45
46 **CHAIRMAN NANCE:** Nancie, thank you. Let's go back to that
47 table. Just real quick, it looks like the first two rows on
48 each of the different scenarios -- The new code seems to have a

1 larger projected yield than before, and so it went from --
2
3 **DR. CUMMINGS:** Slightly larger.
4
5 **CHAIRMAN NANCE:** Slightly larger, and so it went from -- Am I
6 reading that correct?
7
8 **DR. CUMMINGS:** Yes, and they're slightly larger.
9
10 **CHAIRMAN NANCE:** Okay, and so, in the first one, it went from
11 1.6 to 2.1.
12
13 **DR. CUMMINGS:** Correct.
14
15 **CHAIRMAN NANCE:** Okay. Any questions on this? Nancie, thank
16 you for that presentation.
17
18 **DR. CUMMINGS:** You're very welcome, and I would just also point
19 the audience to the document.
20
21 **CHAIRMAN NANCE:** Katie.
22
23 **DR. SIEGFRIED:** Thank you, Mr. Chair. Thank you, Nancie. I
24 did want to just add something to the answer to Jim's question,
25 and Nancie actually has some slides to this effect, if the SSC
26 wants to see it, but they just weren't ready in time to be in
27 put into your briefing book, but the 2022 value, Jim, that you
28 just compared, the 1.637 in the OFL scenario, versus 2.102,
29 that's true that it's larger, but, in general, the SSC, or I
30 guess because the council wants more constant projections, we
31 have also looked at the average, either the three or five-year
32 average of 2022 through 2024 or 2022 through 2026, and they are
33 not that different from the average that you find from the
34 current recommendation for the OFL and ABC. Does that make
35 sense?
36
37 **CHAIRMAN NANCE:** Okay. That does make sense. Thank you.
38
39 **DR. CUMMINGS:** Thank you, Katie, and I can show those, if you
40 would like. I also have more of the four different alternatives
41 that were requested from the IPT team that is considering the
42 framework amendment.
43
44 **CHAIRMAN NANCE:** Why don't you go ahead, Nancie, and just show
45 the slide, just for our edification?
46
47 **DR. CUMMINGS:** I think we emailed them to Ryan, and it's just
48 basically the replacement PowerPoint.

1
2 **MR. RINDONE:** You can just make here the presenter. We're
3 trying not to continually update stuff on the website mid-
4 meeting.

5
6 **CHAIRMAN NANCE:** Doug, we'll see this, and then I will get to
7 your question.

8
9 **DR. CUMMINGS:** What we've done, and thank you, Katie, for noting
10 this, is we've taken -- What we've taken is, for each scenario,
11 I've just given you a five and three-year average, and so, if
12 you look at the -- I will just highlight Row 7 here, the five
13 and three-year average for the -- This is the OFL and then the
14 F rebuild, and so, as Katie pointed out, even from the old code
15 to the new code, they are not that different, especially for
16 the three-year average.

17
18 Obviously, looking at the alternative scenarios, there will be
19 further deliberations on those scenarios, I'm sure, from the
20 IPT team, and, looking at the F rebuild, similarly, these are
21 not so different.

22
23 **CHAIRMAN NANCE:** Thank you for showing that.

24
25 **DR. CUMMINGS:** You're very welcome.

26
27 **CHAIRMAN NANCE:** Doug, you had a question?

28
29 **DR. CUMMINGS:** This is the previous table that you saw without
30 the five-year and three-year average.

31
32 **MR. GREGORY:** Regarding the averages, the five-year average is
33 lower than the three-year average, yet the numbers are going up
34 year after year.

35
36 **DR. CUMMINGS:** The numbers?

37
38 **MR. GREGORY:** Your 2.1 to 2.2 to 2.3, 2.4, 2.47. I would expect
39 the five-year average to be larger than the three-year average.

40
41 **CHAIRMAN NANCE:** I think it's the previous five years.

42
43 **MR. GREGORY:** I'm looking at it backwards. Okay.

44
45 **DR. CUMMINGS:** That's just the way we had it arranged, Doug,
46 and this first one is a little weird, because, without the new
47 code, the R script that maintains the sector allocations, you
48 had it really going up in 2026.

1
2 **MR. GREGORY:** Right, and my original thing that I wanted to
3 point out, given my concern about greater amberjack, and the
4 differences are minor, but, the more you allocate to the
5 recreational sector, the lower the OFL is, which means that the
6 recreational sector is exerting, pound for pound, a greater
7 fishing mortality rate than the commercial sector.
8
9 **DR. CUMMINGS:** But we've known that, Doug, for years. You don't
10 even have to go out to the projections to see that, because, if
11 you just go back and look at your landings and your actual age
12 composition over time, you can see that the recreational fishery
13 has been prosecuting the fishery higher, more intensely, rather,
14 since the early 1980s.
15
16 **MR. GREGORY:** Thank you.
17
18 **DR. CUMMINGS:** Thank you, and you pointed that out about
19 something else this morning, and I thought it was a wonderful
20 comment that you made.
21
22 **CHAIRMAN NANCE:** Are there any more comments from the SSC? I
23 guess I have a question. What do we think about these
24 calculations? Are they acceptable? Benny.
25
26 **DR. GALLAWAY:** Is the recreational fishery prosecuted equally
27 across the Gulf, or is it focused in one area or the other?
28 Does the eastern Gulf have larger recreational fisheries than
29 the western Gulf, for example?
30
31 **MR. RINDONE:** Yes.
32
33 **DR. CUMMINGS:** We don't have the landings -- I mean, we don't
34 have the inputs into the model broken down to that refinement,
35 because of basically the availability of samples and so forth,
36 and we have taken into account weightings of our samples, both
37 the age and the length comps, by area, east and west, and not
38 any finer than that, but, in general the answer is yes.
39
40 **DR. GALLAWAY:** Yes being that it's more in the east?
41
42 **DR. CUMMINGS:** Yes, sir.
43
44 **DR. GALLAWAY:** Thank you very much.
45
46 **CHAIRMAN NANCE:** John.
47
48 **MR. MARESKA:** Nancie, I am just noticing that it looks like,

1 for all these new projections, the buffer between the OFL and
2 the ABC are very miniscule compared to the current difference
3 between the OFL and the ABC, and is that something because of
4 the new R script, or what's causing that decrease in the buffer
5 between OFL and ABC?

6
7 **DR. CUMMINGS:** Are you looking at the F rebuild, at the OFL?

8
9 **MR. MARESKA:** So if we look at the OFL, that first row, using
10 the current, the projected yield for 2022 is 1.63, and the ABC,
11 under the F rebuild scenario, is 1.2, and, if we go down to the
12 second row in each one of those boxes, the OFL is 2.1, where
13 the ABC F rebuild is 2.02, and so there is very little difference
14 in all these new projections compared to the current
15 projections.

16
17 **DR. CUMMINGS:** We would have to go into each individual year
18 and look at that, and I can also -- I think Nathan is on the
19 call, who wrote the script, but I think we can probably say that
20 that is the largest contributor to those smaller buffers, but
21 if Nathan or Katie want to add anything to that.

22
23 **DR. SIEGFRIED:** I can add something to it.

24
25 **CHAIRMAN NANCE:** Yes, Katie, please.

26
27 **DR. SIEGFRIED:** So the F rebuild, the fishing mortality that
28 leads to recovery by 2027, isn't that different from FSPR 30
29 compared to the 75 percent FSPR 30 that was chosen by the SSC
30 previously, and Shannon can correct me if I'm wrong, but, when
31 we looked back to find out why the -- You discussed this a
32 little bit during Matt's presentation, why it's 75 percent FSPR
33 30 instead of F rebuild, and it seemed like it was a
34 precautionary approach, for the very reason that the question
35 was just asked, and so it's either 25 percent less, if you're
36 using the 75 percent FSPR, or it's F rebuild, which actually
37 isn't that different from FSPR 30, if that helps.

38
39 **CHAIRMAN NANCE:** I think the question John had was the difference
40 between the OFL and the ABCs. It seemed to be -- If you're
41 using the old model, then you get an OFL, and you get an ABC.
42 If you use the new R script, the ABC is much closer to the OFL
43 than in the original model.

44
45 **DR. SIEGFRIED:** I don't think that has to do with the new R
46 script. It's F rebuild.

47
48 **CHAIRMAN NANCE:** It's occurring whether it's F rebuild or F 75

1 percent SPR 30.

2

3 **DR. SIEGFRIED:** The 75 percent FSPR 30, the values to compare
4 would be the 2.102, as opposed to 1.582, which is 75 percent
5 less, pretty much, and so a 25 percent buffer is pretty good
6 compared to 2.102. as opposed to 2.021 for F rebuild. I'm sorry
7 that I can't point for you, and so I'm trying to be clear, but
8 I know it's hard.

9

10 **DR. CUMMINGS:** You are correct, and I did confirm your point
11 about the mortality rate, but it is much closer to OFL, F 30.

12

13 **CHAIRMAN NANCE:** What we were comparing is you had something
14 like an OFL of 1.6. With the new code, it went up to 2.1, but
15 then, if you look at the ABC, for the sixteen, it's 1.214.

16

17 **DR. CUMMINGS:** No, that's incorrect. This is if you use 75
18 percent.

19

20 **CHAIRMAN NANCE:** I was just using that as an example, but F
21 rebuild is 1.255, and then the next would be -- With the R code,
22 it's 2.021.

23

24 **DR. CUMMINGS:** Correct.

25

26 **CHAIRMAN NANCE:** Okay. So those -- I guess, John, are those
27 closer?

28

29 **MR. MARESKA:** Under that scenario, under the current, it looks
30 like we have a difference of about 300,000 pounds, but, under
31 the new scenario, it's less than 100,000 pounds difference, and
32 that pattern just seems to repeat, and I was curious if that
33 was an effect of the R script or something else has changed.
34 We can call on someone else, and they may have something to add
35 to it.

36

37 **CHAIRMAN NANCE:** Okay. Let's go ahead and go on to Will.

38

39 **DR. PATTERSON:** Sorry. My hand is down.

40

41 **CHAIRMAN NANCE:** Doug Gregory.

42

43 **MR. GREGORY:** Thank you. I suspect -- Thank you, John. That
44 was a great call. I suspect the F rebuild is exhibiting the
45 properties it is because we're only like six years away from F
46 rebuild, unlike red snapper, where we had almost a decade to
47 build up to it, and we're pretty close to rebuilding already,
48 and so, if we're put in the position of recommending new

1 projections, I would seriously consider going back to the F 75
2 percent, and that would be precautious, particularly if that
3 was our logic in the past, but what are we being asked to do
4 here?

5
6 I would not be inclined to call any of this best available
7 science information. It's just a bunch of numbers that are
8 projections, and that's what they are, and that's not for us to
9 choose, and I didn't find anything wrong with it, but --

10
11 **DR. CUMMINGS:** The task of the Center was to update the
12 projections assuming that -- Looking at alternative allocation
13 scenarios. In doing that, because the Center has been working
14 on new projection code for a number of species, that would work
15 for a number of species rather, then we felt that it would be
16 imperative to go ahead and update the projections for the base
17 model that was accepted in January.

18
19 **CHAIRMAN NANCE:** Okay. John.

20
21 **DR. FROESCHKE:** I think maybe Nancy provided the information,
22 but, essentially, the way I see it is, in January, the SSC
23 provided an OFL and ABC based on SEDAR 70, and I think it's like
24 a 1.6 OFL and 1.2 ABC, ish, and so, now, and that was assuming
25 the 23/73, essentially the Alternative 1, with regard to the
26 allocation, and so, in terms of developing a document, an
27 amendment, we would need that, and so the first question is does
28 the SSC want to reconsider that previous OFL and ABC
29 recommendation based on the information presented here, meaning,
30 for that particular allocation, do you want to go with this
31 2.102 for the OFL and one of the different ABC options? That
32 is one decision point.

33
34 The second one is, once you have figured out that, the Science
35 Center has provided different recommendations for allocations,
36 based on what the council may be interested in, and so those,
37 essentially, would be equivalent, just accounting for the
38 differences in selectivity between the fleets and so how that
39 affects the OFL overall, and so that's analogous to what was
40 done with red grouper, but I guess the point we weren't
41 anticipating was this change to the original no action
42 allocation, the 27/73, when this -- Based on the new projection
43 code. I think, once we figure that out, then we can move ahead.

44
45 **CHAIRMAN NANCE:** Okay. Yes, because the first thing, before we
46 accept any numbers, we need to determine, from consensus, is
47 whether this is acceptable, and so is there discussion on that
48 topic? Are the numbers coming out of here acceptable for us to

1 work with? Silence. Roy.

2
3 **DR. CRABTREE:** Well, I mean, I don't know why we would not. I
4 mean, we've already accepted the basics of the assessment and
5 the update and all those things, right, and so this is really
6 just an update and then a look at a variety of different
7 allocations, right?

8
9 **CHAIRMAN NANCE:** Yes, and my only concern is the difference
10 between the two top rows on each one are what we looked at in
11 January, and then a new code that should produce the same --
12 Some sort of number, but they're a little different, and I know
13 they're not that much different, but that's my only concern.
14 Katie, go ahead and -- I will let you go first.

15
16 **DR. SIEGFRIED:** Thank you, Mr. Chair. I just wanted to reiterate
17 why we thought that this was necessary, to provide the base case
18 projections again, and that was not in the council request, as
19 Nancie said, and I'm not really saying anything different than
20 what Nancie has already stated, and she just -- There is one
21 other slide that we had on the updated projection that will show
22 the effect of --

23
24 The SSC has been asking, for a long time, for the Science Center
25 to address the projections and the ski-slope issue that we see
26 on the screen here. On the right is the old set of projections,
27 and on the left is the new, and we have this contractor, Nathan
28 Vaughan, Dr. Vaughan, who has been working on this for a while
29 and trying to correct the SS-based projections, and so just the
30 projection module contained with SS that -- As we tend to do in
31 the Southeast, we break SS a lot, and one of the things that
32 breaks it is fixing allocations in equilibrium projections.

33
34 What Nathan's code does now is hold those -- All the values in
35 the SS base model the way it should be held when we're holding
36 allocations through time, and so on the left is what the Science
37 Center thinks is more accurate, and it takes the stock to the
38 SPR 30 percent that we have stated in the past, and we think
39 that this is the correct way to do assessment projections now.

40
41 We didn't want to add confusion, or complicate anything, and we
42 wanted to provide you with what we think are the best available
43 projection methodology, or projections using the best
44 methodology. Thanks.

45
46 **CHAIRMAN NANCE:** This graph is a perfect one. It explains the
47 difference, and so I'm glad that you showed this. Thank you
48 very much. Doug.

1
2 **DR. CUMMINGS:** You're welcome. You're very welcome.
3

4 **MR. GREGORY:** I am ready to make a motion to accept the new
5 methodology, and so the SSC concurs with the --
6

7 **CHAIRMAN NANCE:** One second. We're going to have Jessica get
8 ready. Okay. Go ahead, Doug.
9

10 **MR. GREGORY:** This will need to be wordsmithed, because I didn't
11 think it out in advance. **The SSC concurs with the Southeast**
12 **Fisheries Science Center determination that the new methodology**
13 **for estimating equilibrium mortality rates is an improvement**
14 **and acceptable as the best scientific information available.**
15

16 **CHAIRMAN NANCE:** Do we have a second?
17

18 **DR. GALLAWAY:** Second.
19

20 **CHAIRMAN NANCE:** Benny made a second. Okay. Is there discussion
21 on this motion?
22

23 **MR. GREGORY:** We probably should take out "equilibrium" and say
24 "for estimating projected mortality rates", and it's not just
25 equilibrium.
26

27 **CHAIRMAN NANCE:** Shannon.
28

29 **DR. CALAY:** Sorry. It's no longer needed, but thank you very
30 much, Chair.
31

32 **CHAIRMAN NANCE:** You're very welcome. Discussion? Paul.
33

34 **DR. MICKLE:** I am trying to figure out the basis of the motion,
35 and I'm glad that we have a clear option here of what our role
36 is of identifying if this is best available science or not, and
37 to be used for management, I guess, is what we're tasked with
38 here.
39

40 I appreciate the detail that they've given on this new method.
41 The only thing that concerns me is that none of us really
42 understand -- I don't, and I will just speak for myself, but I
43 don't exactly understand how it's different from how it was done
44 before in just the nuts and bolts of it.
45

46 Now, if it's been done in other areas, and this is an acceptable
47 method, that gives me a lot more comfort in supporting this
48 motion, but, if this is an R code written by a contractor, I'm

1 sure it's great, and it's working, and the statement I think
2 that was just made by the Science Center was that they liked
3 it, and they thought it was usable, which is great, and they
4 probably do understand it very much, but it's hard me just to
5 look at this and have a very quick briefing and understand the
6 nuts and bolts and to say this is acceptable.

7
8 In a similar story, there is a running -- There is different
9 types of analyses that are somewhat spin-offs of different types
10 of tests and statistical comparative things, and, just as an
11 example, there's a stars analysis, which is literally -- It's I
12 think similar to this, where it's literally a running T-test,
13 and so you're looking at changes over time, and there is
14 independence issues with that, but, in the scientific community,
15 half the community loves it, and it makes it through peer review,
16 and the other half of the statistical community can't stand it,
17 and refuses everything about it, and it's just a great big
18 divide.

19
20 I don't know if this is that or not, and it probably isn't, but
21 those things do exist, and I don't understand this enough to
22 actually stamp it as the peer-reviewed best available science.
23 That's all. Those are my thoughts. Thank you.

24
25 **CHAIRMAN NANCE:** Thank you, Paul. Will.

26
27 **DR. PATTERSON:** Aren't we projecting future catches here and
28 not actually mortality rates?

29
30 **CHAIRMAN NANCE:** Yes. That's a good point. **So projected**
31 **catches.**

32
33 **MR. GREGORY:** **Please change it as needed.**

34
35 **CHAIRMAN NANCE:** Thank you, Will.

36
37 **DR. GALLAWAY:** Agreed.

38
39 **CHAIRMAN NANCE:** You always catch those things. John.

40
41 **DR. FROESCHKE:** Thank you. Jess, can you bring up that chart
42 with the projections on it again, the one that they just provided
43 that had the two panels with the -- Who had that?

44
45 **CHAIRMAN NANCE:** The graph?

46
47 **DR. FROESCHKE:** Yes, and I just wanted to --

48

1 **CHAIRMAN NANCE:** Katie, did you provide that, or did Nancie,
2 the graph?

3
4 **DR. CUMMINGS:** I have that.

5
6 **DR. FROESCHKE:** I will just start talking while -- I guess, just
7 looking at that, and it was the first I had seen of this, but,
8 in general, if you look at the projections for either set of
9 methods, the projected landings are higher than the last three
10 years or so, and higher than essentially the landings that I
11 have seen, yet we expect these to lead to a rebuilding of the
12 stock, in fairly rapid succession, and it doesn't seem like
13 we're reducing the landings very much.

14
15 I guess, just based on historical, we've done, I don't know,
16 since I've worked here, four or five amberjack assessments, and
17 they look very similar to those sorts of projections, and we
18 have yet to make any progress on it, and so the new ones, I will
19 say, just based on how they are, they're more linear, where, in
20 the past, they typically would -- A result would be you would
21 have one year of fairly dramatic reductions in catch and then a
22 very rapid rebuild, and that's what we had before, and the new
23 ones look like they are much smoother, which seems, intuitively,
24 to make sense, but, again, if you look at those first -- Since
25 2016-ish, I mean, we're right there, and the stock hasn't
26 responded in the direction that we had hoped.

27
28 **CHAIRMAN NANCE:** Shannon.

29
30 **DR. CALAY:** I certainly do understand and respect the desire to
31 be cautious. I did want to say a few things about the new
32 projection methodology. I think many of you recall, from some
33 of our previous work, that, in situations where we are
34 attempting to hold a constant F, like F rebuild, and also an
35 allocation, what we sometimes saw is that the F in those
36 immediate years of the projection, where we get our OFL and ABC,
37 actually indicate F above the constant F we're projecting, and
38 so F higher than FMSY, in some cases, or F higher than F rebuild.

39
40 That was a problem with SS itself, in that Rick concentrates
41 primarily on the equilibrium situation, which is many, many
42 years out, and not the transitional effects, which are where we
43 get our immediate catch advice from. Nathan Vaughan has been
44 working on our projections, and he's also part of the team who
45 is implementing changes to SS in association with Rick and his
46 colleagues, Rick Methot, and so he is available to answer any
47 questions you might have about what he did and what tests he
48 may have conducted to assure that his results are correct. He

1 is available.

2

3 **CHAIRMAN NANCE:** Okay. Paul, to that point?

4

5 **DR. MICKLE:** Shannon, I do appreciate that. Is the methodology
6 in the literature, and has it been published, in gray literature
7 or anything like that, where you can really jump in the weeds
8 and understand how these differences are? At this point, it
9 seems real abstract to me, and maybe I'm not grasping it.

10

11 **DR. CALAY:** It's not in the published literature yet. This is
12 basically something we have been working on to correct the
13 projections in the most immediate years, pending a problem that
14 we see here in the Southeast frequently, and we may be the only
15 region in the country where they frequently hold allocations in
16 projections. In most places, they don't attempt to that do that
17 level of precision in the projections, and so this is an
18 innovation that has not yet been peer reviewed.

19

20 **CHAIRMAN NANCE:** Thank you, because, in all of our other
21 assessments, the first year of projections spiked, and it did
22 it for every species, and so the Center, for the last few years,
23 has been trying to get that down where it is down to normal,
24 and I think this is their attempt to do that, and so they've
25 been working on this for a while now.

26

27 **DR. CRABTREE:** Just to -- What Shannon is saying is, in the
28 figure to the right, when the yields turn down sharply, that's
29 because it's overestimating the F, and removing more fish than
30 we ought to be, and that's corrected in the new methods, and it
31 keeps the Fs more at the target level, and is that right,
32 Shannon? Am I understanding it properly?

33

34 **DR. CALAY:** Yes, Roy. You are correct.

35

36 **CHAIRMAN NANCE:** John, to that point?

37

38 **MR. MARESKA:** Shannon, can you speak about the uncertainty
39 estimates that are surrounding those point estimates? It looks
40 like, in the update, that uncertainty is a lot larger than it
41 is in the original January estimates.

42

43 **DR. CALAY:** I, unfortunately, don't know the answer to that,
44 but I think that both Nathan and Katie are available, and they
45 may understand that.

46

47 **CHAIRMAN NANCE:** Okay. While they're -- Why don't you go ahead,
48 Jim, and ask your question.

1
2 **DR. TOLAN:** Thank you, Mr. Chairman. Could we go back to Slide
3 7, the table? I just want to make sure that I understand this,
4 because I understand Paul's concern on the R code, and so the
5 basic comparison of the R code, initially, looks to be from 1981
6 to 2004, and you run through those projection years, and then I
7 just want to make sure that this new method, this R code, is
8 carried forward for each one of these other time steps where
9 the allocation changes, and so we get all the way to 2019, where
10 the terminal year includes this new method, and so I just want
11 to make sure that's what I understood. Thank you.

12
13 **CHAIRMAN NANCE:** Any response on Jim's question?

14
15 **DR. CUMMINGS:** I was a little confused when you mentioned 2019.
16 The projection is beginning in 2022, and so maybe I just didn't
17 hear it correctly. Thank you.

18
19 **CHAIRMAN NANCE:** Jim, could you re-ask your question?

20
21 **DR. TOLAN:** To that point, the last line of the sector allocation
22 goes from 1993 to 2019 and a 20/80 split, and then, after that,
23 we were having these projections based on that allocation
24 through those years, and is this new allocation tracking the
25 method with this R code? Is that included through those years,
26 up through 2019? The main comparison that we're being shown is
27 this new R code goes through 2004, and here's the difference,
28 and so is this now maintained through all of these other
29 differences in the sector allocations?

30
31 **CHAIRMAN NANCE:** I think, Jim, the analysis is 1981 through
32 2004, but the projections -- That's the difference, and it's
33 just the projections start with 2022, and so you're using the
34 old projection method, as in Stock Synthesis, in the first row,
35 and the new R code -- For the projection only 2022 throughout
36 for the new R code.

37
38 **DR. TOLAN:** Again, that ends in 2004, at that allocation --

39
40 **DR. CUMMINGS:** The projection -- I just want to make sure that
41 we all know that we are projecting from 2022 forward. Shannon
42 probably, or Katie, can also confirm this, but we are interested
43 in projecting from 2022 forward, and the scenario title is just
44 giving you an indication of how that sector allocation was
45 defined, and so it's just a descriptor, and so I just wanted to
46 say that, because we have our base model -- We basically started
47 in 2018, with the terminal year, and we have the stock status
48 and a bunch of catch and a bunch of mortality rates, and so on

1 and so forth, and we have our retention parameters and so on
2 and so forth, and, according to the projection scenario, then
3 we start -- We have 2019 catches that were put in, as I
4 described, and 2020 and 2021 were an average of 2016, 2017, and
5 2018.

6
7 According to that definition, I think there's like three, and
8 then we start moving forward in 2022 with whatever projection
9 allocation scenario was defined, and the first two rows are the
10 basic, the current status, the 27/73, and then we have four
11 other options that we considered.

12
13 In each of those, that 16/84 was carried forward in 2022, 2023,
14 2024, and it went out for a hundred years, and so I hope I
15 helped, and I think both Shannon and Katie might want to follow-
16 up on that.

17
18 **DR. TOLAN:** Mr. Chair, to that point, if I may?

19
20 **CHAIRMAN NANCE:** Yes, you may, Jim.

21
22 **DR. TOLAN:** I really appreciate these explanations, and it's
23 been helping me understand it quite a bit, and it's to the
24 motion that I'm really addressing this too, because we're
25 stating in the motion that this new method is the new best
26 available science, and I just wanted to make sure where it was
27 being captured in terms of the projections, and so these
28 explanations are helping, but thank you.

29
30 **CHAIRMAN NANCE:** Thank you. Shannon, anything on this point,
31 or should we go on to the other questions, first?

32
33 **DR. CALAY:** I was really just going to let you know that Nathan
34 was muted by an organizer, but he thinks he has figured it out
35 now, and so he is now available to answer the question about
36 the uncertainty, and maybe some other questions that you have
37 as well.

38
39 **CHAIRMAN NANCE:** Okay. Nathan, I see your name there, and so
40 why don't we go ahead, and, Jason, if you don't mind, I'm going
41 to move Nathan up and have him explain it, and then we'll get
42 to your question.

43
44 **DR. NATHAN VAUGHAN:** Thank you very much. I just wanted to
45 point out the details of how this works, so that people aren't
46 too concerned that there's some magic happening behind the
47 scenes. Like Shannon pointed out, the biggest issue with the
48 SS projections is we're trying to balance three things, and SS

1 kind of does some of them.

2

3 We're trying to balance achieving a set target, in this case
4 SPR 30 percent, in 100 years time, which is equilibrium, and
5 we're trying to then achieve the total removals, F , that equates
6 to that final equilibrium target in every year, and we're also
7 trying to make sure that we get the correct allocation in pounds
8 between those two recreational and commercial groups in every
9 year.

10

11 The basic SS projection is only able to get one or two of those
12 things correct, and so it can get -- If you run it by default
13 to an SPR 30 percent, it will project that 30 percent correctly,
14 and it will get the F s in each year right, but it won't get the
15 allocations, and so the allocations end up all over the place,
16 because it just projects with constant effort between fleets.

17

18 If you try to turn on allocations inside of SS, there is a
19 default option to do that, and it then gets the allocations
20 correct, but, because of the single run estimation that it does,
21 it then doesn't reach your required or expected target, and so
22 your 30 percent will get to 20 percent, or 35 percent, depending
23 on the assessment, and then it also doesn't achieve the correct
24 F in every year, and that's what Shannon was mentioning, and
25 so, in those early years, you might be too high, and you might
26 also be too low, and so all my code does is go through and does
27 an iterative search, multiple times, to adjust the catches
28 between fleets until all of those targets are achieved.

29

30 It can be directly tested in the SS output files that you did
31 achieve the correct F that we've targeted, and we did achieve
32 the correct final stock status, and we did achieve the correct
33 allocations between fleets, and so it hasn't been published,
34 but it's not doing anything that can't be directly tested in
35 the SS report files, and so that is all being -- We are all now
36 correctly -- We're sure that we are actually on the correct
37 target for all of those features.

38

39 For the recruitment, for the uncertainty that we project in
40 that, basically, all that we do is, once we run that projection,
41 we do the search and get the correct F s in every year, until we
42 meet all of our targets. Once we've done that, then we run a
43 final version of SS with uncertainty turned on, that re-
44 estimates the parameter values, and then that projects the
45 uncertainty forward into the projection period.

46

47 The reason you see, and, if it is brought up, the reason you
48 see that funneling, and the uncertainty actually reduces from

1 the recent year into the future, is because all our projection
2 estimates -- Our recruitment is fixed at that recent mean, and
3 the Fs are fixed in our projections, and those uncertainties
4 get sucked up, and the uncertainties get sucked up at zero, and
5 so you end up -- You've got those uncertainties in F and
6 recruitment in the recent years, and it is slowly reduced down
7 to just the model parameter uncertainty in the long-term
8 forecast.

9
10 We are currently working to try to come up with methods to
11 incorporate more of that real uncertainty in future recruitment
12 and annual landings, so that we can get more realistic
13 uncertainty projections into the long-term projections, but, at
14 least for the moment, because you're using either the 75 percent
15 SPR or the F rebuild as your ABC, instead of a P* approach, that
16 is less of a concern that they're not necessarily lining up
17 exactly as we might like, but that is something that we're
18 working on at the Center. I'm happy to answer any other
19 questions, if that wasn't clear.

20
21 **CHAIRMAN NANCE:** Nathan, thank you very much for that
22 explanation. Jason, go ahead with your question.

23
24 **MR. ADRIANCE:** Thank you, Mr. Chair. Can we go to Slide 8
25 again? I don't know the rebuild year offhand, and so this may
26 be the answer, but the graphic on the left, out there at about
27 2027 or 2028, the OFL and rebuild flip-flop, and is that's
28 what's going on there?

29
30 **DR. VAUGHAN:** Yes, 100 percent. That's the change in the year,
31 and so the F rebuild was a little bit lower than the F OFL, and
32 so that's the stock rebuilding a little bit faster, and then it
33 jumps up in 2028.

34
35 **MR. ADRIANCE:** Thank you.

36
37 **CHAIRMAN NANCE:** Good eye. Will.

38
39 **DR. PATTERSON:** Thanks, Jim. I thought that I understood this
40 until we put this figure up. I don't understand, in the July
41 2021 update, why it appears that a much lower equilibrium level
42 is being reached, and the curve flattens out, whereas, in
43 January of 2021, you have projections to much higher yields down
44 the road, and the yields in 2030 are projected to be about what
45 they were, and actually a little bit less, than 2016, when
46 overfishing was estimated to be occurring.

47
48 I am confused as to why such a flat curve, and I understand some

1 of the issues about smoothing out the early years, but I don't
2 understand why it looks like productivity is estimated to be
3 lower in the out years.

4
5 **CHAIRMAN NANCE:** Nancie or Katie?

6
7 **DR. CUMMINGS:** I was going to ask if Katie wants to take that
8 one. I think she's on.

9
10 **DR. VAUGHAN:** Katie is muted, and so I think I will jump in.
11 There were some changes that were made in the projections with
12 how SS was interpreting the previous forecast and with the
13 recruitment steepness, and so the previous code that was used
14 to run projections was built on an assumption of a steepness of
15 one, and this was used for red snapper and some other species,
16 where it's not been an issue, but, in the amberjack case, it
17 did have more of an impact, and so, when we switched to the new
18 code, we're rebuilding from a different value in SS, basically,
19 and so it has -- It does change the target equilibrium OFL
20 benchmark, if that helps. Sorry for jumping in. This is in
21 line with what we were presenting as doing, and there was just
22 some corrections made to the previous target.

23
24 **CHAIRMAN NANCE:** Does that answer your question, Will?

25
26 **DR. PATTERSON:** Partly, and I would have to think about some
27 more of what's going on here, but, while we have Nathan, and
28 so, if you've changed the steepness, you're clearly changing
29 the assumptions about stock productivity, but you're projecting
30 landings in 2030 that were overfishing in 2016.

31
32 **DR. VAUGHAN:** Previously, yes, it was going much higher than
33 what we're envisioning, and the issue was that it was being
34 projected on spawning biomass, and so, if your steepness is one,
35 your spawning biomass ratio is the same as your SPR ratio, and
36 everything is equivalent.

37
38 If your -- When your steepness, as is the case with amberjack,
39 is less than one, your SPR ratio, which is what we were intending
40 to project, and what we're now showing you accurately, is
41 actually less than your spawning biomass, and so, in this
42 projection, the spawning biomass is a -- The spawning stock
43 biomass ratio is less than 0.3, while the SPR ratio, which is
44 your spawning stock biomass discounted for the recruitment, that
45 average future recruitment, is balancing it out, if that makes
46 sense, and so we're targeting now a 30 percent SPR, which is
47 what was the terms of reference for the assessment.

1 **DR. PATTERSON:** But, historically, if the steepness was fixed
2 at one, or 0.99, that wasn't projected forward. There was an
3 average recent recruitment that was projected forward. We're
4 basically saying there's no relationship between spawning stock
5 biomass and recruitment, and so we take the average recent
6 recruitment and project that forward, knowing that we're really
7 not thinking about thirty years down the road, or a hundred
8 years down the road, and we're only concerned about the
9 immediate future.

10
11 **DR. VAUGHAN:** Yes, and it's just that doing that recruitment as
12 well -- That is something that is more recently added to SS, is
13 that option for that average recent recruitment, and that also,
14 yes, will impact it, and so it's just -- It came to light, the
15 disconnect between spawning biomass ratio and SPR ratio, that
16 it hadn't been an issue in previous assessments, but it was an
17 issue in this case, because both the steepness and, for
18 amberjack, the average recruitment that we're projecting is much
19 lower than what you would expect at equilibrium, than the virgin
20 recruitment level, and so both of those things are impacting
21 that result, now that we're discounting for the correct SPR
22 target.

23
24 **DR. PATTERSON:** If we actually had the SPR-projected
25 trajectories here, or eggs, or SSB at biomass, just so we could
26 see what the population is doing that's producing these catches,
27 because I just -- I can't wrap my mind fully around what you're
28 telling us here, that, even though we're dialing down the Fs,
29 our catches aren't diminishing much, and our F rebuild is
30 similar to what recent catches have been, and we're not going
31 to recover the stock to a point where it's going to produce more
32 catch in the next ten years than what we've seen for a stock
33 that is perceived, or estimated, to be significantly overfished.
34 I still don't quite catch all that.

35
36 **CHAIRMAN NANCE:** It doesn't look like it would get us past the
37 overfished state.

38
39 **DR. VAUGHAN:** I am not sure where Nancie is -- You're very close
40 to being able to fish, with the new projections and the new
41 target, and the model actually puts you pretty close to where
42 it -- That's why the F rebuild is very low, and like it's not -
43 - Those are constant Fs, obviously, resulting in those catches,
44 and so they're saying that you're a lot closer to your target
45 biomass than the old version that wanted to project to a biomass
46 ratio benchmark, which is much higher.

47
48 **CHAIRMAN NANCE:** These graphs are good, but if we can go back

1 to that table, because I think the numbers themselves will be -
2 - There we go. Will, does this -- Let's look at this and see
3 if this helps.

4
5 **DR. PATTERSON:** Jim, these are just the numbers that are in
6 those figures, and so it shows that, from 2022 to 2023, you have
7 a 500-pound increase, and then it goes to a 400, then a 300,
8 and then a 200, and so you're just getting -- This is the
9 plateauing that we saw in the previous figure.

10
11 **DR. VAUGHAN:** Maybe the -- Do they have the current status
12 relative to that target? Is it Slide Number 3, I think, if you
13 go up to it? Nancie might know better if she has a slide here
14 that has the current stock status determination.

15
16 **DR. CUMMINGS:** There's not a slide, but you're asking, under
17 OFL, when are we going to recover, and is that the real question?

18
19 **DR. PATTERSON:** I think what Nathan's point is, it's that, if a
20 stock is close to its F rebuild target, that's why you would
21 see the plateauing.

22
23 **DR. VAUGHAN:** Exactly. It's very close to the target.

24
25 **DR. CRABTREE:** I mean, that's what I am getting out of this, is
26 the Fs aren't very far from the target, and there is not much
27 rebuilding to come, and so you're not going to see much of a
28 change in the fishery from rebuilding.

29
30 **DR. VAUGHAN:** Exactly, and so the previous models going with
31 the spawning biomass expected very large potential increases,
32 because they were targeting a much larger raw spawning biomass
33 than we are now by correctly doing SPR.

34
35 **DR. CRABTREE:** If I could, Jim, the problem, over the years,
36 has been this stock has not responded in the way the projections
37 indicated that it would, because the projections were indicating
38 big changes would happen, and they never did, despite what we
39 did management-wise, and we didn't see that.

40
41 What I am gathering, from the way we've been doing it, is it
42 just wasn't -- The projections weren't doing what we thought
43 they were doing, because the computations weren't working right,
44 and that's been resolved here.

45
46 **CHAIRMAN NANCE:** Sean, to that point? Go ahead.

47
48 **DR. POWERS:** I guess, Roy, are you -- Is this indicating the

1 stock is less productive than we thought? Is that why we're so
2 close to rebuild, even -- I mean, so we've been making incorrect
3 assumptions about the productivity of the stock? Is that --
4

5 **DR. VAUGHAN:** That's hard to know, because these projections,
6 and everything to do with them, is based on the assumption of
7 fixing recruitment out into the long term at the current
8 average, the recent years' average, and so it's difficult to -
9 - We would hopefully see a change, if it's going to increase,
10 and then we could make corrections down the road, but these
11 current projections and that long-term expected yield is based
12 on the recent averages, and so, when we've used the virgin
13 recruitment in the past, it has come up with much larger catches,
14 which apparently have been an overestimate, which is why we
15 haven't achieved those targeted rebuilds that were expected by
16 the model.
17

18 **DR. CUMMINGS:** The recommendation to use the fixed recruitment
19 from the recent years was only recently done, and it was actually
20 after the original SAR report went in, and it was done right
21 before the SSC meeting, to the last ten years.
22

23 If you do review the base model, you will see the results of
24 the -- The diagnostics on the recruitment curve, you will see
25 that there are quite a few spikes in those early years of
26 recruitment, and then we're using 2009 to 2018. There was one
27 question at the SSC meeting regarding that choice, and it was
28 felt that that was more of a judicious choice to reflect the
29 recruitment.
30

31 **CHAIRMAN NANCE:** Okay. Thank you. Doug.
32

33 **MR. GREGORY:** Thank you. Well, this is confusing also, in that
34 the stock is estimated to be at like 37 percent of BMSY, or 30
35 percent of BMSY, and so that's saying that it is extremely
36 depressed, and so, following along what Will was saying,
37 something here doesn't add up right. Thank you.
38

39 **DR. VAUGHAN:** Do you have that figure there Nancie somewhere?
40 I don't know that, with the new projections, that the stock is
41 at 30 percent of BMSY, given the --
42

43 **DR. CUMMINGS:** I can give you the number, but we didn't make a
44 -- I didn't make that figure, because it was -- It was decided
45 not to update the executive summary, because we weren't trying
46 to request a new evaluation on the base model, but I can get
47 that number for you, just if you will hang on.
48

1 **DR. VAUGHAN:** I think that might be the issue. I think, with
2 the new projections, BMSY is much lower than it was before.

3
4 **CHAIRMAN NANCE:** I think that's the issue. We have an assessment
5 that's been done, and then, with the projections that we had,
6 we have an OFL and an ABC that we have taken, but now these --
7 We have the same base model, but now these new projections are
8 different than what we have seen in the past.

9
10 **DR. CUMMINGS:** Right, and the current stock is based at 77
11 percent of BMSY, and it's 0.77, and so I just will say that it's
12 above MSST, and I don't know if all the new members know that
13 MSST is 50 percent of BMSY for this stock. I will just say that
14 the BMSY has been reduced to 3179, basically, millions of
15 pounds, or metric tons.

16
17 **MR. GREGORY:** So what is the percent biomass currently?

18
19 **DR. CUMMINGS:** 77 percent.

20
21 **MR. GREGORY:** I'm off-base then. I thought for sure that I was
22 reading that it -- Particularly looking at the slides that we
23 saw in the previous agenda item, and the current biomass was
24 below 50 percent of BMSY, and so --

25
26 **DR. CUMMINGS:** That was before the new code was written that
27 would search for equilibrium OFL. I think we have a slide that
28 does give you those metrics. No, we didn't put it in there.
29 Okay.

30
31 **DR. VAUGHAN:** That is, obviously, a change for the base as well,
32 but that's part of the issue, is every one of those four
33 different projections with different allocation ratios all have
34 a different BMSY, or B, and so it's --

35
36 **DR. CUMMINGS:** If you look at your document that was provided,
37 along with this presentation, on Table 2, it does give you the
38 metrics, the benchmarks and reference. It's Table 2, which is
39 page 4.

40
41 **DR. VAUGHAN:** That's on page 4 of the report, Katie says.

42
43 **DR. CUMMINGS:** So there's your mortality criteria, and so
44 nothing has changed in the first five lines, and then the
45 mortality rate criteria -- You have a new SPR, F at SPR 30, of
46 0.42. That 75 percent is FOY, and F rebuild is different, and
47 it's 0.32, and so you can see that these are close, as Katie
48 was referring to. It doesn't take as long to get there. With

1 F rebuild, we do get there by 2027, because that's the
2 definition, and, without OFL, we get there at 2034, about two
3 or three years earlier than in the previous --
4

5 **DR. VAUGHAN:** If you scroll down a smidge on that page, I think
6 you'll see that we get to the 77 percent.
7

8 **DR. CUMMINGS:** This was 7119 in the previous projection
9 scenario, and so we're above MSST. We're at 1.53, and we're 77
10 percent, in terms of SSB to the proxy F 30.
11

12 **MR. GREGORY:** Nancie, I am looking at Table 23, the summary of
13 reauthorization act benchmarks and reference points, and it has
14 MSST at let's say 3.6. It has current SSB at 2.4.
15

16 **DR. CUMMINGS:** What table are you at?
17

18 **MR. GREGORY:** Table 23, page 78.
19

20 **DR. CUMMINGS:** Yes, and so this was based on a different BMSY.
21 It was based on the 7119 MSST being 3559, and so, with the new
22 code, now searching for SPR 30, we have lower SSB BMSY.
23

24 **MR. GREGORY:** But SEDAR 70 is our latest stock assessment.
25

26 **DR. CUMMINGS:** It is, but this is the results in January, and
27 so what you're looking at now are updated projections based on
28 the revisions to seeking the correct status.
29

30 **CHAIRMAN NANCE:** So, really, Nancie, it's more than just
31 changing projections, isn't it? It has changed some of our
32 benchmarks in the assessment.
33

34 **DR. CUMMINGS:** It did change the reference benchmarks. Correct.
35 That is true, and it has to do with the way we were using SS
36 strictly to search for FSPR 30, and, as Nathan pointed out, the
37 model developer really concentrates more on, in all of his
38 projection code, those Fs in an equilibrium sense, and there's
39 not many stocks, other than the Southeast, that has these
40 multiple sector allocations, or multiple fleets.
41

42 **DR. VAUGHAN:** It's trying to continue that benchmark, like what
43 we were trying to target to.
44

45 **DR. CUMMINGS:** Right, and I'm really oversimplifying it here, I
46 realize. We're truly seeking for the F that will achieve FSPR
47 30, our proxy, and maintain those sector allocations
48 simultaneously, and so it's not just a simple single-vector loop

1 search, and it's actually a multiple -- It's a little bit more
2 complicated than that, and I don't want to oversimplify it
3 either.

4
5 **CHAIRMAN NANCE:** Okay. Thank you, Nancie.

6
7 **DR. CUMMINGS:** You're welcome.

8
9 **CHAIRMAN NANCE:** Katie, you're next up on the list.

10
11 **DR. SIEGFRIED:** Thank you, Mr. Chair. So much of what I had
12 already wanted to say has been said by Nathan and Nancie. I
13 guess the first reason that I wanted to chime in is, Jim, I
14 believe, Tolan asked if all of the other projections in the
15 spreadsheet, or in the document, were conducted using the
16 updated methodology, and they were. I'm sorry if that's already
17 been answered.

18
19 Then Nathan already covered the issues with SPR 30 and the
20 recruitment, and so, to Sean Powers' point, if we use those
21 virgin recruitment -- If we use the stock-recruit curve, we're
22 not really using the most recent recruitment, which shows a much
23 lower level than in the past. As Nancie noted, there's quite a
24 few peaks that would increase the average recruitment expected
25 from the stock-recruit curve, and so I don't think that we're
26 saying, overall, the stock is less productive, and we're using
27 more recent estimates of recruitment, but, everything else I
28 was going to say, I think Nancie or Nathan already said. Thank
29 you.

30
31 **CHAIRMAN NANCE:** Okay. Thank you. David.

32
33 **DR. CHAGARIS:** My question has been addressed. Thank you.

34
35 **CHAIRMAN NANCE:** Mike Allen.

36
37 **DR. ALLEN:** Thank you. A lot of my question has been addressed
38 too, but I had the same question about the productivity
39 difference, the apparent productivity difference, in the
40 trajectory of the recovery between those two scenarios.

41
42 One of the things that struck me, in looking at the assessment,
43 is that the stock-recruit curve -- Actually, there's one
44 advantage of having a greatly-depleted stock, and it's that you
45 have a lot of data points down near the origin, and it seems
46 like the steepness for this stock should be pretty well defined,
47 at least by the model prediction, and so I wondered why the
48 future recruitments were constant, and why not just use the

1 empirical age estimates, the steepness estimates? That was my
2 question.

3
4 **DR. CUMMINGS:** I would just direct the slide staff to Slide --
5 To page 155, just to give the audience a depiction of those
6 recruits, and you can see those spikes. What we did in the
7 model was, going back as far as SEDAR 33, we were recommended
8 to use -- To estimate some of those recruitments far back, to
9 try to get a better sense of -- A better estimation in the later
10 part of the time series, and you can see those spikes and the
11 large deviations. It's in the document, the SAR document. When
12 you have some time, look at that page 155, and you can see a
13 really good sense of those recruitments.

14
15 As I said, we were -- We only had one question, at the SSC
16 meeting, about restricting those recruitments to the last ten
17 years, and so now to the next question, and I think it was about
18 the productivity, and it was also regarding why not use the --
19 Steepness was -- At first, we tried to estimate it in the model,
20 and then we found that we had a number of -- The model still
21 converged, but it gave us poor performance, in terms of
22 diagnostics, and we tried to estimate steepness, and so we ended
23 up -- We did use our profiles, and the profiles on steepness
24 are shown in this report, and I forgot what page, but I can
25 reference those later for you.

26
27 We found an area where we thought steepness was reasonably
28 characterized to be at sort of the lowest of the profile, and
29 that number was 0.7. We fixed it at 0.7, and we did find some
30 support for that value, and that number is somewhat different
31 than the SEDAR 33 and the 33 update. That was 0.85. That
32 number came off of a literature review, and so I hope that helps
33 a little bit more about the steepness value.

34
35 **DR. ALLEN:** It does, and it just seemed like it was better
36 defined for this stock than it is a lot of the time, which is
37 encouraging, but, when I saw the difference in trajectory,
38 recovery trajectory, between those two plots, the only thing I
39 could rationalize that would cause that is a difference in the
40 productivity, because the F is constant, and the yield is
41 increasing at such a different rate between the two that it
42 would have to be a productivity, which is similar to what Will
43 brought up.

44
45 **DR. CUMMINGS:** But the reason that it was ultimately fixed by
46 the panel was because of the diagnostics, and so they became a
47 little bit unsettling, in terms of -- I think it was the
48 retrospective pattern, in a couple of cases, and then some of

1 the residuals in some of the other fits, and it basically
2 affected some of the other fits, and so, I mean, that's what
3 happens in SS. You've got so many parameters that you're
4 estimating, and it just trades off estimating one better than
5 the other, and it's like a big Ouija board.

6
7 **CHAIRMAN NANCE:** Thank you, Nancie. We're going to go offline
8 for just maybe five minutes while we have a discussion with the
9 council and stuff, and so just everybody hold on, and we'll be
10 back at 4:40.

11
12 (Whereupon, a brief recess was taken.)

13
14 **CHAIRMAN NANCE:** What we're -- I guess we've just been talking
15 amongst ourselves here, and I'm sorry for the other SSC members
16 that are not here, but while the model -- I love the -- I think
17 the new approach seems to be a very good approach, and our only
18 issue is it has gone back into the assessment itself and changed
19 the current MSST value, and others, and so now we're starting -
20 - Instead of just changing the projections out from the end of
21 the model, we've gone back in and changed some of the assessment
22 values, and so I guess, as the SSC, we're a little uncomfortable
23 with those changes that have occurred to the assessment itself.

24
25 What we would like to recommend is we need to probably have a
26 presentation from the Southeast Fisheries Science Center at an
27 SSC meeting where we can look at this new update and what it
28 does to the assessments, so we can, I think, vet the analysis.
29 Paul.

30
31 **DR. MICKLE:** Very quickly, we do have a motion on the board, if
32 I'm not incorrect, that we most likely have to address before
33 taking on such conversations. Am I wrong there?

34
35 **CHAIRMAN NANCE:** Well, I think you're probably right. Doug,
36 can we maybe retract this motion? Would you be comfortable with
37 that?

38
39 **MR. GREGORY:** Throw it away.

40
41 **CHAIRMAN NANCE:** Okay.

42
43 **MR. GREGORY:** We know a lot more, and we're confused now. It
44 seems like Paul was right all along.

45
46 **CHAIRMAN NANCE:** Katie or Shannon or Nancie, do you have anything
47 to add, or Nathan?

1 **DR. SIEGFRIED:** Thank you, Mr. Chair. Nathan has said this,
2 and I think that Nancie alluded to this, but I wanted to just
3 reiterate what we were presenting to you here, and so, when we
4 got the council request to do these allocation scenarios, we
5 had to do some new coding, in order to be able to even process
6 those requests, because one of them -- As you saw, the fourth
7 one was fixing the commercial landings and then running it with
8 allowing the recreational allocation to do what it would, and
9 so we did need to innovate a little bit.

10
11 In the process of doing that, we found those two key errors in
12 the previous projections, which you all have worked through the
13 thought processes of that, and so I just want to state them for
14 the record, openly, so that everything is as transparent as
15 possible.

16
17 The first one is we were not iterating to SPR 30 percent SSB,
18 and we were iterating to biomass of basically zero, which is
19 fine if your steepness is one, which is what the assumption has
20 often been, but that was an error, and we have corrected that
21 in these new runs.

22
23 The other error was that we were pulling from the stock-recruit
24 curve instead of the recommended last-ten-year timeframe for
25 the recruitments, and so that estimated that more recruitment
26 was available for the projections, and so that is also the sort
27 of deflation of that curve that Nancie has shown and the council
28 staff has shown, and so those are two key errors that we found
29 in the previous projections.

30
31 We have also met the allocation requirements and made the
32 improvements, but it also covers, potentially, for you all to
33 consider the use of the proxy, based on just simply the fact
34 that I think Will and others have stated, and Jim and Paul,
35 that, if the projections are achieving SPR 30 percent, but
36 they're not really dropping down below recent landings, which
37 are said to be overfishing, perhaps the proxy needs to be
38 revisited, or the recruitment assumption, the last ten years,
39 and so there are a lot of questions that we're happy to put
40 together a more complicated and thorough presentation for the
41 next SSC meeting, but I really wanted to get all of that on the
42 record and make sure that we were as transparent as possible.
43 Thank you.

44
45 **CHAIRMAN NANCE:** Katie, I appreciate that very much. The
46 methodology looks very promising, and I think it's the way to -
47 - It's certainly the way to go once we've looked at what it's
48 doing, because it's taken away the spikes in our projections

1 and things like that, and so I really, really greatly appreciate
2 what the Center has done in looking at this. Benny.

3
4 **DR. GALLAWAY:** My hand was up previously, and it was lowered
5 before, but I do think I need to agree to withdraw the motion
6 as well, as the second, and I'm not sure if that's correct, but
7 I think the method also looks extremely promising. I think,
8 for now, it's representative, will be proven representative,
9 unless east/west differences are found in stock sizes, which I
10 anticipate will be the case. Thanks.

11
12 **CHAIRMAN NANCE:** Thank you. Will.

13
14 **DR. PATTERSON:** Thanks, Jim. I think the approach that Katie
15 is advocating here is prudent. It's really rare that we as a
16 group can't figure out any potential issues and resolve them,
17 based on work that the Center scientists do, in addressing
18 council requests and the SSC's then review of those, and so it's
19 rare, but I think this is a case where it's prudent to maybe
20 pull back and reexamine some of those things.

21
22 Getting back to what Roy had mentioned earlier about the fact
23 that projections in the past never were realized, and perhaps
24 what we're seeing with the new code by Nathan Vaughan is the
25 application of that. However, there just seems to be some other
26 sources of uncertainty here that we haven't completely reviewed,
27 and so I fully support this approach, and I'm hopeful, at the
28 next meeting, we can figure our way through this and put it to
29 bed.

30
31 **CHAIRMAN NANCE:** Thank you, because it does -- It does seem
32 reasonable, what's happening. We seem to be comfortable with
33 it back into the assessment part, and so, from a Center
34 standpoint, Nancie and Shannon and Katie and Nathan, thank you
35 very much for that presentation.

36
37 **DR. CUMMINGS:** Jim, I have a comment.

38
39 **CHAIRMAN NANCE:** Nancie.

40
41 **DR. CUMMINGS:** I want to thank Katie for that wonderful succinct
42 summary, but I do want to address the terms of reference that
43 were given to us, and it did define the projection scenario,
44 but it did not define a new recruitment series, and so we did
45 that at the very end, actually, right after this report was put
46 out, the SAR report, and then that certainly did not get
47 implemented, I should say, that ten-year recruitment series,
48 but SEDAR 33 and the SEDAR 33 update both used that entire time

1 series for recruitment, and so that was just followed through.
2 Thank you very much.

3
4 **CHAIRMAN NANCE:** Thank you. Nathan.

5
6 **DR. VAUGHAN:** Thank you, Chair. I just wanted to give a heads-
7 up. As Katie had pointed out, we're working, at the Center, to
8 try to improve our forecasting approaches and come up with best
9 practices and get this cleared up for future assessments, but,
10 based on the discussion that's been going on here, there is --
11 Like this single request was to simply update the projections
12 with different allocation fractions, and, in this scenario, they
13 are fairly large changes.

14
15 I understand that it's creating some concerns, but, from the
16 comments on the BMSY targets, with those allocation fractions
17 changing, that will always change your BMSY target, and so
18 that's something that we're trying to look into how to have that
19 discussion with the SSC and the council, on how we work on --
20 Every time we update an allocation, it is going to change all
21 those benchmarks, to some degree, because those are all
22 interrelated, and so I just wanted to make that comment, that
23 it's something that's going to have to be considered, and maybe
24 we can come up with some best practices, with the SSC, on how
25 to handle that in the future.

26
27 **CHAIRMAN NANCE:** So, Nathan, I'm just trying to follow what
28 you're -- So you're saying that, once you do the projections,
29 the base benchmarks will change every time?

30
31 **DR. VAUGHAN:** Yes, if they're allocations, because the
32 benchmarks are based on -- Say you've got, for an extreme
33 example, two very different fleets, and you've got one fleet
34 that is catching fish at age-two and another fleet that's
35 catching fish solely at age-twenty, and they have very different
36 levels that are sustainable from the population, and so, if you
37 shift the allocations between those two fleets, what constitutes
38 the sustainable SPR 30 benchmark is going to change, and so
39 that's something that -- For some fisheries, it's not too big
40 of a deal, but, for some, it has a more intense effect, which
41 is why you see those changing allocation quotas from all the
42 different benchmarks that we pursue. They also have different
43 benchmarks for each one of them.

44
45 **CHAIRMAN NANCE:** Thank you. Any other comments from the SSC?
46 Okay. Thank you very much. We'll adjourn, and we'll be back
47 here at 8:30 tomorrow morning, Eastern Standard Time, or Eastern
48 Daylight, I guess.

1
2 (Whereupon, the meeting recessed on August 10, 2021.)
3

4 - - -

5
6 August 11, 2021

7
8 WEDNESDAY MORNING SESSION
9

10 - - -
11

12 The Meeting of the Gulf of Mexico Fishery Management Council
13 Standing and Special Reef Fish, Special Socioeconomic & Special
14 Ecosystem Scientific and Statistical Committees reconvened on
15 Wednesday morning, August 11, 2021, and was called to order by
16 Chairman Jim Nance.
17

18 **CHAIRMAN NANCE:** We'll go ahead and start. Welcome, everyone,
19 on the SSC meeting. I'm going to turn it over to Ryan, just
20 for our next SSC meeting, to go over some of the things that
21 we'll be covering at that meeting.
22

23 **MR. RINDONE:** Thank you, Mr. Chair. One of the things, based
24 on the discussions that were had yesterday regarding greater
25 amberjack that it seems clear that we're going to need the SSC
26 to review is this new projection method that was applied for
27 greater amberjack. Is there anyone from the Science Center
28 that's on right now that can talk, Katie or Shannon or somebody?
29

30 **DR. SIEGFRIED:** I'm here.
31

32 **MR. RINDONE:** Hi, Katie. The SSC is going to need to see a
33 writeup on this new projection method, along with a presentation
34 about it, at the September meeting, preferably, if it's possible
35 to do that, to have a better understanding of how it operates
36 and how it affects -- How changing those sector allocations can
37 affect the ultimate stock status for the species to which it's
38 being applied.
39

40 We have a few species right now that we have accepted projections
41 for that we'll need to know whether those are also in error, as
42 they were for greater amberjack, and what the effect would be
43 of applying this new method to those, and, off the top of my
44 head, red grouper, yellowtail snapper, and vermilion snapper
45 doesn't have sector allocations, and neither does cobia, but
46 having some understanding of if this method has any effect on
47 those would also be helpful, in addition to greater amberjack,
48 and so, really, it's five species then, and so vermilion and

1 cobia that don't have sector allocations, and then red grouper,
2 yellowtail snapper, and greater amberjack, which do.

3
4 **DR. SIEGFRIED:** I just have a question. We didn't do yellowtail
5 snapper, and that's a Florida assessment.

6
7 **MR. RINDONE:** That's correct, but FWC, as I know you to know,
8 receives a lot of support from the Science Center about working
9 through Stock Synthesis, and so, if the projection that was used
10 for yellowtail snapper needs to be revisited, in light of this
11 new method, we should probably know about that, because that
12 affects the Gulf and the South Atlantic Council.

13
14 **DR. SIEGFRIED:** I see. Yes, you're right, and so Nathan has
15 helped the Florida analysts do their projections, and the red
16 grouper assessment is where we did first use this code, but we
17 will address all of that in the presentation.

18
19 **MR. RINDONE:** Okay, and so all of that will need to be talked
20 about as one agenda item, and then we'll need to -- Judging from
21 the SSC -- It looks like we'll need to go back through the
22 greater amberjack stock assessment presentation, including this
23 new method, so that the SSC can see how, under the different
24 scenarios, how stock status, virgin biomass, et cetera, how all
25 of those things are affected by this new method.

26
27 They will have to consider all of that information in its
28 totality again, as to whether it constitutes best scientific
29 information available, because, as it stands right now, changing
30 the projection method, after they have already accepted the old
31 one as being BSIA, and then seeing the new one, which changes
32 the stock benchmarks, it seems out of step, since the projection
33 methods the last time -- Like those were done external to the
34 model, and so having that all presented again will end up being
35 necessary, and, if that can also be done in September, then that
36 would also be ideal.

37
38 **DR. SIEGFRIED:** Yes, that can happen, and so let me just make
39 sure that I understand, Ryan, and so the way that status is
40 calculated, using the equilibrium projections, we need to review
41 that, because the only difference in the methodology is just
42 the allocation part, and there is no difference in the way that
43 we have used long-term equilibrium projections to determine
44 status, and that's how we calculate F 30, our SPR proxies, and
45 those calculations haven't changed. The methodology is just
46 the allocations.

47
48 The amberjack is the only one that we know that there was an

1 actual error in the implementation of the code, but we will
2 review the other assessment codes, or the projection codes, to
3 be sure that any similar errors were not also made.

4
5 **MR. RINDONE:** That would certainly be helpful and still having
6 a breakdown for the SSC of how all of this works I think is
7 certainly going to be to their benefit for moving forward, since
8 this seems to be the new status quo. John.

9
10 **DR. FROESCHKE:** Just to jump in, with respect to amberjack, I
11 do think we're going to need to have some information about
12 SEDAR 70 and how this information integrates. For example, it
13 changes dramatically our picture of stock status, going from
14 overfished to not overfished, but rebuilding, but on a much
15 better position, although the stock doesn't seem near as
16 productive, and I don't know how it would affect the rebuilding
17 time and things like that.

18
19 I think all of that needs to be placed in context after we have
20 some information and a presentation and document about the
21 change in the projection methodology, because, I guess, speaking
22 for myself, I don't -- It's difficult to understand how all that
23 fits together, and, given that this is going to be what we're
24 seeing in the future, I do think the SSC, as a body, would
25 benefit from a presentation and some information on how to
26 interpret and provide feedback on this in the future.

27
28 **DR. SIEGFRIED:** No problem. We can provide that, and I think
29 that we have a good idea of what needs to be presented, and we
30 can do that. I don't think that it's something -- We will
31 present this, but it's not something where the way that SEDAR
32 70 was put together is an issue, but it was just at the
33 projection phase, and so we can make that clear in the
34 presentation.

35
36 **MR. RINDONE:** I think that it's more than that from the
37 perspective of determining and recommending what the best
38 scientific information available is, because, if the projections
39 change the stock status, then the entire package is what is
40 being declared to be best scientific information available, and
41 so it's not that the assessment, by itself, without projections,
42 is BSIA and then also the projections, secondarily to that, are
43 BSIA.

44
45 It's all of it constitutes BSIA and is appropriate or not for
46 management advice, and so that's where that distinction will
47 need to be revisited, because it's already been made, based on
48 the old way of doing things. If that is not true, then it needs

1 to be revisited in its totality, because that's how it has
2 classically been determined by the SSC. You have several hands
3 up, Mr. Chair, and I don't know if you want to start working on
4 the list.

5
6 **CHAIRMAN NANCE:** Doug Gregory.

7
8 **MR. GREGORY:** Thank you and good morning. I respectfully request
9 that we add king mackerel to that list, Ryan. As I noted
10 yesterday, there must be something strange going on with king
11 mackerel, if we're catching say approximately two-thirds of the
12 ACL and you're seeing recruitment has been flatter going down,
13 and we've had the major change in the geographic extent of the
14 population, yet the historical estimates of spawning stock
15 biomass does not change between the early 2000s and after the
16 geographic extent was changed.

17
18 I think a lot of this might be due to climate change, and clearly
19 water temperature is affecting king mackerel movements, but I
20 think it's worth taking a good look at that, and this list you
21 have is a good start with that, if we can add king mackerel to
22 that.

23
24 **MR. RINDONE:** So noted.

25
26 **CHAIRMAN NANCE:** Jason.

27
28 **MR. GREGORY:** Thank you.

29
30 **MR. ADRIANCE:** Thank you, Mr. Chair. I just wanted to make sure
31 -- Do we need to revisit anything red grouper because of this?

32
33 **MR. RINDONE:** We don't know yet. If they have already used this
34 with red grouper, and that was what was used to recommend best
35 scientific information available, then it would seem as if that
36 was already done. However, I don't think that that was -- I
37 mean, I don't recall this kind of discussion about the red
38 grouper projections having happened, and so that wasn't
39 disclosed at the time, but, if that methodology was used, then
40 you guys have already approved it as such, as BSIA, as a function
41 of looking at the different allocation scenarios that you
42 recommended to the council as being in keeping with BSIA for
43 those scenarios, and then the council, of course, would just
44 choose the one that best suited management.

45
46 **DR. SIEGFRIED:** Mr. Chair, may I speak?

47
48 **CHAIRMAN NANCE:** Absolutely.

1
2 **DR. SIEGFRIED:** There is -- Red grouper -- There were absolutely
3 no mistakes or errors made in the red grouper projection
4 specification, and everything in that report is accurate, in
5 terms of what was asked for by the SSC and what was provided,
6 and so the allocations were held constant, and the corresponding
7 exploitation rates were correct.

8
9 That work by Skyler and Nathan is what made us consider that,
10 oh, we need to do this for other species, and so it wasn't a
11 non-disclosure of new methodology, but it was kind of the first
12 time that we ever did it right, and then we developed this
13 methodology that was generalized for other species.

14
15 **MR. RINDONE:** So, Jason, under that information, it would seem
16 as if red grouper, at this time, wouldn't need to be revisited,
17 because you guys have already gone through it for that species.

18
19 **MR. ADRIANCE:** Thanks. I just wanted to make sure.

20
21 **CHAIRMAN NANCE:** Thank you, Jason. Thank you, Katie. Mandy.

22
23 **DR. KARNAUSKAS:** I just wanted to put some of this discussion
24 in kind of the broader context. I am not directly involved in
25 the stock assessments, but I am part of a national working group
26 revisiting forecasting and projection methods, and my
27 understanding is that projection methods are always -- It's a
28 developing field, and we spend a lot of time, or we have spent
29 a lot of time in the past, fitting data to the model, and that
30 part has been really well fleshed out in the stock assessments,
31 but the projections aspect of stock assessment is very much a
32 sort of developing field, and that's not just the case for the
33 Southeast, but across the regions, and, again, I say that as
34 participating in this national working group.

35
36 I think we're probably going to be seeing constant updates and
37 improvements to the way that we project, and so I just wanted
38 to add that perspective, that this is an issue that's going to
39 come up, I would expect, kind of routinely over the coming
40 years, and it's not that old methods were wrong, or that they
41 were errors, but that just we're constantly finding ways to
42 improve, and so that's my two-cents on what we're kind of dealing
43 with here.

44
45 **CHAIRMAN NANCE:** Thank you for that perspective. David Griffith
46 first.

47
48 **DR. GRIFFITH:** I was just curious about the timeline, and Mandy

1 actually probably addressed this, in that I would -- I am not
2 that familiar with these methods, and I would actually like some
3 more background information on the kinds of assumptions that go
4 into them and things like that, and maybe that working group
5 that Mandy just talked about will provide that kind of
6 information, but, if not, I was wondering if we could get some
7 background information ahead of time, so that, if we had some
8 questions that we would like to raise, or have included in the
9 presentation, if we could give some feedback to the Science
10 Center people before the meeting. Thank you.

11

12 **CHAIRMAN NANCE:** Thank you. Dave Chagaris.

13

14 **DR. CHAGARIS:** Thank you. Katie, I appreciate you all agreeing
15 to come back and go over this again with us in more detail, and
16 I just wanted to mention that the big question that I have with
17 the analysis we saw yesterday was that, in the assessment model,
18 the spawning stock biomass MSY proxy was like 30 percent of the
19 unfished biomass, but, in the projections, the new biomass proxy
20 was like 13 percent, and I think I understood that to be due to
21 the different allocations and selectivities, but, given the
22 changes in allocation that were prescribed in the projections,
23 I was surprised that the change was that much.

24

25 While the projection methodology itself may be sound, there
26 could be some other things going on a little bit deeper, or just
27 a decision to switch the MSY proxy calculation, and that is the
28 big sticking point for me, and so hopefully you can clarify that
29 in September. Thank you.

30

31 **CHAIRMAN NANCE:** Thank you, David. Benny Gallaway.

32

33 **DR. GALLAWAY:** Thank you, Jim. Would this be the place to
34 submit new information regarding the studies that I referenced
35 yesterday concerning western Gulf greater amberjack abundance
36 estimates, abundance, size, and sex estimates?

37

38 **CHAIRMAN NANCE:** Probably not at this meeting.

39

40 **DR. GALLAWAY:** Okay.

41

42 **CHAIRMAN NANCE:** But that certainly we can do at a later date.

43

44 **MR. RINDONE:** Benny, if you want to plan on January right now,
45 but the September meeting was full before yesterday, and so
46 we'll have to add on time for this, but, if you want to plan on
47 January, you can go ahead and pen that in, because I don't have
48 that meeting filled up yet. Is that acceptable?

1
2 **DR. GALLAWAY:** Yes, indeed, and, by that time, I think we will
3 have additional new information from the Louisiana study.

4
5 **MR. RINDONE:** Even better.

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

8
9 **CHAIRMAN NANCE:** Any other discussion on this item? Thank you.
10 We'll go ahead and move into our scheduled item, Review of Draft
11 Options: Generic Essential Fish Habitat Amendment 5.

12
13 **REVIEW OF DRAFT OPTIONS: GENERIC ESSENTIAL FISH HABITAT**
14 **AMENDMENT 5**

15
16 **DR. LISA HOLLENSHAD:** Thank you, Mr. Chair. I will be presenting
17 this agenda item. Just a little bit of context here. At the
18 June council meeting, the Habitat Committee was convened, and
19 they reviewed this initial Draft Generic Essential Fish Habitat,
20 and I'm going to call it EFH from here on out, Amendment, as
21 well as a version of this presentation.

22
23 After reviewing those materials and some discussion, that
24 committee decided to request that staff bring those materials
25 before the SSC, in order to get some feedback on some of the
26 proposed methodologies and just generally looking over the draft
27 options and providing any input or recommendations.

28
29 Then what will happen then is the council staff will summarize
30 those discussions and then bring that summary back to the
31 Habitat Committee at the August meeting.

32
33 Before I sort of jump into the amendment or anything, I am going
34 to give a little bit of background on EFH. What is EFH? It
35 has a very specific definition that was first brought about with
36 the reauthorization of Magnuson and the creation of the
37 Sustainable Fisheries Act in 1996, and that specific legal
38 definition is those waters and substrate necessary to fish for
39 spawning, breeding, feeding, or growth to maturity.

40
41 Now, the Gulf Council does have identifications and descriptions
42 of EFH that was completed in Amendment 3 back in 2004, and so,
43 also, within Magnuson, is a stipulation that five-year reviews
44 should be completed to review the council's policy on EFH, and
45 so those have been also completed in 2010 and 2016.

46
47 Those reviews will sort of update the information that may be
48 available to inform descriptions of EFH, but those five-year

1 reviews don't do anything in terms of formally changing the
2 FMPs, for example, and so that has to be done through a generic
3 amendment, which hasn't been done since 2004. Those five-year
4 reviews are available in the background materials.

5
6 After those reviews are done, the Habitat Division over at SERO
7 will also have some recommendation letters in response to those
8 reviews, and those are also in the background materials, and
9 they were done in 2010 and 2016, and so one of the things that
10 I just want to highlight is you will see those letters are very
11 comprehensive, and they sort of have a ten-bullet-point list of
12 things that they look through, in terms of considering the
13 council's EFH policies, and so EFH is certainly important, but
14 it's one of many things, and it's sort of the tip of the iceberg.

15
16 Today, in talking about the draft options paper, I am going to
17 focus on EFH, but keep in mind that there's a lot of other
18 things to consider that would go into this amendment, like
19 fishing effects, non-fishing effects, habitat areas of
20 particular concern, and those sorts of things, and so I just
21 wanted to make the committee aware of that.

22
23 Highlighting the latest recommendation letter from the 2015
24 five-year review, there were a few things that popped out that
25 were identified by SERO. An update to the habitat protection
26 policy they recommended, as well as identifying and prioritizing
27 some research needs, and then one of the emerging themes though
28 from that letter was the need to amend the council's FMPs with
29 updated habitat information as soon as possible, in
30 consideration of other council priorities and timelines.

31
32 When that original Generic Amendment 3 for EFH was created in
33 2004, some of the habitat data that was used to inform those
34 descriptions was from the NOAA Data Atlas, which, at the time,
35 had data from 1985, and so, back in 2004, it was maybe a little
36 outdated, and so it's probably very outdated now, and so that
37 was one of the recommendations from the SERO office, was to go
38 back and look at this. The council had been doing the five-
39 year reviews, but, as I mentioned, those don't formally change
40 the FMPs, and that has to be done through a generic amendment,
41 which is why this is being tackled here today, and then something
42 that the council is going to have to address as well.

43
44 These descriptions are important, because they are needed and
45 used to inform the consultation process, and so a consultation
46 would be required when a federal agency has authorized, funded,
47 or undertaken part or all of a proposed activity that could
48 potentially adversely affect EFH, and so an adverse effect could

1 include direct or indirect physical, chemical, or biological
2 alterations.

3
4 Sometimes the federal agency, in agreement with NOAA, may
5 determine that no consultation is required, but, more often than
6 not, it is, and so this is just a way to allow for some
7 development, but also within conservation goals for habitat in
8 the Gulf.

9
10 The Gulf Council has some tasks, and then some upcoming ones as
11 well, and so the council must identify and describe EFH for all
12 managed species by the life stages you see there in that first
13 bullet. If you've been paying attention as we've gone along,
14 you may say, well, hey, the last five-year review was in 2016,
15 and that means the next one is up to bat in 2021, this year,
16 and so that would be correct.

17
18 Council staff, in speaking with the Habitat Office at SERO,
19 agreed that probably the best use of resources would be to
20 combine those two efforts, and so to develop a generic amendment
21 that would update those EFH descriptions in the FMPs as well as
22 incorporate what would need to be done in the five-year review.

23
24 In trying to keep, generally, and adhere to that timeline of
25 the five-year review, the goal of completion of this amendment
26 would be by 2022, and so it's a bit of a tight turnaround, given
27 the amount of work that would be done, but, if it could be
28 completed, that would actually be a great way to combine those
29 efforts, and so that's the goal that the council has set up.

30
31 Since the 2004 amendment was created, there have been certainly
32 not only advancements in sort of the data sources available,
33 but also the quantitative and computational techniques that are
34 available for sort of describing spatial ecologies in the Gulf,
35 and so, when revisiting this, this was something that we thought
36 perhaps the council may be interested in considering.

37
38 The rest of the talk, I'm kind of going to go through and talk
39 about these methodologies that we could use to describe EFH,
40 and I'm going to use gag grouper as an example, and so we're
41 going to use that as kind of the case study, and then so the
42 three pictures will denote those three approaches that I am
43 going to consider.

44
45 That first picture, the top of that picture, just some sea
46 habitat, is going to be the standard method that we're using
47 right now, and so what that does, very generally, is it looks
48 at the available habitat, the benthic habitat, and then looks

1 at some life stage tables, and so some species attribute tables,
2 and says, okay, let's link those up. That's the current method.
3 It's already established, and it's a fairly quick process, but
4 it does lead to some broad generalizations for descriptions of
5 EFH.

6
7 A second method that could be proposed would be just look at
8 species presence, and so it says, hey, I know that the species
9 is here, and I am not entirely sure why, necessarily, or what
10 the linkage for the habitat is, but I can at least refine myself
11 a little bit, and then I know something about the species
12 presence.

13
14 Then we can get into some complicated models, and so then we
15 can say, well, I know actually something about the species
16 presence and its absence, as well as I have some information on
17 some environmental covariates that I can try to use to link
18 those things.

19
20 For the two, these two, proposed methodologies, we only have
21 data to do it for a handful of species, and so it would be very
22 limited, even if we decided that, hey, perhaps we would like to
23 go with one of these new, more quantitative techniques, but it
24 will only work for a handful of species, and so the majority of
25 managed species is probably still going to have to use the
26 current method, and so just keep that in mind.

27
28 Then, certainly, the more complex these models get, it takes a
29 little bit longer to go through these analyses and make sure
30 that everything is up to snuff, and so it just takes a little
31 bit more time than the more qualitative techniques that we're
32 currently using.

33
34 This is how it's currently done here in the Gulf. Habitat use,
35 an extensive literature review is done to look at the species
36 habitat use within the Gulf and attributing those to various
37 habitat types. These benthic habitat characteristics are mapped
38 in the NOAA Gulf of Mexico data atlas. Like I said, what we
39 have on the books now, through Generic Amendment 3, is from
40 1985. Also, habitat categories are broken down into twelve
41 distinct categories, and then the Gulf is divided into five
42 ecoregions and three depth zones as well.

43
44 This is what these ecoregions look like, by their name, and then
45 the various bounds to demark them, and they generally follow
46 the NOAA statistical grids, and those are laid out there in that
47 last column. Here is a visualization of what those ecoregions
48 look like, and they are, across the Gulf, just very, very

1 broadly.

2

3 Then these are the twelve habitat types, and so you've got
4 everything from submerged aquatic vegetation, oyster reefs,
5 shelf edge, and so these sort of broad descriptions of benthic
6 habitat, as well as some drifting algae and sargassum as well.

7

8 Here is these other considerations for breaking out the habitat
9 types by depth, and so you have an estuarine boundary, which is
10 comprised of barrier islands and estuaries, and then a nearshore
11 categorization is depths of sixty feet or less, and then the
12 offshore would be depths of sixty feet or greater, and so that's
13 just general depth strata there.

14

15 Then we would also, through the literature search, compile all
16 of that, and so this is an example for gag grouper, broken down
17 by those life stages, and so what the researcher would do is
18 look at these various life stages and then try to assign these
19 life stages to an ecoregion, based on what has been found in
20 the literature, as well as looking at some of those habitat
21 zones and the habitat types and those sort of things, and so
22 this is how that's broken down.

23

24 Then, spatially, you can take your GIS layers and put these all
25 together, and you will get something that looks like this, and
26 so this is from the 2016 five-year review for all life stages
27 of gag grouper, and so this is probably -- This map is probably
28 different than that's denoted in the 2004 Generic Amendment 3,
29 because this has been updated through 2016, and so this is
30 slightly different.

31

32 However, if, for example, we decide to continue with this
33 method, this is, generally, what this would look like for all
34 stages of gag grouper, and so sort of expansive areas of the
35 Gulf would be described as EFH for that species, in this case,
36 and so that's the methodology we have been using.

37

38 There is some pros and cons associated with this. Some of the
39 pros are it's already established, and so we wouldn't
40 necessarily have to reinvent the wheel, and we would just have
41 to update our data sources. Formally, that's been done up to
42 2016, with that five-year review, but, in 2020, I did have some
43 time to go through, and those tables and things have now been
44 updated to 2020, and so we have that information as well.

45

46 Certainly the cons would be that that data atlas is outdated,
47 and so, again, we would have to formally implement what we've
48 been doing in the reviews and here recently into the FMPs through

1 this generic amendment. Again, there are some probably more
2 refined methods available that we could use that are a little
3 less qualitative to help refine EFH.

4
5 In terms of a policy pro, there is some precedent for using
6 these similar methodologies in the South Atlantic, the
7 Caribbean, and the Western Pacific. I think, actually, the
8 South Atlantic mostly uses depth strata as a way to describe
9 their EFH for their main species.

10
11 It can be very quickly updated, should it need to be, and it's
12 going to work for most species. Even for some data-limited
13 species, we do have a few papers that will let us know something,
14 so that we can go off of that, even if we don't have a whole
15 lot of other information for them.

16
17 A con, like I said, is it's relatively broad, and there's a
18 little bit of indirect linkage for species and habitat, and so
19 what this is doing is this is erring a little bit more on the
20 side of I know that this habitat type seems to be selected based
21 on some studies in the literature, and so I'm going to assume
22 that, everywhere that habitat type exists, that the fish could
23 be there, and that assumption is sort of a big one, because, as
24 you might imagine, there's probably other things going on, water
25 temperature or salinity effects, that would also be driving
26 selectivity to certain places, and so this is going to give you,
27 like I said, a little bit broader description for EFH, using
28 this method.

29
30 This is how these concepts translate into what's in the
31 document, and so Alternative 1 would be the no action, and so
32 we would retain that current description and identifications of
33 EFH as described in Amendment 3.

34
35 Alternative 2 would say, okay, I'm going to take those same
36 methodologies that I used to generate those descriptions back
37 in 2004, but I'm going to update my data sources, and so we're
38 going to have habitat maps that are much more contemporary, as
39 well as a literature review through 2020, and so that's what
40 that would do for Alternative 2.

41
42 For the two proposed more quantitative methods, the data sources
43 that we used would be the Gruss et al. 2018 paper that's also
44 available in your meeting materials. I will go into a little
45 bit more about what that paper did, but, in terms of Gulf-
46 managed species, the next two methodologies that I am going to
47 talk about, these species presented on the tables, this is what
48 it would be applicable for, and so this is where we have that

1 information and we could use some of this data.

2

3 Now, some of these species, they only have the aggregated life
4 stage data, and so it would have to be done maybe as an
5 aggregate, and there is actually even fewer species where we
6 have this information by species and by life stage, and so, like
7 I said, it would only be applicable for a handful of species.

8

9 What this paper did is they identified a number of fishery-
10 independent and dependent datasets, and so these datasets
11 included presence-absence data for species of interest, as well
12 as a number of environmental covariate measurements to go along
13 with those, and this data was collected -- They requested data
14 from 2000 to 2016 for these datasets, and, again, this is
15 throughout the Gulf, and generally, for their analyses, they
16 also selected datasets that had a long time series and good
17 spatial extent and that sort of thing as well.

18

19 Then it came through for a number of gear types, in terms of
20 encountering species, for everything from video to trawl seine
21 and vertical line and so on, and so the two proposed methods to
22 be considered for this would be a non-parametric kernel density
23 estimator, using a nearest neighbor approach, and so that would
24 be sort of that presence only, and so I know the species is
25 here, and I have identified it in a fishery-independent survey,
26 but that's all I'm going to use for that.

27

28 The second method would be a boosted regression tree model, and
29 that says, okay, I know a little something about the presence
30 and absence as well as some habitat data, and so I'm actually
31 going to be able to model that together and say a little
32 something about that.

33

34 The first method I'm going to talk about is this presence only.
35 If you had your observations of your fish here, and the method
36 I'm going to bring up draws from two different sort of conceptual
37 ways of looking at this, and so let's pretend that this is our
38 population of our gag here, and we want to say something about
39 like, well, I'm curious as to what area the fish are inhabiting,
40 and so, back in the day, when they didn't have a whole lot of
41 computational power, and, actually, most of this comes from the
42 avian literature back in the day, when people kind of sat around
43 and watched birds, and, if you had your observations, you could
44 draw a polygon around those outer observations, and you could
45 say, okay, here is the area in which I have seen my species.

46

47 It's really quick and easy to do, and it's easy to interpret,
48 and it's easy to compare across time or other species and that

1 sort of thing. However, it's generally going to give you an
2 overestimation, because you can imagine that most species aren't
3 spread out evenly over a spatial plane. There is areas that
4 they're selecting, and so they may congregate as well, and so,
5 if you just draw a line around your most -- A polygon about your
6 most exterior observations, you're going to get an
7 overestimation of the area.

8

9 There are other ways you can sort of approach this, and so a
10 more interesting question would be like, well, what is about
11 the size of my core area, and then what is the size of the
12 extent of the area, and what would be a better way to perhaps
13 describe what you're seeing in terms of habitat use, and so
14 another way that you can approach this is by looking at it in
15 sort of these little pieces, and, instead of drawing a minimum
16 convex polygon about all of your observations, you can also do
17 -- It's very popular, and you may have heard in on some of these
18 approaches used, but it's called a kernel density estimator.

19

20 What it would do is it would take each one of your individual
21 points and it would overlay a bivariate normal distribution
22 overall of those, tabulate those, and you would apply a
23 smoothing curve and get your isopleths and you could say, okay,
24 here is more core area of about 50 percent of my occurrence,
25 and then you can move out from there.

26

27 That works great for a lot of things, and so, for example,
28 Atlantic HMS uses this approach, because they have pelagic
29 species that are out in the water column, and so they can sort
30 of draw these inferences based on those kernel density
31 estimators.

32

33 For a species that's a little more inland, when you draw those
34 kernel density estimators, a lot of those times, those tails on
35 those probability distributions can get fairly long, and,
36 suddenly -- You're accounting for areas that you know the fish
37 is there, or they're near land, and, suddenly, you've got some
38 these considerations where it says your fish is on land, and we
39 know that's not the case.

40

41 To sort of move around that, instead of using a probability
42 distribution to say, okay, this is what I'm going to consider
43 my core area, or this utilization, based on how many occurrences
44 I have here, you can, instead, draw your polygons being informed
45 by the nearest neighbor, and so this is an observation that I
46 know where the fish is, and that will also allow you to account
47 for any boundaries, and so, if the fish are aggregating
48 nearshore, you wouldn't include any shore space, or area, in

1 your estimation of your habitat use. That is very conceptually,
2 broadly, what this is doing.

3
4 To look under the hood a little bit, what it's doing is that
5 first expression just says, okay, I have a location of points
6 on some grid, and I'm going to call it XY, and these are my
7 locational points. Then the model is going to generate a list
8 of local convex hulls using a nearest neighbor algorithm, and
9 so you're going to tell it that I want you, when you draw your
10 polygons, to consider this many nearest neighbors, and I will
11 get into how that is selected. Then it draws these areas, and
12 so it gets an idea of this core use, and so that's great to
13 know.

14
15 Then the next step it does is it reorders these areas, smallest
16 to largest, and then it defines unions and creates -- Where
17 there is overlaps of those unions, it can give a better idea of
18 this is what the extent of my area is, and so it's a nice way
19 to be able to say here's perhaps some core area, where fish seem
20 to be aggregating, or selecting these certain areas, but then,
21 also, here is my broader extent, and so that's what it's allowing
22 it to do.

23
24 In order to compartmentalize that, such that we can make a
25 determination about what we're interested in defining as a core
26 area, you can also assign percentile of points within that
27 utilization distribution, and so 100 would be all of your
28 observations, for example, and so you can go from 10 percent
29 all the way up to 100, and you can construct those corresponding
30 nested set of regions within each of those areas, and so each
31 extent has an area that's associated with it.

32
33 You can pull that out, and you can calculate your utilization
34 density, and so that's the last expression there, and so you
35 can take your area, and then you divide it by your percentile
36 of points, and so, for example, if you kept area constant, and
37 you increase your percentile of points, that density calculation
38 is going to get smaller, and so you can say, hey, this is where
39 I've got my concentrations of points, in this smaller area, and
40 so that's what I am accounting for.

41
42 We performed this analysis in R, using the T-LoCoH package, and
43 we used this package, and then, like I said, in terms of how
44 you want to draw your convex polygons, or your convex hulls,
45 you need to tell it how many neighbors, how many neighboring
46 points, I want to consider, and so that could be a little
47 arbitrary when you get started out, and three might be enough,
48 or do I need fifty, and what do I need, and so, fortunately,

1 the package does allow for some diagnostics to help inform that
2 decision.

3
4 To do that, you can examine your isopleth area curves and your
5 isopleth edge area curves for each K value, and so you can check
6 that out first. To do that, when you do that, it looks something
7 like this.

8
9 On the left, we start with the graph on the left here, and K is
10 those nearest neighbors points that I want to address on the X-
11 axis, and, on the Y, I have the area. Then the various lines
12 are your isopleth determinations, and so anything below 0.5 is
13 going to be considered your core area, and then 75 and 95, and
14 so those lighter colors, and the larger area are going to be
15 your larger extent, and what you're looking for here, and this
16 was the example done for gag, adult gag, what you're looking
17 for here is, if you see any rapid increase in the area as you
18 increase your nearest neighbor number, that would let you know
19 that perhaps there is a few outliers that are causing the extent
20 to expand.

21
22 It's only attributable to a few observations, in which case you
23 might run into creating a -- That would be like a Type II error,
24 and so you're including area that may not be there, and so that
25 would be the problem that I ran into right when I was first
26 talking about how you would just draw a polygon over your larger
27 extent and then perhaps be including the areas where they're
28 not really there and overestimating.

29
30 In the case for gag, we see sort of this just plateau throughout,
31 and so, as you increase the number of nearest neighbors you want
32 the model to consider, you don't see a whole lot of difference
33 between fifty or a hundred, but when things get interesting is
34 when you start looking at the isopleth edge area, and so, again,
35 that would be the plot on the right.

36
37 Again, on your X-axis, you have the number of nearest neighbors
38 you're considering, and then your ratio on the Y, and, if your
39 edge-to-area ratio is really high, that would be indicating some
40 overfitting, and so you would perhaps be higher probability if
41 you had less nearest neighbors that you were considering of a
42 committing a Type I error, so that you're actually excluding
43 areas that perhaps could be important for utilization.

44
45 Looking at this for gag -- I did a number of these, and this is
46 just an example, and we settled on using a hundred, and so
47 that's where you start to see that come down a little bit, and
48 so you don't get that overfitting, or sort of the Swiss cheese

1 effect, where you sort of get these really high demarcations,
2 in terms of where it's saying these concentrations are, and so
3 you don't want to necessarily overfit as well.

4
5 The results from using a hundred nearest neighbor looks
6 something like this, and we've drawn our isopleths in and around
7 this, and so the warmer colors, the reds and the yellows, are
8 going to be that core area, and then those lighter colors are
9 going to be more the extent.

10
11 Generally, in the literature, a core area is considered about
12 50 percent, and so, in the case of this map for adult gag
13 grouper, it's going to be those more yellow colors, and then 95
14 percent would be the darker colors there, and, like I said,
15 Atlantic HMS uses a 95 percent isopleth for describing their
16 EFH.

17
18 This is something that we get using this method, and the next
19 slide is just to remind you what the method that we would
20 currently use would look like, and you get a pretty different
21 description of EFH depending on what method you use. The
22 presence only, or the non-parametric kernel density, does refine
23 things a little bit better, because it says something about
24 like, well, this is where I seem to see and encounter that
25 species, and, even if perhaps the habitat is available, you just
26 don't see them there, is basically what that is sort of broadly
27 telling you.

28
29 **CHAIRMAN NANCE:** Can you answer just one question I have?

30
31 **DR. HOLLENSSEAD:** Sure.

32
33 **CHAIRMAN NANCE:** It's interesting that on that first -- The
34 other slide, you have very nearshore, and then, on the other
35 one, that nearshore is totally blank.

36
37 **DR. HOLLENSSEAD:** Just to let you all know too, the kernel
38 density, or the non-parametric kernel density that I'm showing
39 is just considering adult gag, whereas this one is considering
40 all life stages together, and so it's not quite apples-to-
41 apples, but, yes, you would think that there would be a little
42 bit more overlap than there is.

43
44 **CHAIRMAN NANCE:** Go ahead, John.

45
46 **DR. FROESCHKE:** Just on this particular one, I think what the
47 issue is, the way these work, you have maps of the habitat
48 types, and then you link -- Those are recognized as EFH. For

1 example, gag hardbottom is mapped, and so, to the extent -- On
2 the West Florida Shelf, if you don't have a good map of the
3 hardbottom, it's going to be underrepresented. In this case, a
4 lot of that area -- There probably is a lot of ephemeral, low-
5 relief hardbottom that really isn't captured in the benthic data
6 that we have, and so I think, in that particular case, that is
7 the issue.

8
9 **CHAIRMAN NANCE:** Thank you.

10
11 **DR. HOLLENSHAD:** It's likely that would be -- You would see
12 similar patterns for other species and life stages that we would
13 be considering, and so that's something to think about.

14
15 Pros and cons for this method are it's a fairly simple model,
16 actually, and it's using fishery-independent data. Some cons
17 though is, again, it's not available for all life stages, and
18 another policy pro is that there is a little bit of precedent
19 in New England, Mid-Atlantic, and, again, Atlantic HMS, as I
20 mentioned before.

21
22 It does seem to better refine EFH. Potentially, this method
23 could be something that could be used to describe habitat areas
24 of particular concern, and so, if we were interested in
25 protecting an area, for example, we could do something where we
26 looked at all juvenile life stages across all species and see
27 if we can get some patterns or if there's these high areas of
28 concentrations, or hot spots, to sort of inform what might be
29 going on there, or aggregations of spawning adults across
30 species, something like that. This would be sort of a good
31 methodology to sort of look at that.

32
33 One of the cons is it does add a couple more actions to the
34 document, to make it a little bit bigger, but that's just more
35 of timeline thing, and then this does -- One of the cons here
36 is there is a species habitat linkage tradeoff, and so what it
37 says is I know that the species is here, but I don't really know
38 anything about how the habitat links into that, and so, when
39 you think about your formal definition of EFH, we're missing
40 that a little bit, but at least it can say, hey, there's probably
41 something that I may not be measuring, or I don't have the
42 greatest habitat maps of that area, but I do know that the fish
43 is there, and so that's a tradeoff there.

44
45 In terms of the draft paper, Alternative 3, and so, if this
46 method were to be considered, there would be an Alternative 3
47 that would say, okay, use this non-parametric kernel density
48 estimator to describe EFH, and, again, it would only be

1 applicable for those species listed on Slide 14.

2
3 When sort of looking at this, it's probably a good idea to give
4 some consideration of what isopleth you would be interesting in
5 assigning for EFH here, and so, within that third alternative,
6 there would be a couple of options, either at 50 percent, 75
7 percent, or 95 percent kernel density estimator, and so this
8 would allow you to focus on either core areas or be a little
9 more conservative and say out to 95 percent, and so that larger
10 extent of the habitat use. That is all I have for the presence
11 approach.

12
13 Now I'm going to talk a little bit about the presence/absence
14 and habitat model, and so, before, it was just looking at I know
15 the species is here, and this model says, okay, I'm going to
16 have my sampling event, and I have encountered my species, and
17 so I'm going to encounter my species, mark it as encountered,
18 and then also take a suite of habitat measurements associated
19 with that observation.

20
21 Potentially, also, you could have a sampling event and the
22 animal is not there, and so you say, okay, well, now I also want
23 to measure this habitat so I can say something about where the
24 animal is not. Of course, you can also sample animals there,
25 and you don't capture them, but I will get into that in a little
26 bit, too.

27
28 In an ideal case, it would look something like this, and then
29 you could put these together and get your model output, and so
30 you can say something about the linkages between the species
31 presence as well as those environmental covariates.

32
33 To do that, we're going to use a boosted regression tree model,
34 and so these regression model approach -- It's a regression
35 model approach, but the objective is not to find the best model,
36 and I think maybe a frequentist approach, and, instead, we're
37 going to use recursive bifurcation, or trees, that are
38 constructed to identify regions within the space that have the
39 most homogeneous response to our predictors, and so those are
40 that tree from that figure that you can see up there, those
41 little demarcations right there.

42
43 It's a regression model where each term is a tree, and so it's
44 going to let you know that, hey, this response variable is
45 significant for explaining why a fish is here, or a fish is not,
46 and, because of that, it can say something like water
47 temperature is the most important, and certainly water
48 temperature above thirty degrees, or something like that, and

1 it allows you to demark exactly where along that variable you
2 begin to see the difference between why it's there and why it's
3 not.

4
5 The model can fit a variety of responses, and so, if you had
6 count data that worked really well for a Poisson, you could use
7 it, but, when we investigated our dataset, we found that it was
8 best suited -- Our presence/absence observations were best
9 suited for fitting a binomial distribution. We used the GBM
10 package in R to run this model.

11
12 As well as constructing the model, one of the things that gives
13 this approach some of its predictive power is boosting, and so
14 this uses a stage-wise optimization and is focused on
15 quantifying the variation in the response. That has not, so
16 far, been explained by the model, and so, every time it goes
17 through an iteration, it's looking to fit those residuals a
18 little bit better.

19
20 Boosting incorporates some stochasticity in the model, using a
21 random subset to reduce overfitting and improve that predicted
22 performance. The sequential model fitting builds from knowledge
23 of the previously fitted tree to help focus on more convoluted
24 observations, which can be difficult to predict, and this can
25 affect the learning rate and tree complexity, but it allows for
26 a straightforward prediction that still requires considerable
27 thought and interpretation, and so, with great power comes great
28 responsibility, right, and so this model can do a lot of things.

29
30 It can tell you a little something about interaction terms, but
31 how you interpret that -- You would want to be very careful and
32 give that a lot of consideration through the output.

33
34 Again, we used the Gruss paper to run this model. Originally,
35 there was 209 environmental inputs, and we were able to reduce
36 that down to thirty-nine, using Spearman correlation analysis,
37 and so here's what actually we put into the model, and the
38 years, again, were from 2000 to 2016, and the gears considered
39 were trawl, seine, longline, and gillnet, and then we had a
40 variety of environmental inputs that we also examined in the
41 model.

42
43 What we got for, again, adult gag grouper is, when we looked at
44 relative influence, not surprisingly, gear came out, as well as
45 bottom depth, bottom temperature, year, month, bottom dissolved
46 oxygen, and surface salinity, and so this is some of the
47 physiochemical things that also came out as well.

48

1 What the output also gives us is a number of plots looking at
2 how each variable performed in the model, and so what each one
3 of these little plots is going to tell you is each one is related
4 to an input, and so like the top-left one would be here, and
5 gear was a categorical variable, as was month, and so that's
6 why you see them denoted as those little dashes, whereas bottom
7 depth and temperature are going to be continuous variables, and
8 so that's why you see them marked out as a line.

9
10 What this is telling you is that anything above -- Certainly
11 above zero is going to have a positive effect, in terms of
12 habitat selectivity, or predictive, and then anything around
13 zero is going to be neutral, or be a non-effect, and anything
14 well below zero, or below zero, is going to have sort of a
15 negative effect.

16
17 Again, it looks like Gear 3 has a strong negative effect, and I
18 believe that is gillnet, I believe, and so that's what it's
19 telling you, is that gillnets are very good at catching adult
20 gag grouper, which I think makes sense.

21
22 Then you get your bottom depths and things like that, and so
23 the model can then look at all of these things and say, well,
24 okay, can we say something then and give sort of a predictive
25 analysis, based on this model, of where we may encounter gag
26 grouper, and so, visually, this is what this would look like,
27 and so this is a Raster expression, and the brighter colors,
28 and so your yellows and greens, you've got a higher probability
29 of encountering a gag grouper, and then the darker colors, the
30 purples and dark blues, would tell you that you have less
31 probability, and so it's just a different way of getting at
32 that.

33
34 The pros here is it's very refined. Like I said, we can get
35 into looking at some interaction terms, and it can get very
36 complicated very quickly. Again, it also uses that fishery-
37 independent dataset. Again, the con is that it's not available
38 for all species or life stages, and it is quite complex, and
39 so, even though we were able to get this to work for adult gag
40 grouper, as we go through some of the others, we think that they
41 may be good for considering this, but, once we run the model,
42 we won't really know, and perhaps they're not, in which case we
43 wouldn't be able to use them.

44
45 Pros, in terms of policy, the North Pacific and the Pacific have
46 some not quite boosted regression tree models. They do some
47 maximum entropy models, but they are really powerful models that
48 they can use to describe their EFH in those areas, and what's

1 really great is it directly links that species presence and
2 habitat, which sort of hits the nail more on the head, in terms
3 of our legal definition for EFH.
4

5 It can also be used to inform habitat areas of particular concern
6 as well, and, again, very few species, and, again, adding
7 another alternative would complicate the document and perhaps
8 extend the timeline with which it would take to complete it.
9

10 Looking at our draft options, this would be represented as
11 Alternative 4, which would use that boosted regression tree
12 modeling approach, and so this is -- If you were to include the
13 no action alternative, the alternative for using the same
14 methodology, but with more contemporary data, that would be
15 Alternative 2, and then we would have our new proposed
16 methodology, Alternative 3, being the presence only and
17 Alternative 4 being the boosted regression tree approach.
18

19 Similar to what we saw for the presence-only model, a way to
20 sort of -- You know, how do we consider what we describe as EFH,
21 and you would have to sort of look at the magnitude of what
22 you're considering, and so, again, there would have to be
23 options within that alternative as to what you would define for
24 your EFH levels.
25

26 With all of that, and certainly after some discussion and just
27 maybe some things to kick out as starting discussion for the
28 group, one of the things that I think the council would be
29 interested in knowing is, certainly, the SSC's thoughts on the
30 methodologies, and, to my knowledge, there is no other fishery
31 management council that sort of piecemeals their descriptions
32 of EFH, and I believe the methodology they use for one species
33 and life stage they use for all, and so it's comparable across
34 all of their managed species, and I don't think they take
35 considerations into which have more data and do something
36 different.
37

38 The council is probably interested in knowing the SSC's thoughts
39 on, well, maybe we do have some Cadillac models for some of
40 these, but it would be -- What's the merits of maybe leaving it
41 the way we have, so that it's standardized and at least we have
42 comparable descriptions of EFH for all of our managed species.
43

44 We do have some good data layer sources, and those are also
45 available in your background materials that we went through,
46 and so that's sort of what we have in house, but certainly, if
47 anybody had some suggestions on like, for example, the sargassum
48 maps, any remote sensing or anything like that we could look at

1 and perhaps incorporate, that would also be really great.

2
3 Then, during your discussions, if you wouldn't mind just taking
4 in those timeline considerations. In an ideal world, in order
5 to still adhere to that five-year review timeline, we would be
6 completing this by early 2022. Well, 2022 anyway, and so please
7 just keep that in mind during your discussions, and, at this
8 point, I would be happy to take any questions that you had.

9
10 **CHAIRMAN NANCE:** Thank you very much. I have one question on
11 alternatives. If Alternative 3 was preferred, you would have -
12 - Because it's only fourteen species, I think, or whatever it
13 was, but you would have to have another option within it to say
14 what you were going to do with the other ones.

15
16 **DR. HOLLENSHAD:** What you could do is you could select
17 Alternative 2 for everything, and then you could select
18 Alternative 3 for -- You could select both. You could select
19 Alternative 2 for those species where you didn't have this data,
20 and then you could select Alternative 3 for red snapper or
21 whatever species.

22
23 **CHAIRMAN NANCE:** Would it be better to have -- It would give
24 you more alternatives, I guess, but you would have Alternative
25 3 for the fourteen species, and, if not, then you go to
26 Alternative 1. The other one would be those fourteen species,
27 and, if not, then Alternative 2.

28
29 **DR. HOLLENSHAD:** That's something that we can speak about. I
30 know we had originally talked about going FMP-by-FMP and doing
31 this, and, in talks with our interdisciplinary planning team,
32 it was suggested to do it this way and then allow for Alternative
33 2 and Alternative 3 to be selected, depending on the species,
34 and so that is something that we can talk about at that level,
35 certainly, the best way to organize that.

36
37 **CHAIRMAN NANCE:** I just didn't know if you needed to have all
38 the alternatives listed, like typically it is within an
39 amendment, and you had to have all of the alternatives for
40 everything listed.

41
42 **DR. HOLLENSHAD:** I believe, actually, in the 2004, it was just
43 a single action, and do we update EFH or do we not, but they
44 were only considering one methodology for that.

45
46 **CHAIRMAN NANCE:** Okay. Thank you. Mandy.

47
48 **DR. KARNAUSKAS:** Thanks, Lisa. This was a great presentation,

1 and I had some thoughts on the questions, and maybe we can go
2 back to the previous slide, so I can see them. I have some
3 potential resources for you.

4
5 On the methodology, it's great that -- The Gruss paper, I'm
6 familiar with that, and that is a really comprehensive
7 compilation, and he has a follow-up paper on that where, if I
8 remember, he actually, he and his team, attempted to create
9 species distribution models, and I'm not sure if you've seen
10 that paper, but that might be useful as a comparison, or you
11 might even be able to use those models themselves as another
12 methodological approach, and that's the only input I have on
13 the methodology.

14
15 On the other data layer sources, I think there's a number of
16 sources that could be useful to you. On the sargassum, there
17 is the Hernandez sargassum project, and I hope he's in contact
18 with you. If not, we need to do that, because I think he has a
19 lot of useful information. That RESTORE project he's been
20 leading has been looking at specifically the role of sargassum
21 in habitat for a bunch of managed species, and so that should
22 be a really useful source, and they have now automated, I think,
23 weekly maps of sargassum for the Gulf of Mexico.

24
25 Another RESTORE project that just kicked off is the work by
26 Tracy Sutton and the DEEPEND Consortium, and we just had their
27 site visit meeting a couple of weeks ago, and I'm the technical
28 monitor on that project as well, and they have some emerging
29 work on characterizing new mesophotic habitats, mesophotic
30 reefs, that I think were previously under-described, and so that
31 might be a useful resource for you on the mesophotic reefs.

32
33 Then the last data layer that I wanted to mention is the
34 Southeast Center has a recent effort, and we've been using
35 compositional kriging of the usSEABED database, and this is
36 something we needed for some of our red snapper work, and looking
37 at species distributions for other species as well, but we have
38 a -- We're attempting to put together a really comprehensive
39 habitat map for the Gulf of Mexico, largely pulling from that
40 usSEABED database, and trying to get a better sense for that
41 sort of uncharacterized bottom offshore and what that actually
42 consists of. I am happy to share further details on any of
43 that, but I thought those could be useful data sources for this
44 effort. Thanks.

45
46 **CHAIRMAN NANCE:** Thank you very much. Ryan, to that point?

47
48 **MR. RINDONE:** Thank you, Mr. Chair. Mandy, if it's possible,

1 if you could provide those papers, so that we can -- Where you
2 have access to them, so that they can be sent around to the SSC,
3 in case anyone else has an interest, and that would be great.

4
5 **DR. KARNAUSKAS:** Will do.

6
7 **CHAIRMAN NANCE:** Thank you. Trevor.

8
9 **DR. MONCRIEF:** I just wanted to briefly discuss Option 3 and
10 then kind of take it up to a little bit higher level of
11 conversation, but, if we're relying on a lot of fishery-
12 independent data, then we also have to take into account the
13 paucity of some of this fishery-independent data around the Gulf
14 of Mexico.

15
16 From a little bit higher level, I was trying to read through,
17 and forgive my naiveness when it comes to some of this stuff,
18 but, essentially, if we define essential fish habitat, I kind
19 of wanted to at least get a brief description of the consultation
20 process, should some activity be deemed to go through a
21 consultation process, when we define it.

22
23 Really, my mind goes, I think, to gray snapper most, but I'm
24 pretty sure that's on the list, and gray snapper has a pretty
25 far-reaching distribution, from the estuary all the way out to
26 the shelf edge, and it's across the entire Gulf of Mexico, and
27 I just wanted to think about, or at least have a little bit of
28 a description of if it is defined, and it's something that's a
29 global species, and what is that consultation process like, and
30 is it going to create a larger burden on the process?

31
32 **CHAIRMAN NANCE:** Lisa or John?

33
34 **DR. FROESCHKE:** That's an interesting comment. I guess the long
35 answer, regarding the consultation, is David Dale from the
36 Regional Office is the best expert in the region, and perhaps,
37 at a future meeting, we could get him in to kind of go over
38 that.

39
40 In a nutshell though, I have had a number of conversations with
41 him, trying to understand the tradeoffs between having a more
42 refined, if you will, core area of EFH versus a larger area and
43 how that affects the consultation process. He has explained to
44 me that the agency can consult regardless of this, but it does
45 give them some additional authority, but, the way it's done now,
46 if you look at any particular one -- For example reef fish EFH
47 is an aggregate of all species and life stages.

1 Essentially, it's the entire inshore area, and it doesn't matter
2 if an area falls into EFH for one species and life stages or
3 twenty species across, but it's either yes or no. One of the
4 potential benefits of this is it would go through more on a
5 species-by-life-stage basis, and it would allow you to compare
6 two areas that may both be EFH, but one may be EFH for one
7 species and life stage, whereas another area might be EFH for
8 twenty species across five life stages, and so you could compare
9 them a little bit more and perhaps provide a little more
10 information to the consultation process, but, again, I think we
11 could get you some information from him.

12

13 **DR. MONCRIEF:** Thanks, John.

14

15 **CHAIRMAN NANCE:** Thank you. Benny.

16

17 **DR. GALLAWAY:** I want to express my -- That was an excellent
18 presentation, and I think a real contribution -- Your proposed
19 changes are a real contribution to refining the EFH, and it's
20 something that is useful. I think, historically, EFH, as it
21 has been defined, is so broad that it's almost not useful, but
22 I see the combination of what you're doing as actually
23 contributing something that -- To where we can use EFH in the
24 way it was intended to be used.

25

26 I really like your proposed modifications, and I support some
27 sort of tiered approach, where they're in the lead, so to speak,
28 as defining EFH, and you drop back to whatever method you have
29 to, given data availability. This is a really nice
30 presentation. Thank you.

31

32 **CHAIRMAN NANCE:** Thank you, Benny. Lee.

33

34 **DR. ANDERSON:** Lisa, I also agree that that was a brilliant
35 presentation, and I learned so much from that, and what really
36 got me is that, if I was a council member, and I have been a
37 council member for eighteen years on another council, and I had
38 to vote on this, your explanation would have given me a lot of
39 background, but this is a case where I hope that you and the
40 other parts of the staff -- Members of the SSC like me, who are
41 economists, are -- We know a bit about this stuff, but not
42 enough to make a decision, and, if I remember my days as a
43 council member, there's a lot of people that are very
44 intelligent, but don't know much about this at all.

45

46 If they have to go through alternatives, they are going to,
47 respectfully, need a lot of help, and I hope that, when this
48 goes up, whatever level the decision is made on, we have staff

1 preferred alternatives.

2

3 Sometimes staff doesn't like to say, well -- They say it's up
4 to the council, and, with this thing, I would think that we need
5 a lot more advice on I would do this, for this reason, and stuff
6 like that, and so I think it's brilliant, and I hope that it
7 can be -- That you and the rest of the staff on this can stay
8 and provide ongoing evaluations of it. Thank you very much.

9

10 **CHAIRMAN NANCE:** Thank you very much, Lee. Rich.

11

12 **DR. WOODWARD:** Thanks. I agree with Benny and Lee that this is
13 a really interesting presentation. Benny said that this was
14 allowing EFH to be used as it was supposed to be used, and I
15 would like to know how does this affect fishery management plans
16 and other things, and, obviously, the consequences of a large
17 area versus a small area are important to know what are those
18 consequences. If you define it really broadly, and there is no
19 consequences, does it really matter?

20

21 The other question is that, in the regression tree approach,
22 there were -- Well, first, gear was included as one of the
23 variables, which doesn't strike me as really part of the
24 habitat, and so that sort of surprised me, but I also -- The
25 presence of artificial reefs, wrecks, oil and gas platforms,
26 are also on the list, although lower down, and should those be
27 included as habitat in analysis such as this?

28

29 **DR. HOLLENSHAD:** To get to your first question, I think you were
30 asking -- As you were saying, how EFH is supposed to be used,
31 and what does it mean if it's small or big, and, again, I guess
32 I would have to revert back to the legal definition, and,
33 unfortunately, this is where the science melts into the legal
34 world, in that it's got a legal definition, and it's basically
35 trying to conserve areas, and it recognizes that they are
36 potentially areas that may be more, for lack of a better term,
37 important than others, right, and so those areas where perhaps
38 spawning aggregations may happen or areas where juveniles need
39 to be able to grow to contribute to the adult population, and
40 trying to figure out what that might be.

41

42 Unfortunately, depending on your methodology, you could end up
43 doing something where you have maybe a pelagic species, and we
44 have run into this issue, where you don't know a whole heck of
45 a lot about the habitat, or are not able to use a method that
46 will help with a little bit more precision, and then end up
47 determining that the entire EEZ is EFH for that, and so you're
48 being very conservative, but, again, maybe missing the mark,

1 and I believe that's what Dr. Gallaway was mentioning in terms
2 of that.

3
4 It's a little bit of a balancing act between the legal
5 ramifications and the consultation progress, as well as the
6 science, and so that's where we're trying to juggle there, and
7 then your next question of why would we put in gears, one of
8 the ways that -- Gear did come out, and we put it in mostly to
9 see how it would interact and what the influence would be.

10
11 One of the nice things about the boosted regression tree model
12 is it uses a stage-based approach, rather than a step-wise, and
13 so it can say -- The model can say, hey, this variable seems to
14 be very important, and I am now going to investigate the other
15 residuals in the model, but it leaves that gear component out
16 of it, as opposed to a step-wise, that would maybe encounter
17 that as well, and so it's a little bit more compartmentalized
18 in the way it works.

19
20 Certainly, at the SSC level, if that was something that you
21 thought could maybe be left out -- It's something that I believe,
22 and Dr. Froeschke can correct me if I'm wrong, that we can put
23 these things into the model and see what it does, and then, when
24 we use our predictive aspect of it, we could leave it out then,
25 but it would allow us to interpret, perhaps, what we're seeing
26 in that prediction output, and he can speak to that maybe a
27 little bit more than I can, but I think that would be the idea
28 as well.

29
30 The artificial reef would be along those same lines, right, and
31 so gear and artificial reef. If they could be put in the model,
32 it would help us interpret our output as well.

33
34 **DR. WOODWARD:** Let me just quickly follow-up, and so if the --
35 If I found that an artificial reef, or let's say an oil-and-gas
36 rig, were identified as critical to essential habitat, would
37 that mean that -- Would that have implications for policy, in
38 terms of whether that rig is removed from the Gulf, should it
39 become inactive?

40
41 **DR. HOLLENSEAD:** As of right now, artificial reefs, rigs, those
42 things, are not considered EFH, and so I do not believe that it
43 would have anything to do with that policy, but I will let John
44 speak to that.

45
46 **CHAIRMAN NANCE:** John.

47
48 **DR. FROESCHKE:** In regard to that question, the way that EFH is

1 currently structured, and Lisa had it in the presentation, there
2 are a number of habitat types, and so, in order to be EFH, there
3 are, I guess, about a dozen different habitat types, and so
4 those habitat types are mapped in XY space and then linked to
5 the species.

6
7 Right now, artificial reefs are not a recognized habitat type.
8 However, if you look at maps of the Gulf, they may sit on the
9 bottom, and so, for example, soft-bottom substrate is EFH for
10 shrimp, and so many of those reside on EFH. At one point, and
11 it was probably seven or eight years ago, the council briefly
12 looked into considering artificial reefs as EFH, and there are
13 a whole host of issues, and it didn't really seem to address
14 this, but, right now, the removal of platforms and things is
15 outside of the council process.

16
17 However, given that they do occur in EFH, and, even if they
18 didn't, the National Marine Fisheries Service does have the
19 ability to comment on this, I believe.

20
21 Just as a follow-up, one other thing, while I've got the mic.
22 In regard to using the gear type, you're correct that that's
23 not a habitat issue, and that's why it's in there, and so, if
24 you think about the way that gears are used, the gear selectivity
25 is not equal, and the gears are not placed randomly throughout
26 all portions of the Gulf, and so that contributes to some
27 variance, and so the gears are included in there as essentially
28 a blocking variable to partition the variance of the sampling
29 that is solely due to what we think is the gear effect, and so
30 then the model -- Then you can look at that and make your
31 interpretations of the map and try to remove that effect from
32 the model.

33
34 **DR. WOODWARD:** That makes a lot of sense. Thanks.

35
36 **CHAIRMAN NANCE:** Thank you. Roy.

37
38 **DR. CRABTREE:** I can comment on that consultation process and
39 how all of this is used, and a lot of it is stuff that really
40 the council, or you guys, would not see, but the Regional Office
41 of the Fisheries Service has an Office of Habitat Conservation
42 and a whole group of people whose job is to do essential fish
43 habitat consultations, and so, if you are doing something in
44 the EEZ that requires a federal permit, you have to consult with
45 the Fisheries Service on what sort of impact you're going to
46 have on essential fish habitat, and you have to find ways to
47 minimize it.

1 Sometimes this involves huge projects, and the most recent
2 example of big projects have been some of the port expansion
3 projects that have gone on, the Port of Miami, Port Everglades,
4 Savannah Harbor, where you're talking huge amounts of dredging
5 and removal of materials in the Port of Miami and Port
6 Everglades, and corals, and so it brings in, oftentimes,
7 endangered species and protected resources.

8
9 The Fisheries Service will engage in essential fish habitat
10 consultations on all of those projects, and there will be a long
11 negotiation that may go on, and this will be the Army Corps
12 would be the federal agency permitting this and doing it, and
13 so the Fisheries Service and the Corps might engage in
14 negotiations literally for years on some of these big projects,
15 to try to find the best way to do it and how to minimize the
16 impacts on it.

17
18 It also -- States have to come in and do essential fish habitat
19 consultations for their artificial reef projects, because they
20 are depositing stuff out on what is often essential fish
21 habitat. If the Department of Interior wants to remove a rig,
22 they would typically have to come in and do an essential fish
23 consultation on the impacts of removing the rig, but that often
24 more focuses on the use of explosives to remove the rigs, and
25 so it kills animals and those kinds of things.

26
27 The whole issue of artificial reefs as essential fish habitat,
28 this has been kicked around for twenty years or more, and I have
29 always found it to be really a stretch and difficult to accept
30 that anything that is manmade and not natural to begin with is
31 essential to the proper functioning of a habitat or a species,
32 because none of that stuff was there until people started
33 putting it there, and these species and the ecosystem was
34 perfectly healthy, and so it changes things.

35
36 You can argue all you want about how it affects productivity
37 and some of these things, but a lot of these artificial
38 structures are on and are in areas that have been designated as
39 essential fish habitat, but that's really most of the impact of
40 these designations, is in the consultations that go on between
41 the Fisheries Service and these other agencies.

42
43 They do have significant impacts, and they have resulted in a
44 lot of seagrass being preserved and a lot of good things being
45 done to prevent destruction of these habitats, but, ultimately,
46 in the end, it's a negotiation, and the essential fish habitat
47 recommendations are not binding on the federal agency, and they
48 don't necessarily have to go along with them, but, if they

1 don't, they have to put down in writing why it is they can't
2 and why they're not doing it, and so that's kind of, briefly,
3 how the process goes.

4
5 **CHAIRMAN NANCE:** Thank you. David Chagaris.

6
7 **DR. CHAGARIS:** Thank you, Lisa, for the presentation. I thought
8 it was really clear and informative, and I agree with the other
9 members that a more refined EFH designation would make sense.
10 I mean, some of these EFH maps, as others pointed out, are
11 basically the entire shelf, and I do like some of these modeling
12 approaches, but there are maybe some pitfalls to those as well.

13
14 As somebody else pointed out, the data don't always have
15 comprehensive coverage, spatially, and like, for example, that
16 last map that you showed for Option 4 for gag grouper, my -- I
17 suspect that that map is largely informed by the Pascagoula and
18 Panama City sampling dataset, the camera dataset, but, if you
19 were to include the more recent FWC data -- Because that's where
20 they sample, is right where those hotspots are on that map, but,
21 if you were to include the more recent FWC data, and the combined
22 dataset, you would probably get a quite a bit different map.

23
24 I am saying this just that, if it's in your mind that these
25 models are going to be done in some kind of wholesale approach,
26 that you could come into some issues there, and I would recommend
27 thinking carefully about the datasets that you're using in each
28 of those models. If there is one good dataset, I would recommend
29 trying that, and this is coming from experience. We have tried
30 modeling some of these distributions with these same datasets
31 for some of our ecosystem modeling work, and so that's just a
32 note of caution there, that the data that you're using are going
33 to influence those maps.

34
35 Then the other, I think, major underlying issue with those two
36 approaches is that we're treating species distribution maps as
37 essential fish habitat, but those maps are coming from data, as
38 I said before, that aren't collected comprehensively, but
39 they're also coming from data derived from a system that has
40 had local depletion and things like that, and so, just because
41 this is where the data say the fish are now, it doesn't
42 necessarily mean that that's the only essential fish habitat,
43 and so I think that that issue will be there.

44
45 Like, for example, what we do with our spatial ecosystem models
46 is we actually -- We use generalized additive models to define
47 the preference for different habitat types, and then we predict
48 those over maps of those habitats, and we get these spatial

1 predictions of what we call habitat capacity, and that's like
2 in the static form, but, as the simulations play out over time,
3 the actual abundances tend to diverge from that initial habitat
4 capacity, and that's due to things like exploitation in the
5 nearshore environment over time, as the nearshore portion of
6 the population becomes depleted.

7
8 Just keep in mind that those processes are in place and that
9 the species distribution maps might not always identify where
10 the essential fish habitat would be, but thank you.

11
12 **CHAIRMAN NANCE:** Thank you. Will.

13
14 **DR. PATTERSON:** Thanks, Jim. Lisa, really nice job here. I
15 like the direction and the more quantitative approach to trying
16 to define EFH. Dave's comments had a little bit to do with what
17 my, I guess, concern here, or not really concern, but just
18 things to look for.

19
20 You talk a bit about process error in your presentation, and,
21 obviously, modeling error, using different approaches, to try
22 to estimate the distribution of EFH, but I think measurement
23 error is something that should be, perhaps, more closely
24 considered here, and Dave mentioned the issue of exploitation
25 and where species are today, versus where there is capacity for
26 them to be.

27
28 The second thing is just our knowledge of the habitats
29 themselves is pretty incomplete, and so I would think that would
30 be a challenge to your endeavor here, and, obviously, you have
31 probably considered this already and have plans for trying to
32 address it.

33
34 In one of the early maps you showed on gag, I found it
35 interesting, where you were mapping EFH based on SAV and hard-
36 bottom habitat, but there was this big area of the Big Bend,
37 for example, which is known to have lots of seagrass habitat
38 and is important for young gag, as they're moving offshore, but
39 that didn't really show up in your model, and so, when you're
40 considering these different habitat layers, the question of what
41 are we missing I think becomes really important.

42
43 Not only from the species perspective, about what anthropogenic
44 effects could be affecting where current distributions are, but
45 just that we've got incomplete knowledge of where the habitat
46 itself actually is.

47
48 **CHAIRMAN NANCE:** Thank you, Will. Dave Griffith.

1
2 **DR. GRIFFITH:** I also wanted to thank Lisa for giving a wonderful
3 presentation, and then I also wanted to thank John and Roy for
4 pointing out how they consider -- How this is used in management
5 circles and also how they are considering things like artificial
6 reefs and gear.

7
8 Personally, as a social scientist, and I have always considered
9 humans as part of the system, and so they really are part --
10 They have been part of essential fish habitat for thousands of
11 years, and so these -- I would advocate keeping in things like
12 platforms and artificial reefs and gear, of course, because they
13 do affect the reproductive fitness of these species.

14
15 For submerged aquatic vegetation, one of my students did a study
16 that showed, in the Albemarle Sound, the human impacts on SAV
17 was quite substantial, and it really affected the nursery areas
18 in the Albemarle Sound, and so I think we have been a part of
19 the system for many generations, and so I would advocate keeping
20 that kind of stuff in the model and in the mapping. Thank you.

21
22 **CHAIRMAN NANCE:** Thank you. Thank you for that comment. Trevor.

23
24 **DR. MONCRIEF:** I just wanted to follow-up on what Roy had, real
25 quick, and, if I didn't say it before, the presentation was
26 wonderful, and it was very enlightening to me, and I'm still
27 just trying to understand it, I think more from a higher level,
28 but John said that, before, it was bulk species, right,
29 everything all in one, and what we're talking about now is
30 establishing EFH for various different species, and this might
31 not be a question for you, and it might be a question for when
32 we get some more explanation, but let's say we do something
33 right in the middle of the Gulf of Mexico, around hardbottom or
34 anything else, and it lines up with twelve of the fourteen
35 species.

36
37 Does that mean that a consultation is going to have to be had
38 and a response is going to have to be written for every one of
39 those species that falls within there? I'm just trying to think
40 that, if it already takes years on end, I would hate to create
41 an entirely new burden by adding all these different species
42 consultations across-the-board, when a lot of them are using
43 this habitat in the same way, and using it for the same reasons,
44 and that's all.

45
46 **DR. CRABTREE:** Well, I mean, it would only trigger a consultation
47 if there was some federal action, and so like the Army Corps
48 was going to issue a permit to someone to do something, and that

1 is the case -- For example, if an oil company wants to go out
2 and drill an oil well, there are going to be permits issued,
3 and there would be a consultation on it, but some of these
4 consultation are done very quickly.

5
6 Sometimes we look at it and we don't think there's any effect,
7 and some projects we just don't consult on, because we think
8 the impacts are minimal, and we don't have staff to do all of
9 them, and so it varies. The projects that typically take years
10 of negotiation are projects where the development of an EIS to
11 do a major port expansion -- I mean, that takes years to do, to
12 begin with, and for the whole project. They're huge, and the
13 engineering companies that come in, and so sometimes you have
14 to write an environmental impact statement and go through that
15 whole process.

16
17 Other things are much quicker and much smaller, and so it just
18 varies, but there has to be some federal nexus to where there
19 is a federal action taking place.

20
21 **CHAIRMAN NANCE:** Paul.

22
23 **DR. MICKLE:** Thank you, Lisa, and I really enjoyed the
24 presentation. I am going to kind of echo Dave Chagaris' and
25 Will Patterson's comments with a couple of examples, but the
26 EFH is incredibly complex, and hitting the mark dead on is
27 almost impossible, when you start thinking about habitat
28 selectivity for basic food resource reproduction, refugia,
29 predation, and even social interaction with some species.

30
31 You can get into age classes. Years ago, we tackled it through
32 occupancy index with acoustic telemetry, and we came up with a
33 new method, and I can't believe it made it through peer review,
34 because it was so weird, but it did, but there are a lot of ways
35 to look at it, but really understanding -- A lot of the work
36 done with spotted seatrout came out of Florida, and seagrass,
37 seagrass, seagrass, and nothing else, and it really affected
38 management decisions in the rest of the Gulf.

39
40 Yellowtail snapper, the reefs are dying in the Keys, the habitat
41 reefs, and the reefs are in terrible shape, and yellowtail
42 snapper are doing pretty good. Really, my point is spatial
43 sampling, with the presence/absence, and make sure that
44 everything is sampled, so you have no spatial selectivity with
45 your presence/absence independent and dependent.

46
47 My only question is I saw you talked about independent data in
48 the presence/absence, and what about the dependent data? Did I

1 just miss that in the second model that you presented? How does
2 the dependent data make its way into the second model type that
3 you presented? I may have just missed that, Lisa, and thank
4 you.

5
6 **DR. HOLLENSEAD:** I will have to double-check which exactly
7 surveys went into the model, and I believe they were primarily
8 independent. There are some fishery-independent, and John is
9 indicating that there are a couple, but I would have to go back
10 and look at the code, to see what we actually put in.

11
12 **DR. MICKLE:** I love the second method, and I think it's great.
13 I love the complexities of it, and I have no issues with it,
14 and I'm thinking of the science and not the management side of
15 some of this discussion, but I think most of my reservations is
16 on the frontend, of taking the peer-reviewed literature that's
17 out there.

18
19 In some areas of the Gulf, it's dominated by certain regions of
20 the Gulf, and that's just -- Once you identify what habitat
21 types are for each species, you're probably getting that from
22 the literature, and that can be very dangerous, and, again,
23 spotted seatrout is a perfect example.

24
25 It was all done in Florida, and it's seagrass was the most
26 important thing of spotted seatrout production, and, in
27 Louisiana, there is virtually none, and, in Louisiana, there is
28 ten-times more trout than -- You could put Florida ten-times
29 over, and there is more over in Louisiana.

30
31 The conditions are higher on the fish, and there is no seagrass
32 at all, but, when everyone is screaming the literature out
33 there, and the EFH are set up on state levels -- Even the
34 restoration process, there was so much money wasted on trying
35 to restore seagrass when it shouldn't be in an area of the Gulf,
36 just because the literature was screaming it out, and so a Type
37 II error can be created even before you start crunching numbers,
38 because of spatially-biased, I guess, perception of habitat.
39 Does that make sense?

40
41 **DR. HOLLENSEAD:** Yes, and I think -- That's what we were actually
42 trying to get at with sort of like the boosted regression tree
43 model, where you had that primarily example where some
44 literature -- The study was only done maybe in one portion of
45 the Gulf, and now it's like, well, we're going to expand this
46 out here, which is a potential problem and something we were
47 trying to address, using these other methodologies.

1 **CHAIRMAN NANCE:** John, to that point?

2
3 **DR. FROESCHKE:** Yes, and, if you dig into the weeds on how EFH
4 is done in the Gulf right now, and so there's two -- There's
5 actually one other layer, and so there is the habitat types,
6 and then there are ecoregions, and so, essentially, these
7 portions, and so what that does allow, and you're correct that
8 it's important that we figure out the linkages, but it does
9 allow that, for example, a habitat type, say seagrass, that is
10 recognized as an EFH for spotted seatrout, which we don't
11 manage, but, as an example, in Florida, an ecoregion, and I
12 don't know if that's 5 or 1, and I can't remember, but it doesn't
13 necessarily mean that that is a recognized habitat type and that
14 linkage is the same in Ecoregion 3 or 2 or 1.

15
16 It's possible that you could get those sort of interactive
17 effects of different habitat types that provide different
18 ecological functions for species in different regions of the
19 Gulf, and that is possible, through the way that we do that,
20 but it does require that you have a good -- That your
21 understanding of the linkages are correct, and I think there is
22 room for improvement there, and I think, in some cases, there
23 are some errors in what we have now.

24
25 **CHAIRMAN NANCE:** Paul, to that point?

26
27 **DR. MICKLE:** Thank you, John. Exactly, to that point, but an
28 example of still missing the mark there would be a species in
29 one part of the Gulf may be opportunistic with habitat. In
30 other parts of the Gulf, it may be a specialist, or highly
31 selective, and, if that's missed, then it's just the independent
32 sampling -- I don't know how to approach it, but there needs to
33 be caution in the frontend, because species do different things
34 in different areas of the Gulf, and, when they're categorized
35 in one area, even within an ecoregion, it can be quite dangerous.
36 Thank you.

37
38 **CHAIRMAN NANCE:** Thank you. Lisa.

39
40 **DR. HOLLENSSEAD:** Just, to that, I mean, these are pretty broad
41 ecoregions that we're assigning as well, and there's only five,
42 and so, even within that, I can see your point.

43
44 **CHAIRMAN NANCE:** Rich.

45
46 **DR. WOODWARD:** Just a couple of quick follow-ups. First, based
47 on Roy's comments, it seems like any expansion that heads in
48 the direction of shore is going to end up being very expensive,

1 potentially, if it leads to a net increase in EFH, and so there's
2 going to be a lot of pushback, and we need to make sure that
3 the science is really, really solid as you move closer to shore,
4 it seems to me.

5
6 Then, also, on sort of echoing some of David Chagaris' comments,
7 any of these data-driven approaches are going to be backward-
8 looking. I mean, if you see habitat declining sort of over
9 time, and species abundance declining over time, the area of
10 which that are identified as essential is just going to keep
11 falling, and, obviously, everybody is very much aware of that,
12 but that's just a concern that we need to make sure is reflected
13 in the analysis.

14
15 **CHAIRMAN NANCE:** Thank you very much. Lisa, we appreciate your
16 presentation. I think we've provided some very good comments
17 and recommendations. John.

18
19 **DR. FROESCHKE:** Sorry. I can't help myself. Just trying to
20 think about how to move this along, I mean, it definitely seems
21 like we have some homework to do, as far as digging a little
22 deeper in the data and things, but, as far as the big picture,
23 does there -- Is there a consensus about some of these methods?
24 Should we keep working on all of them, or should some of them
25 be abandoned? Do you have thoughts on that that we could kind
26 of put a bow on, and so we would know how to respond to the
27 feedback?

28
29 **CHAIRMAN NANCE:** Trevor.

30
31 **DR. MONCRIEF:** Do you mind pulling up that options list, real
32 quick, so we can look at it again?

33
34 **CHAIRMAN NANCE:** Certainly, in my opinion, we want to start
35 moving away from Alternative 1. I really liked what we were
36 doing with the kernel density estimates, and I thought that
37 looked like a very interesting approach that could be tried with
38 some different species, and, for those species that we can't do
39 anything with, then I think Alternative 2 would be where we
40 would like to go, and that's my opinion. Mandy.

41
42 **DR. KARNAUSKAS:** I am thinking about Dave and Will's comments
43 and wrapping my head a little bit more around what was done
44 here, and I just had another thought. Looking at Slide 34, for
45 example, there is really an impressive number of habitat
46 variables that have been compiled here, and, I mean, it's really
47 quite thorough and impressive, and, to get at Dave's and Will's
48 point regarding the sort of sampling biases, I think there's a

1 fundamental question, or decision point.

2

3 I guess the question is do we create these species distribution
4 models and then assume that every habitat laying underneath
5 those models is essential fish habitat, which I think is the
6 current path that you're going, if I'm not mistaken, or an
7 alternative would be to look at some of the species response
8 curves on Slide 35, for example, and we were actually looking
9 at how the species is reacting to each of these habitat variables
10 and, if there is a habitat variable that is particularly
11 influential, in terms of its percent variance that's being
12 described, those would be the candidates for definition of
13 essential fish habitat.

14

15 That might get at some of the issues that Dave was talking
16 about, and so I think the approach, the methodology, is really
17 valuable, and, again, it's very impressive what's been done,
18 but I wonder if we need to be looking more at the species
19 response curves, as opposed to just the distribution maps
20 themselves.

21

22 **CHAIRMAN NANCE:** Thank you. Sean.

23

24 **DR. POWERS:** Getting back to the kind of consensus I heard, and
25 I support, is Option 3 for those -- Alternative 3 for those
26 fourteen species that we could do, and, when we have to fall
27 back to Alternative 2, then that's the plan.

28

29 **CHAIRMAN NANCE:** Will.

30

31 **DR. PATTERSON:** I support actually using sort of a hierarchical
32 approach here, because sometimes you're not going to have the
33 data available for more quantitative methods, but I think, in
34 the end, I think it's also probably important, and Mandy's
35 comments kind of touched on this a bit, about presence/absence
36 versus what it truly means to be essential.

37

38 I mean, if you go back to some of the work that Mike Beck and
39 others did in the early 2000s, talking about, you know, what is
40 EFH and that there are different levels of information that can
41 be used to define what EFH is, and presence/absence is really
42 the lowest level, and then you get into population demographic
43 information and then eventually to estimating production,
44 habitat-specific production.

45

46 There can be some really small habitats that produce a
47 disproportionate amount of production for a given species, and
48 so, from a production-based perspective, that would be the

1 essential habitat, or, alternatively, if most of the production
2 comes from widely-distributed habitat, that doesn't -- It's not
3 really distinguishable, from a production on a per-unit area
4 basis, from other habitats, but, just by its expanse, it's
5 producing most of the biomass for a given species.

6
7 I think I'm not sure, in the context of this analysis, how to
8 fold in that other -- The levels of -- From presence/absence
9 all the way up to production-based estimates of what is EFH,
10 but I do think that that needs to be considered somewhere in
11 here, but, as far as the options that are shown here, I don't
12 necessarily think that you have to pick one or another. It just
13 seems, to me, that you should have sort of a hierarchical
14 approach, and you should be as quantitative as you can be, given
15 the data for a given set of species.

16
17 **CHAIRMAN NANCE:** Thank you very much. Josh.

18
19 **DR. KILBORN:** Thank you, Mr. Chair, and thank you, Lisa, for
20 the presentation. I guess I agree with what Will was saying
21 about the hierarchical approach, and I do think that it makes
22 sense to kind of work you way down from the more complex models,
23 based on the data that you have available.

24
25 However, I'm a little cautious, because we've already pointed
26 out some potential biases regarding sampling that could affect
27 Alternatives 3 and 4, and I don't know that it would be -- I
28 don't know how smart it would be to jump right on those methods
29 without first trying to account for some of these other things,
30 and so I'm a little hesitant to -- As much as I really do like
31 both of those alternatives, because I think the methodology is
32 really promising, I just want to make sure that we're being
33 careful about the application of those methods, because there
34 is the potential to get a lot wrong, if we don't really, really
35 pay close attention to the data that we're putting into those
36 models.

37
38 All of that being said, I also agree with the chair that we
39 should probably be moving away from Alternative 1 and moving
40 into Alternative 2 wherever it is possible, and so those are
41 kind of my general comments on that stuff, and then I also think
42 that it's important that we do pay attention to things like
43 mobile habitat, like sargassum, which is starting to become
44 important for things like amberjack and king mackerel and things
45 like that, and we know that they take advantage of that habitat,
46 but we don't really know the extent to which they take advantage
47 of it, and so some of the work, like what Frank Hernandez and
48 his group is working on, is going to be really useful and

1 influential moving forward, but that's not complete yet.

2
3 Again, I think there's some stuff that we're kind of not paying
4 attention to fully that is going to be important moving forward
5 when -- That will allow us to use Alternatives 3 and 4 in a more
6 efficient and correct way, for lack of a better term, and so,
7 yes, that's basically what I have to say about that. Thank you.

8
9 **CHAIRMAN NANCE:** Thank you. Those are very good comments, and
10 so the Alternative 2 -- It looks like to move towards Alternative
11 2 with some research being done to see how well Alternative 3
12 and 4 pick up the different things and any issues with those.
13 Any other comments from the group? Okay. Thank you again,
14 Lisa, for that presentation. It was excellent. Let's go ahead
15 now and move into I guess Number XXV, Topic Leaders, from Ryan.

16
17 **DISCUSSION OF TOPIC LEADERS FOR AGENDA ITEMS**

18
19 **MR. RINDONE:** Previously, during the last three-year SSC term,
20 something that Dr. Joe Powers had introduced, to try to
21 facilitate more involvement by different members of the SSC,
22 and also to reduce some of the lift on the Chair position, was
23 this idea of topic leaders for different agenda items.

24
25 This wouldn't apply to every agenda item, and some things staff
26 will just take the lead on, and some things the Chair would take
27 the lead on, but, if there were items that were keenly suited
28 to a particular SSC member's area of expertise, then that SSC
29 member could serve as the topic leader for that agenda item.
30 Let me pull up the agenda, so I can pick on a few of you and
31 use you as examples.

32
33 **CHAIRMAN NANCE:** It did last for one session, and then we didn't
34 do it anymore.

35
36 **MR. RINDONE:** It lasted a few, actually. I think some -- I know
37 that like Kai had served as one, and I think Doug had done it a
38 couple of times, and I think Will had done it once, and so a
39 couple of times different -- John had done it once.

40
41 Things like the discussion document on SSC best practices and
42 voting procedures, like that's definitely an SSC Chair and
43 council staff lead thing to lead, a staff lead thing to lead,
44 but, if we scroll down to something like the discussion of the
45 research track and operational assessment process, if there was
46 an SSC member, and I will pick on Will Patterson here, that has
47 extensive experience participating in the SEDAR process, both
48 pre and post-genesis of the research track and operational

1 assessment evolution of SEDAR, then that SSC member might be
2 well equipped to be able to lead the discussion and talk about
3 the differences and things like that and help provide an SSC
4 member's perspective on those changes, good, bad, and
5 indifferent.

6
7 The same for some of these different species that we might be
8 talking about. If an SSC member has spent a lot of time working
9 recently on serranids, then, something associated with grouper
10 in the Gulf, they might be keen to be able to inform about.

11
12 We've talked about things -- I will pick on Dr. Scyphers here.
13 We have talked about the Something's Fishy tool in the past,
14 and Steven has been a great source of information for giving us
15 perspective on how to better structure that tool to be more
16 helpful, and so, if we were talking about that specifically, he
17 would be a good person to lead a discussion on something like
18 that.

19
20 These are just ways to get more of you involved in different
21 parts of the agenda, and, if this is something that you guys
22 would like to revisit and get back off the ground, we certainly
23 can do that, and so I'm just kind of looking for a little bit
24 of feedback from the group and the Chair on this.

25
26 **CHAIRMAN NANCE:** I appreciate that. It's one of those things
27 where, from an expertise standpoint, a lot of you guys really
28 have great expertise in those, and so, if we're going to go down
29 this road, we each need to be willing to do that. Will.

30
31 **DR. PATTERSON:** Thanks, Jim. I agree with that statement, and
32 so we tried this once, and there were a handful of times when
33 folks led discussions on a given topic, other than the Chair.
34 I am not really sure why this didn't take off more when we were
35 doing it, or why it sort of just kind of trickled away.

36
37 I do think that Jim Nance's first meeting here in the Chair's
38 chair has been really effective, and I am not sure we need topic
39 leaders, and I think, if there were a vote for Chair for Life
40 today, I think I might cast a positive vote here, and so I think
41 that has some bearing on whether we approach it this way or go
42 back to trying to do the leadership thing.

43
44 **CHAIRMAN NANCE:** Here's what I would suggest, and I appreciate
45 that comment, but a lot of you guys have real good expertise in
46 these areas, and I may not, but you all -- On discussions and
47 things, you always speak up, and that's good, but are there --
48 I guess, as we look at topic items for the next meeting, I would

1 appreciate maybe, if you have an expertise in that, let me know,
2 so that you can -- I can say, okay, you can lead the discussion
3 and things like that, because I'm not going to know, for each
4 one of you, where your expertise lies.

5
6 I have a good idea for some, but not all, and I think that would
7 be a good way to do that, because I know that your input is
8 invaluable in these discussions, and so maybe that's the way to
9 go, is, instead of me trying to figure out who to assign to
10 something, it's that you let me know that you would be willing
11 to provide some expert discussion in that topic, or lead a
12 certain portion of that, and that may be the way to go. David.

13
14 **DR. GRIFFITH:** Actually, I was going to suggest something very
15 similar along those lines, in that you could still chair the
16 sessions, Jim, but those of us who have certain areas of
17 expertise on certain topics and could volunteer to assist in
18 the discussion, or maybe be listed as somebody who would give a
19 brief presentation or something like that, as long as we were
20 provided the agenda ahead of time and could look it over and
21 say, yes, I know a little bit about this, and I would be willing
22 to talk about this aspect of it, and so that's all.

23
24 **CHAIRMAN NANCE:** Thank you. Jim.

25
26 **DR. TOLAN:** Thank you, Mr. Chairman. First off, I will second
27 Will's nomination for Chair for Life, but I think this meeting
28 has gone remarkable well, and, for your very first one, it was
29 a really good meeting.

30
31 My perspective of the topic leaders, it's a good idea, but it
32 came across as a little bit clunky, because of the formality
33 that we run our meetings at, and I think most of the people that
34 have a good deal of insight, or expertise, for some of these
35 different topics -- I think, most of the time, they do speak
36 up, and so things, from my end, have gone pretty well up to this
37 point, and so I don't really see the need to institute this
38 formal topic leader.

39
40 I like your idea of just reaching out to folks when an agenda
41 item comes up and say, you know, will you help out with this
42 topic coming up, but I think this meeting has gone very well,
43 and so thank you.

44
45 **CHAIRMAN NANCE:** Thank you, Jim. Sean.

46
47 **DR. POWERS:** I am just with Will and Jim, and I don't want to
48 add too much more, because I agree that I don't think that it's

1 essential right now, but I encourage people to reach out to Jim
2 and to give him a hand.

3
4 The other thing I would like to say is one of the reasons I
5 thought this evolved, when Joe was doing it, is we had some
6 meetings, and maybe it was COVID, and maybe it was a variety of
7 reasons, that Joe just had a problem getting people to have
8 conversations and discuss things for a while, and this has
9 definitely been one of the more interactive SSC meetings that I
10 remember, and so I think part of the reason was just stimulating
11 conversation and opinions and getting people to talk, and, based
12 on this meeting, I don't think that's a problem.

13
14 **CHAIRMAN NANCE:** Paul.

15
16 **DR. MICKLE:** I agree with pretty much everybody. Most of the
17 topics don't have problems getting conversation. Jim, I would
18 say it's up to you. If you see a -- You know the topics well
19 enough, and the agenda items well enough, for you to know if
20 there might be some prodding needed to get some information, or
21 to get some folks to talk up, or, if we dive into some of the
22 disciplines that the Standing folks don't have the backgrounds,
23 the economics and the social parts and those things, obviously,
24 maybe we want to -- You might want to just politely ask, before
25 a meeting, for a leadership in that role.

26
27 I just want to tip my hat to Tom Frazer, and he's so good on
28 the council level of encouraging conversation, even when folks
29 don't want to do it, and sometimes he's gotten me to talk, and
30 I didn't even want to talk, and he got me talking, and I didn't
31 even realize that he got me talking, and so it's a true talent,
32 and I just have to say that, but, Jim, you've done that as well
33 at this meeting, and so I don't think there's a formal need for
34 it, but, again, I think, just perusing the agenda before each
35 meeting, and that's your call, as Chairman.

36
37 If you see something that there hasn't been conversation in the
38 past on, you may want to reach out, and I would encourage you
39 to reach out to whoever you wanted to to do that, and that's
40 the role that you're -- The last thing I will say is leading
41 conversations at a hybrid meeting seems like a disaster, if you
42 have someone virtually trying to come in with audio issues and
43 trying to lead a conversation, and that would kill efficiencies
44 of what we're always trying to stay on top of.

45
46 **CHAIRMAN NANCE:** It does make that difficult, for sure. What I
47 would suggest, and we don't need maybe a formal recommendation,
48 Ryan, but, as we get the topics for the agenda, I would encourage

1 each one of you to reach out to me and let me know that you have
2 an expertise that you would like to talk about, that type of
3 thing, or part of that discussion, and I would love to hear from
4 you and be able to know that you would be able to do that. I
5 know most of you pretty well, that I can figure out where your
6 expertise is in, through the years, but I think you can reach
7 out to me, also.

8
9 **MR. RINDONE:** So noted. All right. Next is Public Comment.

10
11 **CHAIRMAN NANCE:** Public Comments, and I guess we'll go ahead
12 and turn the time over for public comments. Jim Tolan.

13
14 **DR. TOLAN:** Actually, this is a follow-up to the last thing you
15 were talking about, but it could actually be rolled into public
16 comment, but I really would like to hear some of the brand-new
17 members, how they thought this went, being their first meeting,
18 and I haven't heard a whole lot of them speak up, and so I'm
19 just curious of their initial thoughts on their first SSC
20 meeting.

21
22 **CHAIRMAN NANCE:** I think the new members have really spoken up
23 at this meeting. I have had to keep Paul from talking as much,
24 but, for that, it wasn't that bad.

25
26 **MR. RINDONE:** We just walk over to Paul's mic and unplug it
27 every now and then.

28
29 **DR. POWERS:** It is hard to get Roy to --

30
31 **CHAIRMAN NANCE:** It is, but I have been very encouraged, and I
32 share Sean's comment that I have been very encouraged by this
33 meeting. It has been very good discussions on all the different
34 topics, and I truly appreciate that.

35
36 **DR. TOLAN:** Are there any of the new members joining virtually?

37
38 **CHAIRMAN NANCE:** Well, for the SSC, I think we have most of the
39 new members -- We've got four new members that are here on
40 campus, but I think, for all of the other -- We have a couple
41 that are not, but we've got four new members that are here in
42 Tampa, and I think we have most of the Special SSCs, Reef Fish
43 and Economics, and some of those members are not present here
44 in Tampa.

45
46 **MR. RINDONE:** Some of your new members are Luke Fairbanks, Mike
47 Allen, Steve Saul, Josh Kilborn, and we've heard from just about
48 everybody, I think, and so we definitely appreciate you guys'

1 active participation.

2

3 **DR. TOLAN:** I guess the whole point of me bringing this up was
4 just to welcome everybody, and so thanks.

5

6 **CHAIRMAN NANCE:** Thank you, and it does -- Having this hybrid,
7 there is always pros and cons to that, but I do think having at
8 least some body here in Tampa has helped in the discussion,
9 because, when we were all virtual, it was more difficult to prod
10 people to talk and things.

11

12 **DR. CRABTREE:** I definitely agree with that, and I think the
13 meeting has gone well, but I think getting back to being here
14 in person, and particularly getting the Science Center folks in
15 person to do the presentations, that makes a huge difference.

16

17 **CHAIRMAN NANCE:** Jack.

18

19 **DR. ISAACS:** I agree that this has been a very engaging meeting.
20 Truth to tell, some of the online meetings were hard for me to
21 give the proper level of concentration to, but that's just
22 entirely my fault. I think the SSC, very properly, focuses most
23 of its attention during these meetings on the biological
24 modeling and such, but we all agree that economic and
25 socioeconomic aspects are also very important for informing the
26 council on its decisions.

27

28 I would like to draw everybody's attention to some of the really
29 neat stuff in the red grouper report that we had here, and
30 Assane and Matt and Mike Travis did some really good stuff, just
31 pulling together all sorts of data that I found most
32 illustrative, and I really, really liked it.

33

34 One thing that they did that I have started doing with shrimp
35 and oysters and things over in Louisiana is not just looking at
36 the landings of those things, but trying to put the landings
37 for a particular type of seafood into perspective for the total
38 landings of the people who harvest that type of seafood, and I
39 think that gives you some idea of the degree of dependence that
40 the folks have on that particular type, and that's most helpful
41 to me.

42

43 I also wonder if we might be able to get some input from the
44 council on how helpful they found that information informing
45 their own decisions. In the past, that always hasn't been
46 communicated to me, and, if that were somehow shared with me, I
47 would be most appreciative. Thank you.

48

1 **CHAIRMAN NANCE:** I guess council staff, or do you want the
2 council itself?

3

4 **DR. ISAACS:** I will leave that up to you.

5

6 **CHAIRMAN NANCE:** Okay. I think we can maybe -- When I am there
7 at the council, I can kind of ask that question. Lee.

8

9 **DR. ANDERSON:** I want to follow up on Jack's comment, and I feel
10 that there's a lot of things going on that the economists --
11 There is some economic-related topics that the SSC could look
12 at, but they just haven't, and I think, if I can come in
13 periodically and talk about stock assessment aspects, my
14 colleagues of other disciplines can come in and talk
15 knowledgeable about some of the other things, and one thing I
16 was -- I don't want to raise any problems here, but I was a
17 little disappointed that I heard that there's a snapper
18 reallocation going on, and that was never brought up in any
19 phase to say we would like the SSC's evaluation of it.

20

21 Something of that big of a biological nature, it certainly would
22 have been, and I think that may be just because it's never been
23 done. Maybe they don't want to hear from us, and I don't know,
24 but I would hope that the council representative here would take
25 back to the council that the group that we have here can talk
26 about a lot of things and not just biology. Thank you.

27

28 **CHAIRMAN NANCE:** Red snapper was never one of the topics we had
29 on reallocation, for sure. Tom.

30

31 **DR. FRAZER:** I just wanted to weigh-in on that last comment,
32 for sure. I mean, I think it's -- I think everybody recognizes
33 that the decisions that are made at the council level depend
34 not only just on the biology, right, but the socioeconomic data
35 and the interpretation of those data, and it's, admittedly, a
36 weak part of the process, and so I think every member on the
37 council would be very, very pleased to have more complete and
38 informed discussions on that part of the process. I will
39 certainly -- I know that Jim will raise that point at the council
40 meeting coming up in San Antonio, and I will work on it a little
41 bit as well, but I do appreciate the comment.

42

43 **CHAIRMAN NANCE:** Thank you, Tom. Mandy.

44

45 **DR. KARNAUSKAS:** I am wearing my Science Center hat here, but,
46 since we're on the topic of other sort of areas that the SSC
47 could discuss and other sort of areas of expertise that could
48 be presented, I wanted to point out that the Science Center does

1 a lot of work on ecosystem factors impacting the stocks, and a
2 lot of these issues came up, and Doug talked about the impacts
3 of water temperature on king mackerel, and we talked about red
4 tide, and so I just wanted to highlight that the Science Center
5 does do a lot of work in these areas, and there is other
6 information that could be presented to the SSC, if that's of
7 interest.

8
9 **CHAIRMAN NANCE:** Thank you. Lee and Jack, I greatly appreciate
10 your comments, for sure. Sometimes it seems like we overlook a
11 lot of the economics and social and that type of thing. I
12 remember, way back in the 1980s, Tony Peritus, a sociologist
13 that I was dealing with on the Texas closure, came to the SSC
14 meetings, and he was the only sociologist there, and so it was
15 always, Tony, do we have any comments on sociology, and, in
16 fact, he wrote a paper on that, and it was kind of a funny
17 little paper that he had on dealings with the Gulf Council, and
18 so that is certainly one of those things well taken. Okay. I
19 think we're done with that discussion. Carrie.

20
21 **EXECUTIVE DIRECTOR SIMMONS:** Thank you, Mr. Chair. Just real
22 quick, red snapper reallocation, just to clarify I think
23 something that was requested, or asked, earlier is we are
24 planning to work on that. That is a council motion, and we
25 haven't started work on that yet.

26
27 I think maybe what you're referring to is perhaps the red snapper
28 calibration, or conversion, document the council may be working
29 on, and that was reviewed by the SSC, I believe last year, last
30 spring, and I can't recall, and so I'm not sure what red snapper
31 reallocation document, or work, you perhaps are referring to,
32 Dr. Anderson, but just to clarify that.

33
34 Then I think something Dr. Isaacs asked earlier is, you know,
35 is the council happy with the advice, and I think this body does
36 a good job, and we try to do a good job with our presentations,
37 and we have a council rep on there that is helping us get what
38 we need, and we have our Chair, or whoever is going to the
39 council meeting, trying to answer any questions or gaps, and
40 trust, if they don't understand what you guys are recommending,
41 it will come back to you, and so you will have a second chance,
42 or maybe third, and so thanks.

43
44 **DR. ANDERSON:** Can I jump in again?

45
46 **CHAIRMAN NANCE:** Go ahead, Lee.

47
48 **DR. ANDERSON:** Dr. Simmons, I apologize if I said something out

1 of place, and some of you know that I was on the National Academy
2 of Sciences Committee that studies LAPPs and mixed-used
3 fisheries, and we finished the report, and it's out, and the
4 chairman of the report said, if you guys send a letter to the
5 committee, that I guess has been disbanded, but she still had
6 the address list, and said you might be interested and that the
7 Gulf Council is still doing something on red snapper allocation,
8 and so maybe I was judging on that, and I did go to the council
9 webpage, and I maybe was not as fully informed as I should have
10 been, but, Carrie, I do hope that the economists on the SSC can
11 be of use to you and the council.

12
13 **CHAIRMAN NANCE:** They are, Lee. Sean, do you --

14
15 **DR. POWERS:** Yes, and so I was on that committee with Lee, and,
16 Lee, that email was about red grouper and not red snapper, and
17 Carrie is shaking her head, and they have, or are, considering
18 reallocation for red grouper, and you are correct though that
19 that did not come in front of the SSC.

20
21 **MR. RINDONE:** That's not entirely true. When we talked about
22 all the different options for reallocation for red grouper, we
23 brought those different allocation options in front of you guys,
24 to look at the different projection scenarios that corresponded
25 to each of those allocation scenarios.

26
27 There was not a corresponding comprehensive economic analysis
28 applied for each of those allocation scenarios presented to you
29 guys, and such was also not requested, and so perhaps we can
30 try to plan that out a little bit better in the future, but
31 certainly I think the opportunity to discuss those different
32 allocation scenarios was afforded a couple of times to the SSC.

33
34 If, in the future, when we're looking at these things, you guys
35 want to have the opportunity to look more closely at the IPT's
36 analysis, which you can usually find in Chapter 4 of our fishery
37 management plan amendments, where we break down the physical,
38 biological, economic, social, and administrative effects of the
39 different management options that are being considered, we can
40 certainly do that and try to time that in to have you guys look
41 at those effects, to the extent that you are interested in doing
42 so for allocation scenarios prior to final action being taken,
43 and I'm sure the council would appreciate any additional
44 information that can be made available to it to assist its
45 decision-making.

46
47 **DR. ANDERSON:** I am going to jump in again, if I can. I am
48 sorry if I started a he-said-she-said fight, because that was

1 not my intent. I just wanted to say that we're willing to do
2 it, and I'm sure that Carrie and the rest of the gang want to
3 cooperate with the whole SSC, and that's all I wanted to -- If
4 I started some unintentional arguments, I deeply apologize.

5
6 **CHAIRMAN NANCE:** Lee, thank you, and your comments are always
7 appreciated. Steven.

8
9 **DR. SCYPHERS:** Ryan, just a follow-up question to you. How
10 could the SSC best request that type of analysis, or
11 information? If it's attached to an assessment, I assume that
12 it could be at the terms of reference stage or something like
13 that, if we knew that allocation was going to be ultimately part
14 of a further conversation, but, if it's just a framework or an
15 amendment, is there a stage where more specific requests like
16 that could come from the SSC?

17
18 **MR. RINDONE:** I think this is something that we could probably
19 plan around a little bit. I mean, we kind of generally know
20 when we're going to have an allocation discussion. If we're
21 looking at a new stock assessment for a species, and that species
22 has migrated from CHTS to FES, and it has sector allocations
23 now, the presumption should be that those allocations are likely
24 to be reinvestigated by the council.

25
26 Then, if the council takes up an amendment to a fishery
27 management plan, regardless of any data migration to reconsider
28 allocation, for whatever reason it's thinking that it needs to
29 do so, then obviously we'll be aware of that as well.

30
31 Initially, we won't have those analyses to present to you guys,
32 and those analyses aren't typically completed until later in
33 the amendment development process, but there is a period between
34 when those are developed and when the council takes final action
35 that there's a gap in time that they could be brought to you,
36 and Dr. Diagne is in the back of the room, and he's one of the
37 council staff economists, and he can speak a little bit more
38 about -- At least from the economic side, what those analyses
39 can look like, and I think that Dr. Lasseter is on as well, and
40 she can talk about it more from the anthropology side.

41
42 I think that there is time for you guys to look at those, if
43 you think it's appropriate, to provide some additional input to
44 the council, and especially if the council requests it, and
45 certainly Dr. Frazer can bring these comments back to the
46 council as a whole later this month, also.

47
48 **CHAIRMAN NANCE:** Okay. Thank you. Assane.

1
2 **DR. ASSANE DIAGNE:** Thank you, Mr. Chair. About this topic of
3 allocation, I mean, if we look at the big picture, the council
4 has done very few, if you would, reallocations from start to
5 finish, and, essentially, in some cases, when that was done, it
6 went through the court, and some people around here know the
7 outcome of this, and so, as far as the SSC is concerned, we
8 don't necessarily have to bring any, or all, allocation actions
9 before you, because, if you are using the same method over and
10 over to let's say consider reallocation, the SSC has already
11 spoken about that, but, every time we have a new study, or a
12 new approach, and let's say to remember -- Let's say, for
13 example, when the Science Center, Dr. Agar and Dr. Carter,
14 looked at reallocation in some different way, we asked both of
15 them to come before this body and present, and then we took the
16 recommendation, and we also went before the council to discuss
17 that.

18
19 The flip side of this is that sometimes we come to the SSC to
20 start talking about allocation and the feedback that we get is,
21 well, this is really a policy issue. As an SSC, we are
22 interested in the science, and the science is not new, and so
23 we prefer to not get involved, and so, I mean, those are
24 essentially some of the things that we have heard, over the
25 years, when it comes to allocation, but absolutely we'll keep
26 it in mind, and every time we have let's say new approaches, or
27 new methods, we will definitely make sure to bring it before
28 you. Thanks.

29
30 **CHAIRMAN NANCE:** Thank you, Assane. Katie.

31
32 **DR. SIEGFRIED:** Thank you, Mr. Chair. My comment is more
33 general, if you want to continue to Doug, if he has an allocation
34 comment, and I can wait until we're back to more general comment
35 time.

36
37 **CHAIRMAN NANCE:** Okay. I will take Doug, and then I will take
38 you. Thank you. Doug, is yours to that point?

39
40 **MR. GREGORY:** Yes, and just briefly. What Assane said at the
41 end is true, and the SSC is dominated by biologists, and that's
42 the attitude of most of the biologists, is anything that's not
43 strictly biology is in the council's purview and not ours, but
44 that's not true, as Jack and Lee are pointing out, and so I am
45 looking forward to seeing more of this diversity of advice.
46 Thank you.

47
48 **CHAIRMAN NANCE:** Thank you, Doug. Okay, Katie.

1
2 **DR. SIEGFRIED:** Thank you, Mr. Chair. Just back to the general
3 sort of comments about the hybrid meeting, and this meeting has
4 gone remarkably well, and I have noticed a lot more
5 participation, and that definitely makes it a lot more fun.

6
7 My general comments were just it's important to me, personally,
8 and to the Center, that we are making effective remote
9 presentations, and so any feedback about that, until we can get
10 back in the room, is really helpful, and it's important to me
11 that you know that many of us very much prefer to be there, and
12 we wish we could be there, and it's very frustrating that we
13 can't be there, but we just are not allowed to travel yet, for
14 the most part, and we really appreciate your willingness to
15 accommodate our remote participation.

16
17 I think it would be useful to still allow that into the future,
18 even when we can get a group of us in the room, just because I
19 think it helps our staff understand what happens at the SSC
20 meetings a lot more, and the Gulf, in my experience, has always
21 been pretty good about that, and so I appreciate your
22 willingness to accommodate that. That's it. Thanks.

23
24 **CHAIRMAN NANCE:** Thank you, and the presentations this last
25 time, Katie, have been excellent, and I appreciate the
26 willingness of the whole Center to be able to discuss things
27 and be able to give us your thoughts and impressions.

28
29 Certainly, any time we can get together face-to-face is always
30 better, but, since we're in the situation of some of us are
31 remote, and some of us are here in person, I think we just have
32 to do our best with that, but I didn't see any issues with
33 having you do that remotely that affected the presentations or
34 anything. Will.

35
36 **DR. PATTERSON:** I will just echo what Jim said there before and
37 move on to my point about allocation. I think we all appreciate
38 the challenge of trying to present stuff when you don't see
39 people's reactions in the room and doing it remotely, but, over
40 this past year, I think the Science Center has maintained its
41 high standard of providing information that's digestible and
42 complete, and I don't -- I am speaking only for myself here,
43 but I don't think that standard has slipped a bit.

44
45 To Roy's comment earlier about having everybody in the same
46 room, I think one of the great benefits of that is the side
47 conversations, and like, you know, if Nancie Cummings is
48 presenting something on amberjack, and I didn't quite get it,

1 maybe I can grab her for a couple of minutes at the coffee
2 break, and she can clarify or explain to me something that I'm
3 not understanding, or Katie or Matt or whomever.

4
5 I think that's the real benefit, or the greatest benefit, of
6 having an in-person meeting, is just the extra time that allows
7 all the information to kind of soak and allows for follow-up
8 and discussion, but, as far as the presentations themselves,
9 the high standard has been maintained through this challenging
10 year, and I don't think -- I doubt anybody would suggest
11 otherwise.

12
13 As far as the allocation issues, Doug said something there at
14 the end about some of the biologists prefer only to talk biology,
15 and I think, just kind of remembering back through previous
16 allocation discussions and what Assane mentioned about let
17 policy be policy, and the council handles that, and then, if
18 there's a scientific issue, the SSC is happy to weigh-in and
19 provide scientific advice, and that's really my perspective as
20 a biologist, and probably the leading proponent of this idea
21 of, if it's an allocation issue, and it comes before the SSC,
22 then let's talk about what the science is.

23
24 Maybe it's the way to re-estimate what the allocation should
25 be, going from CHTS to FES, but, if it's an issue of a political
26 decision about the split between commercial and recreational,
27 absent some scientific analysis -- By scientific analysis, that
28 could be an economic analysis, and that can be a sociological
29 analysis, and I'm not just restricting that to biology.

30
31 That is the thing that I am cautious of, because I don't like
32 to see us, as a group, weigh-in on the policy sides of things,
33 except for how the science is informing it, because I think we
34 should really be protective of that divide, so that what comes
35 out of the SSC is always perceived as objective and
36 scientifically based and not trying to steer something in the
37 policy arena. I think we should respect that division.

38
39 **CHAIRMAN NANCE:** I agree, and policy is one thing, and science
40 is the other and I think we need to do better -- In my opinion,
41 we need to do better, from the economic standpoint, the
42 sociological standpoint, to be able to bring those other
43 disciplines in when we're discussing allocation and things like
44 that, and so I think that's where we need to maybe step it up a
45 little bit and do that. Lee.

46
47 **DR. ANDERSON:** I agree, to a certain extent, with what Will
48 said, but I also get a little internally upset at this, because

1 what is my science is looking at policy, and so you're saying
2 my science -- Well, I don't want to say that.

3
4 I agree that economists, or anthropologists, or anybody, should
5 not go around and say this is what you should do, you dummies,
6 and that's not what we do. If I were to look at that, I would
7 say, all right, here's some alternatives, as an example,
8 Alternative 1, 2, and 3, and now, if I read these objectives
9 that you have here, in my opinion, Alternative 2 would best meet
10 the objectives, for these reasons, and that's what our science
11 is, but I agree that we don't --

12
13 I don't think that we should impose our will on the council, or
14 anybody, and I hope that the other social scientists in the room
15 agree with me, but we can enter into policy decisions, and I
16 said earlier that I think my colleagues from other disciplines
17 can enter in too if they play by those same rules. It seems to
18 me that, again, these are the alternatives, and these are the
19 criteria and objectives that the council has set up, and I would
20 say this alternative best meets the goal. I will stop now.
21 Thank you.

22
23 **CHAIRMAN NANCE:** Thank you for that, Lee. I am going to start
24 cutting it off a little bit here, but Benny and then Mandy.

25
26 **DR. GALLAWAY:** I just wanted to say that I endorse both the
27 statements that Will has made as well as what Dr. Anderson has
28 said. We do have expertise in different areas, and we have the
29 ability to comment on different areas, but, generally, we need
30 to, in my opinion, focus on the science and our arena of
31 expertise and not get involved in policy issues, except for
32 those on our group, in our group, that are qualified and endorsed
33 to do so, and that they play by similar rules, and so I guess I
34 endorse both the statements of Will and Dr. Anderson. Thanks.

35
36 **CHAIRMAN NANCE:** Thanks, Benny. Mandy.

37
38 **DR. KARNAUSKAS:** Just to add to this conversation, I agree with
39 Will and Benny on the independence of science and policy, but I
40 also think that, as we think more about ecosystem-based
41 fisheries management and what that means -- Part of ecosystem
42 science is sort of understanding the unintended consequences,
43 or potential domino effects, of any particular policy decision,
44 and so I see it as between getting involved in the policy versus
45 looking at a policy and helping the council think about what
46 the downstream effects of any particular policy decision might
47 be, and that, in my mind, falls squarely in the realm of science.

1 **CHAIRMAN NANCE:** Thank you. Go ahead, Will.

2
3 **DR. PATTERSON:** I agree with Mandy's comments there, and, to
4 speak to that, as well as what Lee had said, I think, when a
5 scientific body like the SSC is using whatever methodologies,
6 sociological or economic or ecological or population dynamics,
7 to try to estimate the potential effects of a policy decision -
8 - Usually, they come to us a range, or a series, of potential
9 choices that the council is trying to make.

10
11 If we're using scientific methodology to estimate what the
12 likely effect of that policy decision is, to me, that's not
13 entering into the realm of policy, and that's simply using the
14 science, whatever discipline, to estimate the potential effects
15 to give feedback to the council.

16
17 That's not endorsing a policy, but that's just saying, based on
18 what we know, the assumptions of this approach, the limitations
19 of the model, this is what we estimate the potential
20 implications might be. I think that's a perfectly appropriate
21 way for the SSC to provide information, or guidance, to the
22 council. I am just leery when it ventures away from that and
23 try to guard against it.

24
25 **CHAIRMAN NANCE:** I think that's an excellent point. Paul, and
26 then we're going to shut the discussion off.

27
28 **DR. MICKLE:** Okay. Thank you, Jim. I am going to try to keep
29 it simple, and it's a difficult issue, but there's things that
30 do need to come in front of this council, in my opinion, and,
31 as the Magnuson-Stevens Act identifies, not only historical
32 landings can be used for allocation, and so I think this body,
33 and everybody in it, has the responsibility of identifying what
34 is informative and can be quantitatively justified for one --
35 Quantitative measure to justify an allocation.

36
37 Just for an example, if the council comes up with a way of
38 getting into an allocation discussion, and, really, the world
39 is the limit on what can be thrown in there, as Magnuson-Stevens
40 says, to justify allocation, and so I would think that, whatever
41 number comes up, we would have to stamp it as a reliable metric,
42 or a non-reliable metric, but maybe that's way out of our
43 purview, and I don't know, but I would think the council would
44 definitely need guidance from something, or someone, and whether
45 it's us or not, I don't know, but I see, in the future, within
46 the next five to ten years, some really zany and different types
47 of metrics could be potentially justifying an allocation.

1 Whether that falls with us or not, I don't really know, but I
2 sure hope that somebody is helping them out, because it can get
3 really quite a circus act, when you start thinking about what
4 people want to justify allocation on. Thank you.

5
6 **CHAIRMAN NANCE:** Thank you. Tom, go ahead and have the last
7 comment.

8
9 **DR. FRAZER:** Thank you, Mr. Chair, and so I've been really,
10 really pleased with this discussion, and I think the folks that
11 are on the call that are participating from Tampa are really in
12 a good philosophical place to provide the science and the
13 information that is needed to inform and guide the policy
14 decisions at the council, and I just, again, would urge you to
15 continue this level of engagement on all the topical areas, and
16 so I thought it was a great meeting, and I would agree with all
17 of the sentiment that's been put forth with regard to your
18 effectiveness as a chair, and so good job, Jim, and I really
19 enjoyed listening to this meeting.

20
21 **CHAIRMAN NANCE:** Thank you. I appreciate that. We are going
22 to go ahead and end this discussion and go ahead and enter into
23 the public comment period, and do we have any individuals from
24 the public that wish to comment?

25
26 **MR. RINDONE:** Just for members of the public, so everybody knows
27 how we're doing this, it's pretty much the same way as it's done
28 for the council meetings, and you will have a few minutes to
29 address the committee. If they have any questions to ask you,
30 hang around for just a second, in case they have a question.

31
32 **CHAIRMAN NANCE:** Thank you, Ryan. Michael Drexler.

33
34 **PUBLIC COMMENT**

35
36 **MR. MICHAEL DREXLER:** Thank you, Mr. Chair, and thank you for
37 running a great meeting. I agree with all the comments being
38 said so far, and I thought it was a very productive meeting,
39 and so thank you for that.

40
41 As some of you may know, I'm Michael Drexler, and I'm with Ocean
42 Conservancy, and I just wanted to acknowledge the written
43 comments that we submitted to the agenda, regarding the agenda
44 item regarding the Great Red Snapper Count, and I would like to
45 put the red-snapper-specific issues aside in this and just
46 provide a comment on the process we went through.

47
48 Just noting that the item was on the agenda, but it was removed,

1 and I think that's great, that the PIs are going through the
2 revisions to address some of the concerns noted by the CIE
3 reviewers, but I did want to note, especially for the new SSC
4 members, that the review of that -- The rollout and review of
5 that Snapper Count put a real strain on the integrity of the
6 SSC and the assessment process, and I think the SSC should
7 really think about a roadmap to incorporate these type of
8 abundance studies moving forward.

9
10 These studies provide really informative information on the
11 distribution and habitat utilization of these species, but we
12 still have big, unanswered questions with respect to how to
13 appropriately apply an abundance study like the Great Red
14 Snapper Count into management and what that means for
15 sustainability with respect to the stock and the fishery.

16
17 It was said several times during the review process that we were
18 building a plane while we were flying it, and I would just
19 reemphasize that we really need a plan. There are two more
20 abundance studies in the process, which I think all provide
21 invaluable information to improve these stock assessments, but
22 we need a plan, and start thinking about a plan to incorporate
23 this.

24
25 The rollout of the study was a bit rushed, and decisions were
26 made on incomplete products, adding strain to the integrity of
27 the system, and so, again, we need a plan. I'm not sure what
28 the timeline on the Snapper Count is, and I'm grateful to the
29 PIs for reviewing that huge body of work, and it is no small
30 feat.

31
32 I would just like to point out, when it does come back, there
33 are some big comments made by the CIE reviewers that need to be
34 addressed, and I would encourage the SSC to develop a terms of
35 reference to consider whether those have been addressed and how
36 to use this in the stock assessment, and I think, for any part
37 of that plan, I think SEDAR is an appropriate mechanism to
38 review those types of studies, and so thank you.

39
40 **CHAIRMAN NANCE:** Thank you very much. Any questions for Michael?
41 Michael, thank you. We appreciate those comments. Will.

42
43 **DR. PATTERSON:** Sorry, Jim. Thanks. Thanks for your paper,
44 Michael, and for your comments here. You made a statement that
45 the SSC needs to have a plan for this and that the review of
46 the Red Snapper Count -- The population estimate study in the
47 Gulf created a strain on the system.

48

1 You know, this was a unique opportunity, and I don't know of
2 any other region where Congress has allocated \$10 or \$12 million
3 to fund an independent estimate of population abundance for any
4 fish stock prior to the first red snapper project.

5
6 Since then, there have been a couple of subsequent allocations
7 of funds, one in the Atlantic for red snapper there and now for
8 greater amberjack in the Atlantic and Gulf, but the Gulf study
9 was the first, and I think there are lots of lessons learned
10 there.

11
12 Within the team, and I was a member of the red snapper team in
13 the Gulf, and am a member, and we're not quite done, and there
14 were discussions about how to reconcile, or utilize, this point
15 estimate that is produced Gulf-wide from that study, or was to
16 be produced, and how that would be incorporated, and I think
17 there was some, maybe, perception of some constituencies within
18 the Gulf that that would be a stand-alone number, but, you know,
19 we have all this other information that's collected by
20 scientists, independent academic scientists, state agency
21 scientists, for the most part, and then a handful of federal
22 scientists that go into the assessment process, the SEDAR
23 process, which is itself a collaborative process, and I've heard
24 it referred to as the federal assessment, and that's not really
25 true.

26
27 It's a collaborative process, where most of the people at the
28 table aren't federal employees at all, and it's also an
29 incredibly transparent process, to the point where it can be
30 slow at times, because of the amount of transparency that's
31 imparted into it, and so I agree that, if there's going to be
32 future, and we know of at least two more, estimates that are
33 going to come, and not before the Gulf necessarily, but in the
34 region, then we need to think about how to address this and
35 incorporate these estimates into this process, whether it's
36 directly through SEDAR or some extra process.

37
38 We need to put more thought, as a scientific group, and I don't
39 mean just the SSC here, and I mean everybody who has a stake
40 here, into how these estimates are incorporated.

41
42 I do think that there was a problem in the process for the red
43 snapper rollout, and Joe Powers mentioned this at the last SSC
44 meeting, or the April SSC meeting, where he mentioned that the
45 estimate that was being talked about, at least in congressional
46 meetings, et cetera, that there was a seven-month period between
47 when that estimate was first discussed by our group and when
48 there was the peer review that came before the SSC, the external

1 peer review and then the peer review from the SSC.
2
3 He questioned why there wasn't some process put in place, at
4 least in those seven months, and there had been three years
5 where we knew this was coming, but in those seven months as sort
6 of a reconciliation process, and I think, in hindsight, that
7 was a pretty germane statement, important statement.
8
9 I am the PI of the project, the red snapper project, in the
10 Atlantic, and we have a reconciliation process written into that
11 proposal. I think it's important, and I asked Matt Smith a
12 question yesterday about what they were doing, trying to
13 incorporate this estimate into the assessment.
14
15 You know, there's a ton of information in these integrated
16 assessment models, and we have seen, repeatedly, that sometimes
17 we have to dial down the effective sample size of some of the
18 information, because it overwhelms the model, and the model only
19 fits to the age composition, for example.
20
21 Now, if you're putting in one data point, will the model even
22 pay attention to it, and how do you actually force the model to
23 fit to that? I think it's unrealistic to take one study and
24 one data point and say, okay, this is where -- That we're going
25 to manage based on that, because you don't have age composition
26 information, and you don't have fishing mortality information,
27 and so there's got to be this reconciliation, and these
28 estimates are going to be one part of the information that then
29 informs assessment and management.
30
31 These are extraordinary efforts that are going into these
32 population estimates, and I don't know, again, of any other
33 region where they've had this type of independent approach, and
34 only for Congress stepping up have we been allowed this
35 opportunity to compete for funding, as scientists, to produce
36 the best scientific information available in these processes.
37
38 I do think that we need to stop using the word "count" to
39 describe these studies, because it's imparting an unfortunate
40 idea, I think, among constituencies and the fishing public about
41 what is being produced. This isn't a census, and, in the red
42 snapper study in the Gulf, we didn't go to all the red snapper
43 houses and knock on the doors and say how many of you are here,
44 how many live here, and then go to the next house. We don't
45 know where the houses are.
46
47 We can't see all of the individual red snapper, and it's a
48 statistical estimate, and statistical estimates have bias and

1 precision issues, and so that, obviously, has to be folded into
2 how the information is used on the backend.

3
4 Anyway, I think Mike makes some good points here about what I
5 would call reconciliation, reconciling these one-off studies
6 and trying to estimate population size, into the broader context
7 of information that we have on the stock, and I think, in our
8 region, as these processes continue to be funded, or at least
9 funding is being made available, we as a collective scientific
10 body, NMFS scientists, council staff, academic PIs, SSC members,
11 we need to think collectively about the best approaches to try
12 to incorporate that information into assessment and management,
13 because it just seems unrealistic that that number would just
14 stand alone by itself and we would somehow utilize that, and we
15 need to have a better process, I think, the next time such an
16 estimate is produced, so that we avoid some of the consternation
17 that I think occurred in April. Thanks.

18
19 **CHAIRMAN NANCE:** Thank you, Will. Any other comments from the
20 SSC? Josh Kilborn.

21
22 **DR. KILBORN:** Thank you, Mr. Chair. I wanted to follow-up on
23 what Will was saying, and I think that, to my mind, the real
24 value in these large counts is not so much the point estimate
25 of the population size, but it's really the process that went
26 into producing them.

27
28 I think that they can be really useful to help inform the scope
29 of work for future research track assessments, because the Great
30 Red Snapper Count was a research track assessment on steroids,
31 right, and so I think that the value is a lot more in the process
32 and it uncovered a lot of new data streams and information that
33 can be folded into the more formal process moving forward, and
34 so I think that's an area where we really need to pay attention
35 to how we could improve what we're doing, moving forward, based
36 on the work that was done in these large-scale estimates. Thank
37 you.

38
39 **CHAIRMAN NANCE:** Thank you. Jay Mullins.

40
41 **MR. JAY MULLINS:** Good morning, SSC members and all listening.
42 I'm an eastern Gulf commercial longliner, and I was the
43 fisherman that collected the water samples for you all to
44 review.

45
46 Being that I have a lot of history in the eastern Gulf, I have
47 very deep concerns about the way the eastern Gulf is being
48 managed, particularly in the grouper species, seeing that it's

1 such a delicate complex compared to the snapper.

2
3 Our red grouper -- I heard some questions come up about us not
4 catching our quota, or our ACLs, and there's a lot of variables
5 involved in there. The life history of the red grouper fishery
6 is so complex, and I don't think -- I didn't hear none of Ms.
7 Skyler, in her presentation, really touch on very much of it.

8
9 Primarily, red grouper are shallow-water grouper species, which
10 longliners that produce 80 percent of the quota, or catch 80
11 percent of the quota, are pushed to twenty fathoms and greater
12 to fish. Well, since the implementation of a lot of
13 restrictions, the turtle closure, which is the twenty-fathom
14 closure out to thirty-five fathoms, and that's a three-month-
15 long closure of June, July, and August.

16
17 Furthermore, what restricts red grouper harvest, with the
18 longline industry, is that also runs into the hurricane season,
19 which is natural, completely natural, September and October and
20 into November, which restricts us even further.

21
22 Furthermore, what we have going on in the eastern Gulf is market
23 manipulation and the consolidation issues, where we cannot get
24 no access to allocation. I was allocated, originally, somewhere
25 near 70,000 pounds of red grouper when the IFQ program was put
26 into place. Since then, 60 percent has been taken away, and
27 I'm down to I think 29,000 pounds of red grouper to catch for
28 the year.

29
30 I stay away from red grouper like the plague, to land them,
31 because we pretty much can't get no access to lease from outside
32 the industry any longer, and so that definitely restricts our
33 access to harvest these fish, not to mention, when NOAA said
34 the longline industry was overcapitalized, prior to 2010, I
35 think you guys eliminated nearly 100 longline vessels and
36 restricted us down to sixty-two.

37
38 Last year, I think we only had forty longline boats that actually
39 had landings on their permits. Why -- My questions are has the
40 SSC looked at any of this and put that in any of their equations?
41 You know, there's been a lot of assumptions over the last few
42 days that I have listened to, and predictions and projections
43 and whatnot, but there is very grave concerns, in the eastern
44 Gulf, about which way our management is headed and the science
45 that's not being reported.

46
47 I think Mr. Strelcheck had this information down in the Key West
48 meeting, at the Gulf Council meeting, about the market

1 manipulation that's going on, and has the SSC received any
2 information about this? That's a question I have for the SSC.

3
4 Then, on top of that, if you looked at the three overfished
5 stocks that we're going to have, and I don't -- Gags haven't
6 been considered overfished yet, although I know, at the last
7 stock assessment meeting, they will be classified as overfished,
8 and you have three fish stocks that are really overfished, and
9 the recreational sector of those three fish stocks had the
10 majority of allocations allocated to it, at sixty-some percent,
11 almost 70 percent, each, your amberjack, your cobia, and your
12 gags, and them fish are being overfished.

13
14 The commercial sector is completely accountable. When NOAA says
15 to jump, we say how high. I would like to know, has anybody
16 laid population density maps on their dashboard, to look at the
17 population increases in the State of Florida to account for
18 this?

19
20 Moving forward, we need to start looking at the population
21 increasing at an incredible, alarming rate, and maybe put the
22 brakes on it before this fishery in the eastern Gulf is getting
23 wiped out, and it's getting hurt.

24
25 Furthermore, these are not natural occurrences with this red
26 tide. The verbiage "red tide" really kind of disturbs me. These
27 are manmade fish kills, which the State of Florida is
28 responsible for, but yet, at the end of the day, the commercial
29 sector is the whipping post, and has anybody taken these, and
30 these are black-and-white facts, into account to make wiser, or
31 more intuitive, scientific ideas to create a better path
32 forward for the future? Thank you.

33
34 **CHAIRMAN NANCE:** You're very welcome. Thank you very much for
35 those comments. As you look and see what we discuss here at
36 the SSC meeting, you see all the information that we have, and
37 our discussions are based on that information. Any other
38 comments from the public? Thank you. We appreciate all of that
39 input.

40
41 We will now go into Other Business. We do have one item of
42 Other Business that I am aware of. I will take Ryan's other
43 business first, and then, from Dr. Sean Powers, we have another
44 item of business.

45
46 **OTHER BUSINESS**

47
48 **MR. RINDONE:** Thank you, Mr. Chair. Just for all of the SSC

1 members and members of the public and presenters' edification,
2 in the past, we have had a rule for materials being submitted
3 to the SSC that nothing could be submitted inside of a week of
4 the meeting, and we have certainly been far more flexible, to
5 the point of almost ignoring that rule, in the last couple of
6 meetings.

7
8 I just wanted to say that we are going to get back to it in a
9 hard and fast way, and so, if you are to be presenting any
10 materials to the body in any future meeting, please expect to
11 have those materials submitted by one of the briefing book
12 deadlines that I will provide. If I know that you're presenting,
13 I will be hitting you up about that at least a few times prior
14 to the meeting, to let you know about those deadlines, and you
15 will see those in the draft agenda as well.

16
17 If there are any changes, edits, additions, or what have you
18 that, that need to be made to your materials inside of a week,
19 those -- We're going to be severely limiting whether those
20 changes can happen or not, and the only circumstances, at
21 present, that would allow any changes to be made to materials
22 would be either to pull it down and move it to a subsequent SSC
23 meeting or if the council is going to be taking final action on
24 something directly related to that topic that you are presenting
25 on at the following council meeting, and so just an FYI there.

26
27 Obviously, we'll take things on a bit of a case-by-case basis,
28 and there is always extenuating circumstances, but just to try
29 to make sure that we're providing things to you guys with more
30 than forty-eight hours to review complex material prior to the
31 start of the meeting. We realize how inconvenient those
32 materials updates can be.

33
34 **CHAIRMAN NANCE:** Thank you. Katie.

35
36 **DR. SIEGFRIED:** I didn't actually raise my hand, but I do have
37 a comment. I totally understand this, and the council staff
38 have to be running around like chickens with their heads cut
39 off trying to keep up with all of the stuff that's flying at
40 them during the SSC meeting, and so I completely understand
41 this.

42
43 The Center has put forward a memo sort of outlining the
44 communication about requests that are to be delivered either to
45 the council or the SSC and other cooperators, and that includes
46 a timeline, and we'll just have to be really careful about
47 making sure this one-week hard deadline, which we understand,
48 is included in that timeline.

1
2 If we receive a request for projections three weeks before the
3 SSC meeting, that's just -- That's going to be really difficult
4 to fulfill, if we basically have two weeks to complete them and
5 review them and get the document to the SSC, and so we'll just
6 have to be more aware of all of these timelines and make sure
7 that everybody is adhering to the needed lead time for requests.

8
9 **CHAIRMAN NANCE:** Thank you. Ryan, to that point?

10
11 **MR. RINDONE:** Yes, of course, Katie, and I will work very closely
12 with you and folks in your shop to make sure that we're pacing
13 things out at a reasonable -- In a reasonable way, so that you
14 guys aren't stumbling over each other trying to meet a deadline
15 that's unreasonable, and we'll do our best to work together on
16 that.

17
18 **CHAIRMAN NANCE:** Okay. Thank you. Sean has a motion that he
19 would like to present to the SSC.

20
21 **DR. POWERS:** The background for this is, since we've talked
22 about the research track red snapper issues at this meeting,
23 and we've had some sidebar conversations amongst SSC members,
24 and I've had some email communications with those on virtual,
25 and so we've gotten to a point where I think it's important that
26 the SSC comes on record and advises the council what we would
27 like, as the SSC.

28
29 Now, we've heard Katie and SEDAR talk about workloads and what
30 they can and cannot do, and I think that's important for
31 everybody to hear, but I think it's also important that the
32 council hear from us what we would like. Then, if it can be
33 done, it can be done, and, if it can't, it's -- You know, we
34 have established it.

35
36 The background, a little bit, as Julie Neer mentioned in her
37 comment that the group of fifty-some-odd scientists -- That
38 there was consensus for an option, but it wasn't overwhelming
39 consensus, I would characterize it as, and I got concerned that
40 most of the SSC members, and I won't speak for all of them, but
41 most of the SSC members were the ones that had, ultimately, the
42 concerns, and so that kind of stimulated some email exchanges
43 and the conversation.

44
45 This motion is purely to hopefully get support from the SSC to
46 tell the council exactly what we would prefer. That is, during
47 the assessment modeling phase, for them to explore the different
48 stock area options that we've had.

1
2 There is three, and so it's not a huge number, and I know it's
3 not a trivial amount of work, and Katie has talked about the
4 expectations for that workload, but this is a key consideration
5 and a key point, and we won't be able to get another shot at
6 this for at least a decade, probably, and so, anyway, this is
7 the motion. I guess I will get a second before I read it?

8
9 **CHAIRMAN NANCE:** Why don't you go ahead and read the motion,
10 and then we'll ask for a second.

11
12 **DR. POWERS:** Okay. The SSC recommends that the current SEDAR
13 research track assessment for Gulf of Mexico red snapper
14 investigate alternative scenarios for stock areas, and,
15 specifically, this refers to the document Options a, b, and c,
16 during the assessment modeling phase. Given that the
17 information reviewed by the life history and genetic working
18 groups of the stock ID workshop supports several possible
19 alternative boundaries, with no definitive boundary evident,
20 and the use of different stock areas (number of regions and
21 exact location of boundaries) has remained a key concern of the
22 SSC, the SSC feels that this must be explored during the
23 assessment model phase.

24
25 **CHAIRMAN NANCE:** Thank you. Do we have a second for that?

26
27 **DR. SCYPHERS:** I will second.

28
29 **CHAIRMAN NANCE:** Steven Scyphers has seconded that. Now we'll
30 go on to discussion. Doug Gregory, please.

31
32 **MR. GREGORY:** Thank you. Unfortunately, I really don't know
33 what this motion refers to, because the SSC has not seen any of
34 the background information, and we have not had a discussion
35 about this.

36
37 Those of us that were not part of those working groups, or part
38 of the research topical working groups, or whatever it was, are
39 completely unaware of this, and so it seems to me that this is
40 really something that we can't do at this time. Thank you.

41
42 **CHAIRMAN NANCE:** Sean, to that point?

43
44 **DR. POWERS:** I understand, Doug, and that's one of the things
45 that I struggled with, and this was part of Katie's concern,
46 that we -- Do we need to bring it and discuss it at the SSC,
47 but that's really not the SEDAR process, and my issue is that,
48 if we do wait until the end, when everybody can be informed,

1 then that might be too late. The decision has already been
2 made.

3
4 **CHAIRMAN NANCE:** Okay. Thank you. Roy.

5
6 **DR. CRABTREE:** I have to agree with Doug. I mean, this is kind
7 of coming out of nowhere, Sean, and I haven't seen any of the
8 document or anything with it. I just feel like it would be
9 inappropriate for the SSC to weigh-in on something like this,
10 when we haven't had any preparation for it or seen any of the
11 documents, and the SEDAR process is what it is, and I think that
12 process has to run, but I just can't support this, because I am
13 not sure what any of it even means or what is really going on,
14 because we haven't seen any of that.

15
16 **CHAIRMAN NANCE:** Will.

17
18 **DR. PATTERSON:** I think Doug and Roy bring up some really
19 important procedural points here. My concern with this process
20 is just that the current research track, we've been told, just
21 can't handle examining multiple stock structure scenarios.

22
23 Personally, I don't think the Options a, b, and c that are in
24 the document, that, obviously, many of you have not seen, are
25 all equally plausible. I think the one that was chosen is the
26 best approach as a default, but I do think that, if that doesn't
27 work out, then it will fall back to the current status quo.

28
29 My whole point, in the conversation the other day, was why not
30 just move forward with both and test to see whether that's --
31 Make that as objective as possible, and which is the better
32 approach, given the data and the fits, et cetera, and so, while
33 this particular motion I wouldn't support, if the motion was to
34 encourage the SEDAR process to permit the examination of
35 multiple stock structure scenarios, then I think that's a more
36 general and better approach and would be a path forward.

37
38 **DR. POWERS:** I am happy to change that, Will. That's a good
39 point. I mean, I struggled with how prescriptive to be, but
40 you're right that the issue is just to expand what we can explore
41 in the research track, specifically that, and so I'm fine with
42 that edit, and it's shortening it considerably and keeping it
43 just to letting the -- Allowing that exploration of the stock
44 areas in the research track.

45
46 **CHAIRMAN NANCE:** We can either do it with a substitute motion
47 or, Sean, we can edit this one. Steven would need to agree to
48 that, obviously.

1
2 **DR. SCYPHERS:** I am happy to agree to that, and that's actually
3 close to what I had raised my hand for anyway, and so I would
4 agree to the changes that Sean suggests, and you can take my
5 name off the list. Thank you.
6
7 **CHAIRMAN NANCE:** So go ahead, Sean, and make -- I won't say a
8 quick edit, but edit.
9
10 **DR. POWERS:** Go to "The SSC recommends that the current research
11 track assessment for the Gulf of Mexico red snapper investigate
12 alternative scenarios for stock structure, period. Essentially
13 delete the rest.
14
15 **CHAIRMAN NANCE:** Steven, are you okay with that?
16
17 **DR. SCYPHERS:** Yes.
18
19 **CHAIRMAN NANCE:** Okay. Katie.
20
21 **DR. SIEGFRIED:** Thank you, Mr. Chair. Can I please defer to
22 the end of other SSC members' comments? I can provide my
23 comments after the SSC has weighed-in.
24
25 **CHAIRMAN NANCE:** Absolutely. I will make sure you're on there,
26 for sure. Luiz.
27
28 **DR. BARBIERI:** Thank you, Mr. Chairman. By the way, my apologies
29 that my participation this week has been completely erratic. I
30 am having major computer problems, and my computer crashed, and
31 I am trying to use different loaners to participate, to the
32 extent possible, but at times without success, and I missed most
33 of today's conversation, and so I apologize for that. Anyway,
34 it looks like things are working now.
35
36 Sean, relative to this motion, I think a lot of my thoughts on
37 this, my concerns, have already been expressed by Doug and by
38 Roy and Will. Basically, it's we don't really know -- We don't
39 have any information on any of this, and we haven't participated
40 in the meeting that made these decisions, and we haven't seen a
41 report, and we're completely uninformed about what this leads
42 into, and I don't know how, or why, the SSC would weigh-in on
43 this right now.
44
45 I mean, the SEDAR process, with the research track, involves
46 the use of the assessment development team, and so we have
47 several of us that are members of that assessment development
48 team, and our role is explicitly to weigh-in on these types of

1 issues and follow along throughout the data assessment
2 development and, finally, review continuity in SSC participation
3 in this process.

4
5 Sure, we can discuss this at some other time, when the report
6 and the documents are available, but, at this point, to have a
7 motion of this nature, weigh-in so explicitly on the content of
8 a SEDAR assessment, I am uncomfortable, and, at this point,
9 unfortunately, I am inclined to vote against the motion.

10
11 **CHAIRMAN NANCE:** Sean, to that point.

12
13 **DR. POWERS:** I understand the concerns, Luiz, and, ideally, this
14 is not how I would have preferred it to happen, but it's just a
15 lot of us, or I will just speak for me, but, when I came into
16 what a research track would be, I thought that, just like that,
17 the SSC members on the ADT would have a large say in what to
18 explore and what the priorities are.

19
20 This process revealed that it's more SEDAR staff and the
21 analysts that are limiting what we can explore, and so that give
22 and take -- I understand that this motion is way out of the
23 sequence of things, but I do think, for red snapper, it is such
24 a critical thing that we explore that waiting until the end
25 doesn't give us an option to go back, but I understand your
26 points.

27
28 **CHAIRMAN NANCE:** Thank you. Jason.

29
30 **MR. ADRIANCE:** Thank you, Mr. Chair. Having been one of those
31 members in this stock ID, I understand the concerns. There was
32 a lot of information presented, and I get that a lot of folks
33 here were not privy to that, but what bothers me is some of
34 those same concerns that Sean has mentioned, that this idea of
35 a research track allowing us to explore some of these things,
36 especially one that has been pretty important to the SSC --

37
38 As Sean mentions, obviously, there is a time crunch, and, to
39 me, it appeared -- The group was asked to reach consensus, but
40 there was this underlying notion that, if someone spoke out and
41 mentioned that, well, they did not agree with what the ultimate
42 choice was, that, well, that just blows up the stock assessment
43 timeline, and then we're going to have to shift the red snapper
44 assessment, and things aren't going to get done, and there goes
45 the SEDAR schedule.

46
47 From my perspective, I had a lot of hesitation to really speak
48 how I truly felt about my concerns with the ideas being explored,

1 and so that is my big point, and I think hopefully some of the
2 discussion that we had earlier this week on managing
3 expectations helps that in the future, and we can better this
4 process, but I do feel that, here, this is one where we should
5 explore these things, and there should be a little more freedom
6 for the analysts to do that. Thank you.

7
8 **CHAIRMAN NANCE:** Thank you, Jason. Jim.

9
10 **DR. TOLAN:** Thank you, Mr. Chairman.

11
12 **DR. BARBIERI:** Mr. Chairman, my apologies, but just another
13 point of clarification, because -- I apologize for jumping in,
14 but just on what Jason just mentioned, and I think this is
15 important for us to understand as this discussion progresses,
16 is there a consensus report that is being produced that was the
17 result of an outcome of these workshops or the working group
18 products that was put together, because I feel that, for us as
19 an SSC to make a recommendation that conflicts with
20 recommendations for consensus decisions that are in that report,
21 it creates a process problem here that is difficult for me to
22 understand how we would be able to handle through the SEDAR
23 process. Thank you, Mr. Chairman, and apologies for jumping in
24 like that.

25
26 **CHAIRMAN NANCE:** Thank you, Luiz. Jim Tolan, please.

27
28 **DR. TOLAN:** Thank you, Mr. Chairman, and no worries, Luiz. That
29 was just fine, and I think Julie is going to address that point
30 directly, and I will address that a little bit, as one of the
31 workgroup leaders, but, Sean, as much as I love the fact that
32 you brought this motion up, and I totally support it, I think
33 some of the formatting issues and the timing issues that have
34 been brought up earlier have me a little bit concerned, with
35 all the rest of you, but I know, from the landings CPUE group
36 that I led, in our recommendation, we put forward that we think
37 that there needs to be a different one of the options taken,
38 and so we're going to take that to the data scoping on Friday.
39 I'm going to still push really hard for that, but I think this
40 motion is ill-timed, and so it's going to be tough to get this
41 one passed, but I certainly appreciate you doing it. Thank you.

42
43 **CHAIRMAN NANCE:** Thank you, Jim. Mandy.

44
45 **DR. KARNAUSKAS:** Thanks, Mr. Chair. I agree with Luiz and
46 others on some of the procedural concerns, and so I won't repeat
47 those, and I will also disclose that I was part of the stock ID
48 process, and I contributed some work to that.

1
2 I also appreciate Sean's desire to investigate these different
3 possibilities in the research track stock assessment process,
4 but I have to say, having been involved in kind of opening the
5 hood on this assessment in the past, and, for example, looking
6 at some of the research done with larval connectivity and trying
7 to look at spatial structure in the stock assessment and how we
8 could better account for some of the movement dynamics, it's
9 really not a trivial exercise.

10
11 It's not just a matter of divvying up the data and slicing and
12 dicing in a different way and popping it in the model, and it
13 really -- Each time you add model complexity, it really opens
14 up a whole new can of worms, and so I really have to question
15 whether these kinds of explorations are the best use of the
16 analysts' time.

17
18 Again, I appreciate the willingness and the concern and wanting
19 to explore these alternatives, but I really have a hard time,
20 with my experience in this assessment, trying to figure out how
21 this could be feasibly done.

22
23 **CHAIRMAN NANCE:** Thank you, Mandy. Julie.

24
25 **DR. NEER:** I will speak after Katie. I want the SSC to make
26 their case first. You can stick me after Katie. Thank you.

27
28 **CHAIRMAN NANCE:** I may put you right before Katie.

29
30 **DR. NEER:** That would be fine as well.

31
32 **CHAIRMAN NANCE:** Okay. Katie can have the last word, I guess,
33 but we'll see. You guys can duel it out. Will and then Roy.

34
35 **DR. PATTERSON:** I am sorry. I left my hand up the last time,
36 and I don't have anything.

37
38 **CHAIRMAN NANCE:** Okay. Thank you, Will. Roy.

39
40 **DR. CRABTREE:** I will just be quick. I mean, I appreciate your
41 willingness to modify the motion, Sean, but I just don't think
42 this is the appropriate way, time, or place for the SSC to
43 weigh-in on this. I mean, I'm hearing a lot of things said,
44 but we don't have anything -- I don't know what happened, and
45 we don't have a report, and it's just not the proper time, I
46 don't believe, for a way for us to weigh-in, procedurally.

47
48 **CHAIRMAN NANCE:** Trevor.

1
2 **DR. MONCRIEF:** I certainly understand all of the concerns and
3 everything else, and, being a part of the stock ID process, and
4 listening in on it, this is one those things, when it comes down
5 to a stock like this, that you have a lot of folks that have a
6 lot of expertise, and you have a lot of information out there,
7 and you're not always going to have 100 percent agreement, and,
8 while consensus was reached, there was a lot of questions on
9 which one to choose.

10
11 My question here, and I want to be able to balance the desire
12 of the motion, and also the concerns about the data and
13 everything else, and I was wondering -- Is there a spot for this
14 at the next meeting? Will a report come out before then? Is
15 there any chance for the SSC to review the document, review the
16 information that's there, and kind of have this discussion and
17 come to some sort of consensus of the group?

18
19 **CHAIRMAN NANCE:** Sean and then Ryan.

20
21 **DR. POWERS:** That is definitely my preference. I mean, I would
22 love to table this motion, or withdraw it, for now, and have
23 the SSC come up to speed, but we still have the issue that,
24 procedurally, that's not what we usually do, but I am -- I just
25 don't want procedure in the way of trying to get this stock
26 assessment to where the SSC can examine it and not send it back
27 at the end, and that's my concern, but I am perfectly willing
28 to withdraw it for now, if we can put it in the next meeting
29 and let everybody read the report and see a more informed
30 decision.

31
32 **CHAIRMAN NANCE:** Ryan.

33
34 **MR. RINDONE:** Thank you, Mr. Chair. The way that the research
35 track process is designed to work is not to have consistent SSC,
36 as a body, intervention in between each of the steps of the
37 process, and Dr. Neer had talked about, in her presentation a
38 couple of days ago, that there is some main components.

39
40 There is the stock ID process, and then there is the data
41 preparation and evaluation phase, and then there's the
42 assessment process, and then there's the peer review, which
43 includes SSC members and the CIE.

44
45 Then, after that, the research track is done, and then we begin
46 the operational assessment component of it, which is where we
47 update all the data that were used in the research track to
48 their most current year available and then, using the newly-

1 rebuilt car from the research track assessment, and then the
2 SSC serves as the review body for all operational assessments.

3
4 It would seem, based on the way that -- Obviously, we have
5 started this research track process for red snapper now, and it
6 would seem that interrupting that process in a way that could
7 result in having to repeat the stock ID process, at least in
8 part, or perhaps in its entirety, would certainly create
9 substantial delays in the development of any sort of management
10 advice down the road for red snapper.

11
12 If that is what the SSC is recommending, I would just ask you
13 to think about the downstream effects of what that means, not
14 just for the SSC and its review, but also the workloads for the
15 Center, when the council anticipates receiving the catch advice
16 down the road, and there's a lot of players, obviously, as was
17 spoken to as part of Julie's presentation, and then as Will
18 spoke about earlier.

19
20 It's not just federal, and it's academics, and it's state
21 people, and it's everybody, and then, for red snapper, it's more
22 than any other species. There are hundreds upon hundreds of
23 people that are involved, and going to be involved, in this
24 assessment, and so any changes to pace, et cetera, affects many,
25 many people, and not insignificantly, and so that's all I have
26 on that.

27
28 **CHAIRMAN NANCE:** Doug Gregory.

29
30 **MR. GREGORY:** It's hard to follow that one. Sean, this is
31 surprising, and I had the impression that a research track was
32 to investigate everything, and no matter how long it took, and
33 you do it. In fact, I think, within National Marine Fisheries
34 Service, there was some discussion about that.

35
36 I also understand how SEDAR likes its schedules, and so this
37 will mess up their schedule, and I am really sympathetic to
38 this, because of my concern about king mackerel.

39
40 If you remember, back in the day, we would refer to king mackerel
41 as having a western Gulf migratory group and an eastern Gulf
42 migratory group, and somehow that has been lost, but, in
43 essence, for all intents and purposes, those migratory groups
44 were separate genetic populations, and so I would like to see
45 that re-emerge and us look at the western Gulf and the eastern
46 Gulf as separate populations, because something is going strange
47 with king mackerel, and we need to look into this, and so I am
48 sympathetic, but I don't support the motion, and I see it

1 probably being withdrawn, but this is not what we thought the
2 research track process would be. Thank you.

3
4 **CHAIRMAN NANCE:** Thank you, Doug. Katie.

5
6 **DR. SIEGFRIED:** Thank you, Mr. Chair. There's a lot of things
7 to potentially respond to, and I think Julie will probably
8 comment on procedure. I guess I will just weigh-in on that a
9 little bit, and it's not SEDAR that is limiting -- We're not
10 shackled by SEDAR to only produce one stock structure, and I
11 wouldn't say that the SEDAR process is the problem.

12
13 As I explained in my presentation, and Julie explained in hers,
14 we had a stock ID process that was supposed to be when we
15 considered these alternative stock structures, and it doesn't
16 sound like it's satisfactory to folks, and I understand that,
17 but I hope that it can also be understood that all of the
18 analysts are not focused on just providing data for red snapper,
19 or modeling for red snapper, and so we have to provide some
20 feasible limits of what we can provide at the Science Center,
21 given all of our other operational workload.

22
23 For instance, if this is something that the SSC wants to change
24 procedure and circumvent the stock ID process and decide on
25 stock ID themselves, which I haven't heard that exactly, but,
26 if you want to revisit it next time, that's really ignoring the
27 consensus that was reached during the SEDAR stock ID process,
28 and we would have to stop data provision.

29
30 At this point, we wouldn't need to have data scoping, and we
31 wouldn't want to have the data providers pull the data multiple
32 times. Like the Florida folks have to recalculate their indices
33 of abundance that are key, and, like Ryan said, there's lots of
34 other people that have to get their data together multiple ways,
35 and so it's a trickle-down effect, and it's a trickle-out
36 effect, that we just -- We have to put some feasible limits on
37 workload.

38
39 Also, we just don't know an objective, quantitative way to
40 decide between these models. If we run the status quo, and then
41 we run Option c side-by-side, it's, at that point, at least
42 double the work, and potentially more, because we don't really
43 know which indices will be used in Option c.

44
45 Then the final comment is I agree with all of the folks that
46 have raised the issue, and they haven't even looked at the
47 options, and they don't know what they're evaluating, which was
48 a comment that I made before, but I think that touches on

1 everything that I had written down, and I'm happy to elaborate
2 on anything, and I know that I commented on quite a number of
3 things there all at one time, but hopefully Julie can get at
4 the procedural and process part. Thank you.

5
6 **CHAIRMAN NANCE:** Thank you, Katie. Sean, to that point?

7
8 **DR. POWERS:** Katie, and I don't disagree, and I don't think any
9 of us would, that there was a consensus option, and I guess what
10 I go back to is that consensus somewhat was forced, because we
11 were told we could only have one option, and I guess that's the
12 heart of it, and not which option is the best or anything like
13 that, but just, as many of us said, going into this research
14 track, we thought we could explore more things than we can, and
15 so I am not debating that, or arguing that, the option that was
16 chosen was the consensus among the large group, but it's just
17 we were restricted to choosing one option, and that's all.

18
19 **CHAIRMAN NANCE:** Mandy.

20
21 **DR. KARNAUSKAS:** Thanks. I just wanted to point out what's
22 going on with the research track also isn't happening in a
23 vacuum. There are a lot of lines of research that we're
24 undertaking at the Southeast Center, and we had, before the
25 research track, been exploring some spatial modeling approaches
26 and alternative spatial areas for red snapper, and that line of
27 research is still ongoing, and so it's independent from the
28 research track assessment.

29
30 We also have an effort looking at trying to divvy up sort of
31 artificial versus natural red snapper populations, trying to
32 divvy up the data by those separate habitat types, so we could
33 look at the impact of productivity on artificial versus natural
34 reefs, different growth and those sorts of things, and so that
35 research is ongoing, and potentially those sorts of complexities
36 added into the stock assessment might even have more bearing
37 than two a two-region versus three-region model, and so I just
38 wanted to point that out, that, if it doesn't get included in
39 the research track assessment, it's not that all is lost. A
40 lot of these things can make great PhD dissertations and
41 projects and gradually get included and incorporated into the
42 management. Thank you.

43
44 **CHAIRMAN NANCE:** Thank you, Mandy. Jim.

45
46 **DR. TOLAN:** Thank you, Mr. Chairman. I will just back-up what
47 Sean was saying about, at the very end of that stock ID, we were
48 kind of forced into coming up with some consensus, and I made a

1 point of putting some language into our report that was almost
2 like a minority report status that says, even though the
3 consensus is this, our group preferred this option, and so,
4 again, a lot of people haven't seen these, and so I'm not going
5 to talk much about them, but I still think we were sort of
6 shepherded by the staff to say you get to pick one and go do
7 it, and so, again, it gets away from what a research track ought
8 to be. Thank you.

9
10 **CHAIRMAN NANCE:** Thank you for that comment, Jim. Julie.

11
12 **DR. NEER:** Thank you, Mr. Chair. It seems that the understanding
13 of what a research track can and cannot do is an outstanding
14 question, with regard to the scope of what can truly be done.
15 I am sorry that groups felt that you were kind of forced into
16 consensus, and that was certainly not my intent during the
17 process, but I do agree that the guidance we were provided was
18 that, as anything with a research track, versus a benchmark,
19 versus any of the processes that SEDAR has done, they are
20 sequential decision-making processes.

21
22 You have to make decisions to move on to the next step, and so
23 the Science Center made a compelling argument, during the stock
24 ID process, which I believe they have tried to reiterate here
25 with regard to, one, workload issues, but, two, the bigger issue
26 with regard to how would you choose which model is, quote,
27 unquote, best, if we could even run these things in multiple
28 iterations moving forward?

29
30 I would suggest that, if that is something that the group feels
31 needs to be done, then perhaps that's a recommendation that
32 should come out, that says, well, if we think we want to do
33 these things, we need to come up with an objective way to choose
34 between multiple models, and that's a whole other process that
35 can be conducted via the Science Center, the Science Center and
36 the council, and the Science Center and the council and SEDAR,
37 or whatever.

38
39 It sounds, to me, like that is one of the underlying issues,
40 is, unfortunately, what we feel -- What the Science Center feels
41 can be accomplished, and what the SSC would have liked to have
42 been accomplished are not in step right now, and so we're going
43 to have to deal with that.

44
45 My other comment I just want to make is the current process --
46 We do not have, as Ryan mentioned, reviews at each step of the
47 process during a SEDAR process, and we never have, and this is
48 not the current structure of how these things work.

1
2 If that is something that you also feel needs to be changed,
3 that the SSC should actually weigh-in at each step of when we
4 finish stock ID, when we finish data, when we finish the
5 assessment, before it goes to review, that is something that
6 you need to give some thought to and come up with a proposal
7 and have your council reps present that to the SEDAR Steering
8 Committee, because that is a fundamental change to how we
9 operate, and have operated since SEDAR was put in place in 2002.

10
11 SEDAR changes all the time, as we all seem to make a joke about,
12 but it's true, and we are constantly trying to change and adapt
13 to make things happen, to meet the needs of our cooperators,
14 and, if that's a step that we need to suddenly need to
15 incorporate and make changes to, then think about that. Think
16 about how you would like to see that happen, and it can be
17 discussed at the Steering Committee level, and that's certainly
18 not something that is just decided by any individual cooperator
19 or any individual SSC, and it's a bigger programmatic issue.

20
21 Finally, I just wanted to say that, with regard to timing of
22 getting stuff done, we also have received -- SEDAR also receives
23 pressure from outside influences, such as cooperators, saying
24 we need this management advice. SEDAR is happy to make this
25 project five years long, if that is what it's going to require,
26 but it's not my choice to make that. These schedules are defined
27 and set up with cooperation with regard, and consideration with
28 regard, to when the councils need these products, how much time
29 the Science Center needs to make these things happen, how much
30 involvement we need from a variety of people.

31
32 As Ryan said, this is one of the largest things we've done in a
33 long time, since the first SEDAR red snapper that was held in
34 the Gulf, and there was fifty-some people on the participants
35 list, and that is kind of where we're at again already, not
36 counting the public just showing up, and we think there will
37 be.

38
39 We set schedules, but I don't want anyone to think that SEDAR
40 sets the schedules. In reality, SEDAR sets very little. We
41 operate and act under the guidance we are provided from people
42 doing the work and people who need the product at the end, and
43 then I take all of that information, and I come up with a project
44 schedule to try and make everyone happy, and there is always
45 people who are not happy along those lines, but, if we need to
46 make changes to any of these processes, the mechanism is you
47 make your recommendations to your council, and they can bring
48 it up at the Steering Committee level. Thanks.

1
2 **CHAIRMAN NANCE:** Thank you. Trevor.
3

4 **DR. MONCRIEF:** Thanks, Katie and Julie, for all that information
5 and everything else. I wanted to go down kind of the same route
6 that you were talking about, Julie, but just a little bit
7 different direction, really trying to look at, down the road,
8 should this kind of thing happen more, and you can only imagine
9 that we're going to continue to get more and more data on all
10 these species, and the assessments are going to become more and
11 more complex, is what you would think, down the road.
12

13 I know, at one point, at the end of the meeting, essentially,
14 when we were struggling to come to some sort of consensus, and
15 folks coming down to it, the comment was made that, if we can't
16 make a decision here, then the decision would have to go to the
17 powers-that-be to make it, and I was wondering, at least in our
18 group, if the discussion would be worth having, and, in the
19 future, if a stock ID group cannot come to a consensus, would
20 this be an applicable venue to then receive that information
21 and help guide the process to a consensus? That's just something
22 I wanted to bring up.
23

24 **DR. NEER:** Jim, may I respond to that, quickly?
25

26 **CHAIRMAN NANCE:** Yes, Julie.
27

28 **DR. NEER:** In a previous SEDAR, and it was a benchmark at the
29 time, and it was cobia, Atlantic and Gulf cobia, and we also
30 had these issues within blueline tilefish. In both of those
31 terms of reference, they had an additional process to -- They
32 had steps built into the process, as part of sort of the -- Not
33 the terms of reference, but the operational guidelines, with
34 regard to what if this group can't make a consensus.
35

36 In the case of blueline, we had a review panel review it, and
37 we had stuff like that, and then it went up to sort of council
38 leadership, because there were multiple agencies, or councils,
39 that might have had to deal with the management issues, and
40 there was a technical review body that could also step in, if
41 we had additional questions, and so I think that having that
42 discussion of what do we do if we can't reach consensus, how we
43 move forward, we need to revisit and make sure that those steps
44 are outlined, and I think that is useful.
45

46 Whether it would be the SSC who would weigh-in on it, or council
47 leadership, other technical experts, I don't know, but I agree
48 that, given all the consternation that has come out of this one,

1 we should revisit that process, and it has existed in the past
2 for pieces, and we didn't -- It had sort of fallen by the
3 wayside, because we haven't had any extremely controversial --
4 We didn't envision any of these being extremely controversial
5 or difficult decisions for the recent ones that we have done,
6 but it's certainly a mechanism that could be looked at.

7
8 **CHAIRMAN NANCE:** Thank you. Will Patterson, please.

9
10 **DR. PATTERSON:** Thanks, Jim. I think this issue with the stock
11 structure questions, with respect to the research track
12 assessment for red snapper, really comes down to expectations,
13 and I don't remember going through the TORs ahead of this
14 assessment, and I guess we should pay close attention in the
15 future.

16
17 If there's something that SSC members think really needs to be
18 a focus, or at least potentially examined within one of these
19 research track assessments, that we be sure to get it into the
20 terms of reference, because, going back to -- Following 2010,
21 when we started to see a plateau of stock biomass in the east -
22 - After 2007 or 2008, the trajectory was going upward quite
23 substantially, and a similar trajectory in the east and the
24 west.

25
26 The west continued to climb, and the east kind of plateaued,
27 and then we started seeing, through the various assessments and
28 updates, the decline in indices in the north-central Gulf of
29 Mexico, but an increase in values in the eastern Gulf of Mexico,
30 south of San Blas.

31
32 Now, there was -- I should say just in the data that were
33 collected from various programs, because the indices themselves
34 were being fit to the entire eastern Gulf of Mexico, versus
35 western Gulf of Mexico, and that's when folks that have been
36 involved in the red snapper assessment processes and SSC members
37 started to really get an interest in, well, perhaps we have
38 different dynamics that are occurring south of San Blas, versus
39 from the Mississippi River over to San Blas, and we were told,
40 well, we can't do that in this type of assessment, but there's
41 a research track coming down the road.

42
43 I guess I just didn't really pay close enough attention to what
44 the realm of possibility was there, because I was surprised, in
45 one of the earlier stock ID workshops, when I brought up the -
46 - I naively said, what do you mean we have to choose, and we
47 can do both, and then it will just be this, and then I was told
48 that, no, we can't do that, and so my ignorance there shown

1 through.

2

3 I do think that this is possible. I understand that the data
4 requirements and the amount of finesse that will be required to
5 examine two different population structure assumptions is not
6 insignificant, but, really, what it comes down to is motivation
7 and choice, and time, obviously, right?

8

9 There's a lot of analytical time that's involved here, and so I
10 guess, if the SSC had said this is our number-one priority in a
11 research track assessment, to examine this issue early on, then
12 it seems to me that that would at least have been considered,
13 if not incorporated into the process. We just have to do a
14 better job, I guess, of communicating that as we go.

15

16 I disagree a bit with Katie about this idea of an objective
17 evaluation, because, even though we may not be able to look at
18 AIC or some other Bayesian criterion, there is expert judgment
19 here. We can look at how the model is fitting and how the two
20 different models would be fitting under different population
21 structure assumptions and, from that, draw some inference as to
22 which we think is more plausible, and then the other, which does
23 a better job of capturing stock dynamics.

24

25 It seems like an area for research, especially as spatial models
26 become more in vogue and are utilized, to examine that, when
27 you're not handling the data exactly the same way, so you can
28 use some type of information criterion to evaluate between the
29 two, but I still think that it could be done in a somewhat
30 objective manner, even if we couldn't use the typical types of
31 approaches. Thanks.

32

33 **MR. RINDONE:** Jim stepped out for a second, and so we'll go to
34 Tom.

35

36 **DR. FRAZER:** Again, there is a lot of discussion here that is
37 valuable to hear. I think it will be important, and a lot of
38 it centers around expectations regarding the research track
39 assessment, and I think we can certainly have a discussion again
40 at the council meeting with Science Center leadership, and I
41 will call Clay again to try to clarify what the bounds might be
42 on a research track, and they certainly can't be unlimited, but
43 they should be as flexible as they can be to pursue any number
44 of things, but, again, there are some realities that we have to
45 pay attention to, and so I think some clarity coming from the
46 Science Center with regard to the scope of the research track
47 assessment is in order.

48

1 We can certainly -- I will talk to Clay personally about it,
2 and then we'll have some discussion at the council meeting in
3 Texas in these coming weeks.

4
5 Depending on where that discussion goes, and based on this
6 discussion, we'll have -- Some of it will bear on process and
7 what's appropriate and what's not, and how we might intervene
8 or have some checkpoints, and, if it's doable and the right
9 thing to do, perhaps we can have a one-day SSC meeting to deal
10 specifically with this topic before we get too far down the
11 road, and so that's all I have to say for right now.

12
13 **MR. RINDONE:** All right. Mike.

14
15 **DR. ALLEN:** Thank you. I just wanted to mention that, as a new
16 SSC member on the Reef Fish SSC, I haven't seen any of this yet,
17 and so I wouldn't be in a position to comment or vote either
18 way on any of the motion, and I realize that this is something
19 that the group has been tackling for a long time, and that it's
20 almost irresistible to talk about it, but I'm not in a position
21 to weigh-in either way at this stage, and so thank you.

22
23 **MR. RINDONE:** All right. Is there anyone else that would like
24 to speak to this issue? Seeing none, are there any other members
25 of the SSC that have anything to bring up for other business?
26 I think this was all that we had prior to the meeting.

27
28 Seeing none, thank you, all. You guys have done a great job,
29 especially for your first meeting, and it certainly wasn't dull,
30 and so I will be working on an updated agenda with the Chair
31 and Vice Chair and council staff, and we will float that to the
32 Science Center and the other people from whom we need to receive
33 materials for the September meeting.

34
35 I will send out a doodle poll later today for dates for that
36 last full week of September, and so go ahead and draw a circle
37 around that with a pencil and flag that, and that's definitely
38 when this is going to be, and, right now, it's looking like
39 probably a three-and-a-half-day meeting. If we go forward with
40 having a one-day meeting to resolve this stock ID issue with
41 red snapper, we'll plot something out on the calendar and try
42 and figure a time to discuss that with you guys, and so any
43 questions?

44
45 **DR. NEER:** Ryan, when you say the last full week of September,
46 you're talking the week of September 20, the last full week of
47 September, or are you talking --

1 **MR. RINDONE:** Sorry, Julie. You're right. I am looking at the
2 week of the 27th to October 1.

3
4 **DR. NEER:** Okay. Thank you. I am just penciling in the right
5 week.

6
7 **MR. RINDONE:** Yes. The 27th to October 1, that week.

8
9 **CHAIRMAN NANCE:** I greatly appreciate all of your input, and
10 this has been a great meeting. I guess we will go ahead and
11 end.

12
13 **MR. RINDONE:** All right. Safe travels, everyone. Thank you.

14
15 (Whereupon, the meeting adjourned on August 11, 2021.)

16
17 - - -
18



06-30-2016

Rauch, Sam ~ Oral History Interview

Ruth Sando

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Voices from the Fisheries
166 Water Street
Woods Hole, MA 02543

Interview with Sam Rauch by Ruth Sando

Interviewee

Rauch, Sam

Interviewer

Sando, Ruth

Date

June 30, 2016 at 10:00 a.m.

Place

NOAA Headquarters
Silver Spring, Maryland

ID Number

VFF_SS_SR_001

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Biographical Note

Mr. Rauch is Deputy Assistant Administrator for regulatory programs of NOAA's National Marine Fisheries Service. After receiving a B.A. from the University of Virginia, he received a M.S. from the University of Georgia with the goal of becoming a forest ecologist scientist. He then earned a J.D. from Northwestern School of Law of Lewis and Clark College and worked for the U.S. Attorney's Office on the spotted owl litigation team. He was transferred to NMFS where he first worked on salmon cases before becoming Assistant Section Chief where he oversaw all NMFS litigations. He came to NOAA Headquarters as the Chief In-house Attorney for NMFS before starting his current position as Deputy Director in 2006.

Scope and Content Note

Interview contains discussions of: NMFS, NOAA, fishing regulations, protected resources, sustainable fisheries, commercial fishing, recreational fishing, salmon, endangered species, Vessel Monitoring System, GPS, Coast Guard, fishery management councils, red snapper, spotted owl, litigations, Magnuson-Stevenson Act, overfishing, Congress, right whales, aquaculture

Sam Rauch oversees regulations for sustainable fisheries, protected resources, the habitat program, and aquaculture. As Deputy Director, he helps to manage the regulations necessary to ensure marine resources are protected. In this interview, he discusses the changes in the focus of NOAA's NMFS over time. He describes the ways in which regulations are enforced through

technology like GPS, trip reports, dealer reports, human observers on boats, and the potential costs and benefits of using on-board camera systems in the future. He also touches upon the occasional conflicts between federal and state regulations and the difficulty of managing inconsistent regulations in federal and state waters. Rauch discusses the hiring practices within NMFS, particularly the use of contractors for specialized tasks instead of hiring a permanent specialist because it is hard to predict what big focus will come next. He also touches on the agency's relationship with Congress and his role educating and advising Congress on fisheries issues.

Rauch is most proud of his work with right whale conservation in the North Atlantic. He helped create regulations to prevent rope entanglement and injury by boats and faced a long and difficult fight in Congress to get the regulations passed, but eventually succeeded. Lastly, Rauch discusses the need for a greater supply of fish as the U.S. population grows and the trouble with current dependence on foreign fish. He believes we will see a rise in U.S. aquaculture in the near future.

Indexed Names

Bush, President George
Cheney, Vice President Dick
Hollings, Senator Ernest
Inouye, Senator Daniel
Lent, Rebecca
Magnuson, Senator Warren
Obama, President Barack
Schwaab, Eric
Stahan, Max
Stevens, Senator Ted
Young, Representative Don

Transcript

RS: Ok, so now it's going and this should record fine. This interview's being conducted as part of the Voices from the Science Centers project funded by the Northeast Fisheries Science Center. It's also part of the Voice from the Fisheries project that's supported by NMFS Office of Science and Technology. I'm Ruth Sando and today I'm speaking with Sam Rauch at NOAA headquarters in Silver Spring, Maryland. We're meeting on June 30th, 2016 at 10:00 a.m. in his office. Mr. Rauch is Deputy Assistant Administrator for Regulatory Programs of NOAA's National Marine Fisheries Service. He has a J.D. from Northwestern School of Law of Lewis and Clark College, and M.S. from the University of Georgia, and a B.A. from the University of Virginia. Thank you for meeting with me today. So, let's start with your current role at NOAA Fisheries. How would you describe it?

SR: So, I'm one of the three deputies here. I oversee the work of our regional offices and a few of the headquarters offices dealing with the regulatory programs. So, basically I oversee all the regulations for sustainable fisheries, all of our work on protected resources, biological opinions and things like that, our habitat program, and our aquaculture program.

RS: What is the history of your position?

SR: So, my understanding is that back in the early 2000s, there was one Deputy. There was always the Assistant Administrator in charge of the Fisheries Service and the Assistant Administrator had one Deputy. And before I started here, in about 2006, they split the job into three so that there was, instead of one, there was two named Deputies and then there was the Chief Scientist, which is a Deputy but doesn't have—has the same role and function as the two of us but has a different title. So, there's three Deputies. So, they did that and I don't know exactly when—sometime in the early 2000s, and the first person there was Rebecca Lent. When she went to pursue her international objectives and headed our brand new International Affairs program, they selected me. So, I think I'm the second official person to hold the role full time.

RS: And what was behind their multiplying this role into three?

SR: Well, it was too big. I mean, I can barely keep up with it now—I could not imagine doing my job, and doing all the budget and enforcement and science positions. I don't know how any single person could do that. Obviously they did, but I don't know how you could do it. But that was I think the—it was just too much of a workload to actually provide any sort of oversight, leadership, guidance on that function.

RS: So, the scope had really grown.

SR: As far as I—yeah, right.

RS: How does your work then fit into the larger organization?

SR: Which larger? NOAA or NMFS?

RS: NMFS.

SR: So, we are what I view as, we are part of the product here. We have to...the goal of NMFS, the two main goals are to ensure sustainable fisheries, commercial, recreational, those kinds of issues, and all that entails—food to the people, recreational opportunity, jobs, economy, for both today and in the future. That's half of our job. The other half is to ensure that protected living marine resources are protected and will be there forever and recover. So, those are our two main jobs. We have the science side which tells us what to do. We have the operational deputy which sort of gives us the tools to do it, my people are where it happens, where we do it. We issue the regulations that actually manage the fisheries, We issue the biological opinions, the recovery plans. We build barrier islands. So, I view what we do as the point at which all of this comes together in action. We couldn't do it without the other pieces of it, but this is where we actually achieve the results that meet those two objectives.

RS: Well, those objectives are very broad.

SR: They are.

RS: So what departments do you tend to work most closely with?

SR: So, I oversee all of our fisheries regulatory branches. I oversee all of our protected resources and habitats, so I work on all those kind of equally. But it's working with the councils, our regional offices to put out fisheries regulations—I signed all the regulations. We do—if you look at the codified register, the Fed Register, every year. I am told—I have never gone back and checked—but I am told that we are always within either the third or the fourth highest number of Federal Register actions, which means very active management of fisheries protected resources. So, I sign all of those. They all come through here. All of our region-issued biological opinions to federal agencies in terms of crafting, changing their actions to ensure that they're not jeopardizing the continued existence of species, recovery plans So, I work on all of those things. I oversee all of those—all those people that do that in this agency.

RS: So, that's all kind of bubbling up to you?

SR: Yes. Somebody has to—it bubbles up to a point somewhere...

RS: Yeah...yeah. So, there's three people in this role.

SR: Yes.

RS: Are their roles exactly the same? Is it the same work divided three ways?

SR: No. So, I oversee the regional offices, the Chief Scientist oversees the science centers, the Operational Deputy oversees basically facilities, enforcement, seafood inspection, international policy...those kind of things. We each have about the same number of people working for us and we fulfill the same role in the organization, but our areas of focus are different because I don't deal—I use the science, but I don't manage the science. That's all the Chief Scientist.

RS: So, what is the number of people that you have working for you?

SR: So it varies at any given year—we have about a 3,000 personnel organization. I have something a little less than a thousand, in any given year I'm not exactly sure how many.

RS: Has that changed much over time since you took on the role?

SR: The number of employees at Fisheries has gone down with the declining budget trends. We have—I don't know the exact number—but we have lost a significant number of jobs or positions that we have not filled. So, we are a smaller organization now than we were ten years ago, I believe.

RS: Now, is that reorganization or are people leaving, retiring, and not being... their slot not being filled?

SR: Mostly it's people retiring and we didn't backfill. I don't think that we have gone through any forced—we will normally turn over about ten percent of the organization in a year and we will backfill behind them. These are positions as the budget declined, we didn't backfill behind. The organization has shrunk as the budget has shrunk.

RS: You know, I always wonder—in that situation, you really don't have control of the skills that you're losing.

SR: We don't, but we can choose what we want to replace them with. There are some things that we were doing ten, twenty years ago that we are not doing today. We're doing new things today and so this is where we can look to within our overall mandates, which the broad mandates haven't changed but the things we're required to do are different today than they were back then.

RS: Give me an example of something that used to be very big, in terms of what people spent their time on, and is now gone or at risk.

SR: Well, I'll give you an example that's gone and it's coming back. My understanding—and this was a little bit before my time—but in the '80s and in the '90s, we had a whole division that was working with the seafood industry to promote the seafood industry, to work on trade relations and those kinds of issues so that we would promote U.S. product, we would invest in U.S. fishery resources. Because we were, at that time, transitioning from a largely foreign fleet to a U.S. domestic fleet. We did that in the '70s and in the '80s. And so we were investing a lot of that in industry support, promotion, marketing, those kinds of issues.

RS: [Whispered] Everything's okay.

SR: Alright. But we stopped that over time, so when I started here we invested almost none of that. There was still a little bit of those pieces around the agency—

RS: Did that go to Commerce, or go somewhere else?

SR: It didn't go anywhere else. The agency—the industry took it on on its own. As the U.S. industry became more mature—

RS: Oh, I see.

SR: —they didn't need as much of that support. Recently though, we have begun to invest more. So, when we created...when we merged international and seafood inspection, which is not within my chain, but we did that, part of the focus was to try to recreate some of the customer service aspect that we did then, but not with nearly the staff. That's perhaps the biggest shift over time that we've made. But we've done other things as we've gotten new species. We deal with protected species where we work on them and try to build on their needs and recover them. And so as species have recovered, we focus more on other things. Or, we've had to invest more things. In the early—in the '80s, we did not...our West Coast region, what is now West Coast

region, probably looked much different than it does now. Starting in the '90s we listed twenty—some odd species of salmon as endangered, and now, from my perspective, our West Coast region is probably our biggest office.

RS: When you say it looked different twenty years ago or thirty years ago, do you mean in terms of the staff or their responsibilities?

SR: Yes, all of that.

RS: Oh, okay.

SR: Well, I mean, let me give you an example. So, our West Coast Region used to be split into a Southwest and a Northwest Region. For budget reasons, we combined them a few years ago. The Southwest Region, when it started, it was in Long Beach, California because that's where the tuna fleet, the U.S. tuna fleet left for. Their main focus, one of their big work focuses was regulating, servicing, providing support services to the U.S. tuna fleet leaving out of Long Beach. Well, for various reasons, that doesn't happen—there's not a significant tuna fleet or they don't need that anymore. Our entire California operation, which is our Southwest office, is focusing almost entirely on California salmon issues, dealing with the plight of these endangered salmon stocks. So, twenty, thirty years ago, I don't know that you had salmon biologists on staff in what was the Southwest Region. We have a lot of them on staff today and by far what they do most is dealing with endangered species issues in California where they used to work on international tuna fishing issues out of Long Beach. So, you see that change over time. So, we're hiring more salmon biologists, less tuna specialists.

RS: There's a natural flow of what is needed and then assessment of who's on board that can handle that.

SR: Right.

RS: So, the two California regions are now both located—or they were combined and they're in Long Beach?

SR: No. Well, they haven't physically moved. They've changed their name, they're different sides. So, we don't have two California regions, we have one West Coast Region. So, we had a Southwest Region, which was in California and at the time also covered Hawaii, but Hawaii has been created as a separate region all together—the Pacific Islands Region. Rather than keep only a region that focuses on one state in California, a few years ago, when the budget really declined, we merged the Southwest Region with the Northwest Region. They are still located in the offices—so there's still a Long Beach office, there's still a Seattle office which is where the West Coast Region was, we still have significant offices in Portland, Sacramento, Santa Rosa, California—but now they're all under one leadership as opposed to two.

RS: And is that leadership here in Washington?

SR: Well, no. The West Coast—there's a West Coast Regional Administrator.

RS: Oh, I see, okay.

SR: Which is out there, and then they report up here.

RS: And where does the Hawaii Regional Office report to?

SR: It reports to me. So, there's a regional administrator in Hawaii that also reports to me, and they cover not only Hawaii but all of our territories: Northern Marianas, Guam, American Samoa. So, they have a huge region, but sparsely populated.

RS: How has... You know, I know that there was a new marine protected area that was signed into law—I'm not saying it right, probably—by Obama within the last year or so. How has the work of the Hawaii regional office grown? Has that grown significantly?

SR: Well, it didn't exist—when I started here, I started General Counsel's office in about 2003 and it was just beginning at that point. So, it was transitioning out of the West Coast, I'm sorry, out of the Southwest office to its' own office. It didn't—there was no Pacific Islands Regional office. It just didn't exist then. Everything it does now is, in a sense, it's grown itself. When it started there, we did not have—it is having to focus more on some protected species issues than it did then. We just listed corals, we have—there are marine mammal issues around Hawaii. Those issues were not that significant back in 2003. They also were there and they—we have a fishing management council, they were dealing largely with fishing issues and with coordination with all the various far-flung communities out there. So, they've really had to build up a regulatory program for these various species that need assistance that we didn't have back then. You mentioned the monuments. What the President did—last year maybe, maybe two years ago—was expand the preexisting monuments. That monument had been out to fifty miles and they expanded it out to 200 miles. So, that didn't fundamentally change what they do out there, it just made it bigger. We have had to—President Bush did the first marine monument in that territory with the Northwest Hawaiian Islands Monument, Papahānaumokuākea. Starting with that one, which was at the end of his administration, whatever year that was, we've had to devote resources to monument management. We are not basically a land management agency. The sanctuaries often deal with protecting particular places, and so we co-manage that with Fish and Wildlife Service and the State of Hawaii. So, we've had to create a monument management branch. Obama created a number of... was it Obama?...one of them created a number of far western monuments out in the western ocean and then Obama just expanded this one and he may do something like that again. So, we've had to create that. I don't know that that's been as significant issue, because we only manage the ocean parts of them, we don't manage the land. And on the ocean parts of them, the management is not all that different than what we were doing before—issuing fishing regulations, dealing with interactions out there...it's a little bit—there's an overlay that now it's a “monument” plan, as opposed to a fishing plan, but I don't think it's created that much difficulty for us.

RS: I guess it's a matter of scope.

SR: It is. They're big, but there's not a lot of things that were going on out there to begin with. What was going on is the kind of stuff we were regulating before.

RS: I had the impression part of it was expanding the limit to prevent foreign fishing or some sort of commercial, from overfishing in that area.

SR: Well, it was the U.S. zone to begin with, so there's not supposed to be foreign fishing to begin with. So, that's not—

RS: Oh, so that wasn't the goal.

SR: --accurate. There are various people that attempted to do—because various people like the idea of big huge monuments and so they put out... But foreign fishing was illegal in this area to begin with because it is U.S. waters, and we do not generally allow foreign fishing in U.S. waters. The effect was to preclude U.S. fishing in those waters, and there was some out there. So, we did displace some fishing effort, and it has been difficult for U.S. fishermen to fish, but there is not before—there should not have been before and there should not be now, fishing there, and that's an enforcement question as to whether we can actually catch them. Maybe there is fishing there, we have every incentive—we have the same incentives to catch them now as we did before, right. It's still not legal to do that.

RS: So, talk a little bit about the enforcement side.

SR: I don't actually manage the enforcement side.

RS: Oh, you don't. Okay.

SR: Happy talk about it though.

RS: Well, I just wondered what are the major tools for enforcement, when you think about things like the large monument, the scale of that?

SR: Well, so let me talk about my part of—I have to manage the regulations. So, the enforcement can't... what are they enforcing? They're enforcing our laws and our regulations, right. So, that has to come through me. So when I design a regulation and I say—the people that work for me do that—they have to keep in mind, how are you going to enforce this? It doesn't matter, you can have the best regulation in the world, if it is impossible to enforce, we can't do that. So, the one thing the enforcement people told me since day one is they like straight lines. The fishermen often would like to tailor the regulations so they can get maximum economic benefit. If we have to close an area, the fishermen will often say, yeah, sure, close that area, but let's do it on contour lines and put all these little turns and twists in the map where it's closed so we can fish everywhere else. So, you can minimize that, protect what needs to be protected, less fish everywhere else, and that gets to the enforcement people and they say—I can't enforce a squiggly s-curve on a map, I need a straight line. That's a discussion that we have. How do you do that? We talk about—so that's one, so closed area enforcement. It's relatively easy to enforce a closed area if you have a straight line. You can have various surveillance technologies,

airplanes, ships. Most fishing vessels by regulation, or many of them, are required to have what's called a Vessel Monitoring Systems, VMS units. Little electronic satellite pingers that will tell us their GPS position that they have to ping us every so often when they're fishing so we know where they are. So, it's relatively easy to catch a fisherman who's fishing in a closed area if the lines are straight. The more difficult things are time-area closes, so you say the season's closed. If the season is closed for everybody, so there should be no fishing vessels out there, that's easy to enforce. But if you have fisheries like we do in many places, where you can fish for cod and you can fish for redfish and you can fish for flounder, and you close the cod season, then they're out there fishing and they're fishing for flounder and what happens when they catch a cod? It's hard to enforce a seasonal closure if there are some of the seasons that they're allowed to catch that are open, particularly difficult with recreational fishermen where seasonality is one of the only ways that you can regulate for recreational fishing. You set the red snapper season. Fisherman's out there and after the red snapper season's closed but the triggerfish season's open—or the amberjack season, that's a better example. The amberjack season's open and he catches a red snapper. Well, what are you going to do? So, he's supposed to throw it back overboard. So it gets difficult to enforce those kind of seasonality issues, but part of my job is to design things that are easy to enforce to achieve our objective.

RS: It strikes me something like, that a technology like GPS was probably transformational in terms of...

SR: It was for area closures. It really made those easy to monitor, because now if your a fishing vessel and you're out there without a GPS, that's a violation. If the GPS is not turned on, that's a violation. If it is on and you're in the wrong place, it's a violation. And you really have no excuse because the fishermen, they know where they are and now—maybe back before we had all the satellite data and technology you could say, I didn't really know where the line was—but now everybody knows where the line was. So, we see a lot—I don't know the statistics because I don't manage that—my suspicion is we see a lot fewer of these area intrusions in U.S. fisheries where we have these VMS kinda things.

RS: All due to GPS.

SR: All due to GPS. I mean, the Coast Guard is our partner out there. If we have a GPS unit but we don't have anybody out there seeing that their nets are in the water, it's not going to make any difference. So, we need the Coast Guard. But it really has...I think area closures are now much easier to enforce than they were, and you need less of a presence on the water than you may have historically had.

RS: Which is welcome, I'm sure.

SR: Yeah, I mean the Coast Guard has multiple obligations. It's expensive to put an enforcement presence on the water.

RS: What other technology has become an important tool?

SR: Well, so let's talk about monitoring fisheries. So, we monitor fisheries, not dispositional monitoring, but we have two kinds of fisheries in the United States. Either we require the fishermen to bring all the fisheries to dock, so it's a full retention fishery—

RS: So, you mean they bring their catch to dock?

SR: Right, sorry. They bring all their catch to the dock. So, everything that they catch they have to land. Those are full retention fisheries, so we count their fish. It's relatively easy on land. But that's rare in the United States. In the United States, we often always have allowed the fishermen to sort their fish at sea, to bring home what is marketable and to return what is not marketable. And out of what you return, some of it's going to live, some of it's not going to live. We are adamant that all of that mortality—whether you land it or not—gets counted against the quota. So, we account for it, but that's expensive. So how do you monitor that? How do you monitor discards at sea? The historical way that we do that is two ways. One is the fishermen have to fill out trip reports, so they have to report what they do and those reports are accurate or not because they're all self-reported.

RS: And then that trip report's going to go right away into the regional administrator?

SR: Not right away. Historically, I mean, because the fishing vessel's out at sea and so the fishing vessel is out at sea, it won't come to us until after it lands and then it was mailed to us. So, often times, historically, it'd be several months before we had an understanding of what was landed from the voluntary reports.

RS: So, you might be seeing last season's information in this new season?

SR: Right. And that makes real time management almost impossible. So, you cannot sit there and say to a fisherman with any real accuracy that you as a fishing fleet can catch a thousand fish, send in your trip reports, and when we think the thousand fish are caught, we're going to close the season. If it's based on those long-delay mailed in trip reports, you're going to miss that. Either high or low, it's an estimation. You can try to put in uncertainty buffers to try to deal with it, but it's difficult. So, what we see now is we're moving towards electronic reports that come in in near-real time, using satellite technology, or at least—sometimes it's still hard to communicate with the vessels at sea—so at least by the time they land, we'll get them in near-real time. We also look at dealer reports, and in the last five years or so we have automated our dealer reports to corroborate. So, you've got the fishing vessel saying what they caught, you've got the dealer report saying here's what we think you landed—what we paid for—and those two better match up. Right, so that's all good for landed. I think we've had a really good handle on landed catch and the technology has really improved accuracy, so we're not sitting there with an accountant that's somehow preparing the numbers, which is very difficult...But in real time, we can look and try to calibrate the reports and so most errors are innocuous, miscoding something, but we can correct those or the system can identify those so the dealer or the fishermen can correct. Some are not. Some are more insidious, and this allows us to catch that kind of situation in much more real time and to do more real-time management so we can actually manage in season. But the other advantage is that now we have—but the other thing is we never...any sort

of self-reporting is, there is a certain degree of uncertainty with that, with people either making errors intentionally or not. And so we try to corroborate. The dealer reports are fine, because it's a market transaction, there's a product. In various places in the market you can check and say is that fish coming through. If you're talking about discards, things that are thrown out at sea which we never see, we put observers on the boats, human observers and we've been doing that since the '70s and that is a fairly sophisticated way so that we can try to assess are the kinds of reports you turn in when you have an observer on board the same as when you don't. We have very few fisheries that have an observer on every boat, but we sample enough of them so that we can get a good representation and have some certainty. The technology that we're seeing now, though, is cameras coming in place of observers. It's an expensive prospect, and sometimes dangerous, to put a human observer on a fishing boat that's not employed by the fishing boat. So, if we can do it with technology, which we're seeing more and more of, that may be a viable solution. We put a camera on the boat that has to be on when they're fishing, or maybe the whole time, and we look at the camera and the camera sees some of what the observer will see. An observer is almost in every instance a better data collector because you can collect samples from the fish, that kind of thing. But we are seeing a transition to more and more of the video monitoring systems to be put either to supplement what the observer does or to replace an observer at a lower cost. So, that's the trend that is starting now. We're on the beginning of it, we've rolled this out in a number of fisheries. There are going to be more and more fisheries in the next five to ten years that will be coming online with cameras, either to supplement the observers or to replace them.

RS: You know, it occurs to me, having worked with video a lot, that video is great but then you have to look at it.

SR: Yes, exactly. That's where the cost lies.

RS: Yeah, I mean that's hours and hours and hours of boring—watching a film.

SR: Right. So what we've seen is there's a—people believe that you can compare the physical cost of a camera to the cost that you have to pay in wages for an observer and cameras are always cheaper in that instance. But it's not true because there's still a human somewhere that eventually has to look at it. One of the things we're doing with the Pacific groundfish fishery which just implemented this method is using computer programs to look at all of the empty data because most of what the camera's going to see is nothing. You're at sea, there's nothing on the line, and then slice all those hours and highlight for the human person, here is, of the sixteen hours of data, here's the one hour in which fish was actually coming on board. And I think that will get better and better, and then you will say, you can get computer programs to say, of all the fish that came on board or was thrown overboard, here are the few fish that—the computer was able to catch everything except for these few things. So, over time the amount of video that a human will have to watch will go down. But the costs we see really in camera systems right now are the human auditing cost. How much, when are they going to do it, and the data storage and transmission costs because the video is taken on a boat and you have to get that video—not in real time, because translating that much video through a satellite link is difficult, you can't run a cable—

RS: Oh, it's a huge file.

SR: --right, so you've got to get that file off the boat in some manner to the auditing system and then you've got to store that data somehow. So, those are the real costs of the camera system. But those will go down over time, it's all technology problems. We either are going to fix or fixes are in the works for almost all those issues.

RS: What else do you see in the area of technology that might make a big difference?

SR: Well, I think that...I'm going to delve into my companion chief scientist role here because the big cost for us—once we get the monitoring cost which we just talked about—is trying to assess how many fish are out there. That's a hugely expensive prospect. Traditionally, we have done that by looking at how much fish are caught, but also trying to get an independent assessment. We have all these NOAA ships that are out there that try to do that. We spend a substantial part of the NMFS budget trying to assess, independently, how many fish are out there. What we're seeing is better ways to assess fish health without a big, huge ship because we haven't seen a lot of support in Congress, we've got an aging fleet...I don't know what the future of those ships are. The science side is looking at different underwater autonomous vehicles, all kinds of different metrics to try to figure out better how the fish are. I think over the next ten years we're going to get a lot better at counting the fish using these various much lower cost platforms.

RS: I had heard of underwater drones. Does that come under that category of autonomous vehicles?

SR: Sure, right. If you can pilot a radio-controlled thing down there and count the fish with that as opposed to putting a big net in the water and catching them off of a ship that's crewed by 30 people...

RS: Do you think that there would be more of a support for funding that than there would be for a ship?

SR: It would be cheaper, eventually. I don't know that it would be cheaper to start with, but eventually it would be cheaper. I think our challenge going forward as an agency is to figure out how to do the things we're doing now better, but more cost efficient because the demands on us are only going to increase. We're going to have to be able to monitor more and more things, to be more and more accurate. Our budget is not going to rise consistently with that. So, we have to do it cheaper and more efficiently. So investing in these technologies...I think we're going to have to do that. And we are already doing that—you see more of those coming online. There'll be better reflections of what's going in the water.

RS: It sounds like there's going to be more automation, but also more data.

SR: There will...there will. And one of the things that we're doing now, in terms of our relationship within NOAA, is we've done a much better job in the last five years than when I

started at trying to look at all the oceanographic data—other data that NOAA provides and we're really a customer for all of that. So, you know, we've got all of the satellite programs that take all the various atmospheric meteorological measurements. We've got the ocean atmospheric research people doing all these physical things, we've got all the mapping people in NOS calibrating—you know, so that's massive amounts of data. So, those things are—we control the fishing input, but the health of the fish stocks are, and when and where they are and how many of them, are determined by a combination of these few biological parameters but also oceanographic conditions. We know that many fish are temperature-dependent, they're acidity-dependent. With all this data, you can build much better models that are more accurate that depend less and less on actually going and hauling the fish out of the water to do that. So, I think that we are incorporating all of that. We are an end user of all the NOAA data—and other agencies' data—that they're doing. That's where we're really using big data in our workload. It doesn't necessarily come directly to me as the regulatory person, but I'm the customer for what the science gives me in terms of they'll tell me how much fish we can take. I have to design the systems that allocate that to who and where and how they can take it.

RS: So, you're getting the data in about the fish and their condition and then that might lead to some new regulations that your staff will then write up and...

SR: That will either tell you that you can increase fishing opportunity or that you have to restrict fishing opportunity. Either one of those is a change, right. Any bureaucracy hates change, but we're constantly changing and that's why we issue so many regulations is because the fish populations, they go up and down. Part of our mandate is to have a sustainable fishing industry, which is a huge industry in this country. To do that, you have to be very flexible. You have to not overfish them when they're down, but allow the fishermen to catch them when they're up because fish are cyclical—they go up and down.

RS: Has the role of the fishermen, in terms of the regulations and commenting on them and everything, changed over time? Or is it pretty much the same as it's always been?

SR: Well, so before 1970, there was not very strong federal regulations. The way that we were before 1970 is you had the states basically regulating the conduct of their fishermen within their zone of influence—out to three miles, maybe a little further. And beyond that, it was mostly foreign fishermen coming in and we were regulating it through treaties with foreign governments. Since 1970, the U.S. declared sovereignty over its' Exclusive Economic Zone, its' EEZ, out to 200 miles. And we basically restricted foreign fishing in our waters and created a U.S. domestic industry. There was not a large role for our fishermen before then because we didn't have any fishermen before then that was truly in depth of federal waters. There has been a long, rich fishing history in many areas of the country, but not the same as what we see today. But starting in 1970, we have what's called Fishery Management Councils. These Councils—there's eight of them around the country—they are dominated by the fishermen themselves, so we appoint every year fishermen to the Council, there's also states and some environmentalists, some academics. But in large measure, it's fishermen, and what we tell the fishermen is there are certain legal parameters, including the ones that are generated from science, that you cannot cross. But within that, you're supposed to advise us on who should get to fish, what the season

should be, these kinds of allocations. So, it is basically a mini legislative body that will negotiate within the legal bounds and the science bounds who, when, and where people get to fish. And so they really drive the system. We vote on them, we have one vote. We basically are the auditors of that system. We ultimately issue the regulations, and we'll do that because it resolves what they do as legal. But they have a huge voice in that. What we've seen over time is that the commercial people still—they started with a huge voice, that voice has largely continued...the commercial folks are fairly sophisticated, they make business decisions, they can understand cost-balances and that kind of thing, so they've been there. What we've really seen over time is that the increase in the importance of the recreational community in that process. Recreational fishing, at least in federal waters, is—I mean, everywhere it's important but it's not just a pastime, it's a business. There's lot of jobs. The amount of money added to the economy in any given year from the recreational fisheries can rival what is coming from the commercial fisheries because the jobs, the travel, the boats. We deal with --

RS: I didn't understand the end of that sentence. Because the jobs travel?

SR: The jobs, the travel, the boats—you get a recreational fisherman that could be a tourist—

RS: Oh, so they could do both?

SR: No, you're either a recreational fisherman or a commercial fisherman unless you're in one of the territories where those lines get very blurred. If you're a recreational fisherman and you own a charter business where you're taking tourists out, right. Or, somebody's got to buy all those fishing poles, those gears, those nets, those boats, those hotel rooms...all those kinds of things. It gets to be a very large source of money and jobs in the economy. If you go down in Florida, you see all the big tackle shops. Right, that's all for recreational fishing.

RS: So, it's kind of a ripple effect, economically.

SR: Exactly. So, even though you cannot actually sell the fish, or else it would be a commercial fish, it still is a huge business. And it's important to the United States and jobs—

RS: [Touching mic] Just checking. Okay, we're good.

SR: --so, we've recognized that more frequently but we also understand that—so it's not only significant in terms of the positive economic impact and all the other good things recreational fishing brings, but it is a significant—it can be a significant conservation concern on the back end. With so many recreational fishermen, they can, in some areas, take out as many fish as the commercial fishermen, creating a sustainability concerns. So, what we've seen, I think, over time, is the rise of recreational fishermen in importance and having a bigger voice. It's difficult for them to have, because of the nature of that, a unitary voice.

RS: That's what I was thinking of.

SR: But you're seeing, you can see large national organizations that sort of act for them. You

still have—it is still an industry that is dominated by individual people doing private individual things which makes it difficult for them to engage in a policy debate. But you see more and more of that, and over time that's going to become—and we would encourage their participation because they are important, and they have traditionally been underserved and that's a real change that you're seeing, is the voice of the recreational fishermen.

RS: And does it make it difficult to reach them, to sort of educate them about regulations so they know what is permitted?

SR: Well, not necessarily about regulations. They will know because you—they will know whether it's legal or not, when the season's open or not. We can reach out to them. But to get their input ahead of time and have them—because it takes time, the way that we generate the regulations is through these Councils. They meet three, four times a year, sometimes for a week at a time. It takes a lot of effort to come to a council meeting and be prepared to be constructive. Many of these recreational fishermen, they don't have the time or they're not going to travel. There's only eight of these around the country, so if you're in Florida, you may not travel to Texas where the meeting's going to be held to do that. So, it is difficult to get their participation in the process. I don't think it's difficult for them to understand the regulations in the back end, I mean the season's the season. They're used to fishing seasons, they're used to you can only catch two fish a day. That's what they do. And so I don't think we've had a problem there, we have had a problem understanding what their needs and wants are because it's difficult to get this sort of group of independent actors to come together and to say, this is what our needs and wants are.

RS: So, their voice is probably the weakest in the process.

SR: It has been historically. I think it's getting better. They are rising in importance to reflect the importance that they really have. They're getting better advocates for them, you see some national organizations stepping in more strongly than they have in the past. That really is a trend that when I started in the mid-2000s, ten years ago, here, we didn't give as much credit or voice and there really wasn't much opportunity and you really are seeing much more of that now. That's by design—we're encouraging all that.

RS: Can you talk a little bit about the combination of the federal regulations and the state regulations in terms of developing it?

SR: So, we regulate in federal waters which is usually three miles to two hundred miles. The states regulate in-shore. The fish don't care.

RS: [In unison] Don't care [laughter].

SR: They often don't notice. It's very important for us to work with the states. Much of the data-collection system—the states been regulating fish and game well before we started here in the Fisheries Service. They have huge infrastructure to deal with their own fishermen on their docks. It's revenue for them, they tax it. Much of that revenue gets funneled back into the ecosystems. They collect a lot of the data. So, when we talk about, we get dealer reports, we get vessel trip

tickets, vessel reports... a lot of that is actually we get them from the state. They turn it into the state or to some joint federal-state partnership and then we get them.

RS: So, it's moving up eventually to you.

SR: Right. Because that's the point of landing—when they land, they're landing in the state. It is more likely you're going to see the state agent there than us just because of the vast coastline. So, we have to have a partnership. We have to have a partnership on enforcement, we have a partnership on data collection. The regulations need to be coherent. In an ideal world, we have the same fishing season in state waters as in federal waters because otherwise it's an enforcement nightmare—particularly for the recreational anglers. It creates...the fishermen don't understand why there's a difference. It creates well-deserved charges of this is a bureaucratic problem. So, we try very hard to have consistent regulations in state waters and federal waters and that means we work very closely with the states. The states are on all our Fishery Management Councils. So, they have a say in that we try to be not necessarily deferential, but very cooperative with them on what they want to do, what we want to do, and we try to collaborate. It works very well most of the time. There are some times when it doesn't work well. There's some times when the states and the federal government have different views on how these things happen and when that happens—hopefully that won't happen for long, but it creates a lot of animosity, confusion, position-setting...It's not a good situation where we are not in alignment with the states.

RS: What would be an example of that situation developing?

SR: Well, the best example right now.. best.—the most apropos example right now is with red snapper in the Gulf of Mexico. So, red snapper is a fish that is caught predominantly in federal waters. It has historically been an important commercial fish. It was one of the two fish that were black and red fish, that and actual red fish. In federal waters, juvenile red snapper were taken, killed in unsustainable numbers in the shrimp fishery. The shrimp fishery's very important in the Gulf. It has historically not been that significant of a recreational fishery because it was in federal waters—you had to have a boat, you had to go out three to nine miles. When people started getting more boats, the economy improving in the '50s and '60s, and started recreationally fishing out in the federal waters, all the federal recreational fish became important. Red snapper is very tasty. It's a good fish to catch. So, the recreational catch on that has increased. So, a lot of people take red snapper all around the Gulf. We manage it in federal waters because we can—so, it's a single stock what happens in Texas matters to people in Florida and vice versa. We are one of the few forums that you can actually develop those trade-offs. We have within the federal system, we can put limits on the shrimp fishery in order to leave more adults for the recreational fishery and vice versa. But what you saw in the recreational fishery is—historically, for all these various reasons, red snapper was very overfished.

RS: Overfished?

SR: It was overfished, and it was declining and as the federal management became more and more mature—occasionally with help from some litigation from the environmental community—we had to put in more strictures and actually have a recovery plan to rebuild the red snapper

stock. And that recovery plan had been phenomenally successful. So, red snapper now, there are more out there and the quota's higher than at any time in the last, say, thirty years. Right, so it's going really well. It is going actually far *too* well. So, the commercial people are fine. Their quota's going up, they know how to deal with it. The shrimp people are fine, we've put in measures for them, they're okay. It's the recreational people that are suffering because when a stock recovers, it becomes easier to fish. And so you're a recreational fishermen, you go out there, you are more likely to encounter a red snapper than you were before and the red snapper are bigger. They're moving—they're not necessarily moving, the range is expanding so they're coming down the coast of Florida where they're meeting with more recreational fishermen. All good things, but their quota—they're catching their quota a lot faster than they've ever done it before because of all these good things.

RS: So, by 10:00 a.m., they're done [laughter].

SR: So their season has gone for a recovering stock, their season has gone from a year-round season to a nine day season because they can catch it so fast. They're catching more fish in those nine days than they did in the year-round season, but that has not gone over very well. Right, that system...that system...the fishermen don't understand it, it's hard to explain, it's counterintuitive. You're catching more fish, but you're catching them in nine days. Would you rather have a longer season and less fish? Nobody will agree to that. So [unintelligible] in federal waters because we are trying to achieve these Gulf-wide standards. So, Gulf-wide, we cannot allow more than X number of fish to die. That is coming into conflict, and has come into conflict with the states, who are looking off their own coasts and say, well, I see a lot more on our coast than I've seen in thirty years, I'm going to let my season go longer. And so really what happens is if everybody was managed in the same season, you'd have maybe a twenty day season. But you have the State of Florida, Louisiana, Alabama, Texas saying no, we're not doing it, we're just going to open our fishery all summer long. There's not as many fish in state waters, but there's not none. There are fish in state waters, and so what that means is for every day they open their fishery, that federal season gets shorter and shorter. And so you've got like seventy day season in Florida, which means that instead of having a twenty day season in federal waters, you're getting down to a nine day season. This is a situation where we're not in alignment. It is benefiting some people. It is benefiting mainly the people who can—like Florida, where they actually have some fish. It is hurting the people who would fish in federal waters. So, that's what's going on. At this point, the stock is still healthy, is still recovering, but because the states and the federal government have not agreed, you've basically reallocated fishing effort to the near shore folks and taken away from the people who fish further offshore. That has not been a strategic decision, there's no council that said that, it's just each state individually has done that. So, that is going on right now, is an example of where the federal and states have not agreed. The states are well-meaning and we agree on a lot of other things, but there's a lot of politics involved in red snapper, and that's where we are. And so we don't want that to continue, but it's not clear when that's going to stop.

RS: Unintended outcomes.

SR: Yes.

RS: Yeah. You mentioned the environmental community and environmental issues. How does that play into your role here? I'm sure there's a lot of groups, there's a lot of active interest. How does their voice get incorporated?

SR: So, the environmental community has helped push us towards the sustainability position we're in. I'm not sure that the United States would be the leader in global sustainability it is now without the environmental community either pushing legislation or litigation or those kind of things. They tend to file litigation if they don't think we're complying with the law or they think we've cut the corner too much. They've been very vocal advocates with the overall U.S. citizenry, sort of raising the sensitivity to sustainability products, and with Congress. We've got the regulatory structure that we do now because the environmentalists are pushing us. Now, it's not exactly what they wanted, but it is a lot closer to what they wanted than if they hadn't been doing that. So, that's the broad scope of that. And we talk with them all the time on various issues just like we talk the fishing, we talk to all the constituents who come in here. On an issue-specific basis, at least when we're talking about fishing, we haven't talked about protected resources much at all, but if we talk about fishing, they should work through the council process initially. That's where we make these policy-level decisions and that is one of the things I have also seen changing through time. When I started, I started at the Justice Department in '94 and I was doing a lot of litigation and the environmentalists would sit back and not participate in the council process and then they would sue at the back end. And they would win on occasion. They would lose on occasion, but they created a lot of animosity because they didn't participate at all. I'm thinking like the Natural Resources Defense Council in the '90s with the Pacific groundfish fleet, they sued on every action. They didn't go to the council meeting—they sued on every action and they won some, they lost some... a lot of animosity. What started happening, though, is they started going to the council meetings. They started going to the council meetings and started being part of the process as opposed to the litigates at the back end. The number of lawsuits dropped, the number of council actions that actually did what they wanted to do increased. It takes time and effort to do, but once they come into the process, the fishermen, both recreational and commercial fishermen—they're outdoors people, they're out there. They could probably make money doing other things. It's not an easy thing to do. My experience is that they do have an environmental ethic—most of them, not all of them. Most of them do, and they are concerned about having a fishery for their kids' future. So, they are often willing to listen to the same kind of arguments that motivates the environmental community if you don't demonize them and work with the system. And so you've seen that a lot—when I think the Pacific Council has vastly transformed since the '90s because of the participation in the process. And you've got people in Nature Conservancy and Environmental Defense Fund which are out there buying fishing permits. There are fishing permits that environmental organizations now own and fish. They didn't own them and set them aside, they own them and fish them. They're working with the fishermen to fish in what they perceive to be "the right way." They're using that as an example to say, "look, you can still make money and not kill the environment, we want everybody to do that." And that's a very persuasive argument. And so that has really changed out there and in other places around the country, too, where you see the environmental community—they still use litigation, but they are also making an enormous investment in the council process, and that has moved the council in their direction. I think it's a good thing.

RS: What made them decide to move to the front end?

SR: Well, I think that if you sit back and we make a decision and then you sue us and you win, we're going to do what the court said to do and that's all. If you go through the process—and then the next time we'll go through this all again. If you go through the process, though, and you get certain principles established by the council and all that, then you don't have to waste time...I mean, I was a litigator. Litigation is a roll of the dice. You can have the best case and lose, you can have the worst case and win. You can't ever predict what you're going to do, and if you're really interested in the solution, the court should be the last resort because you just don't know what's going to happen. It's much better, you have much more control, if you invest in the front end of the process. And I think they realized that the fishermen are not all evel, that working through the system is not—you've not somehow tarnished yourself by trying to work within the system. And I think that they've started to see results, right. I don't think that...What I'm talking about now is the people that were going through this in the '90s and the 2000s, because I think now the environmentalists are all very sophisticated, they're working through that. The results will look a lot more like what you want to do if you've invested that time up front, and that has been more worthwhile to them than the few victories that they could check off in litigation, which have not been—I don't think that they've been all that enduring. Some of them have, but...So, I think you see that and I think that's a very good thing. The councils are open to those kind of proposals. And then maybe it's because the government has encouraged them just like we do with recreational people to participate. Maybe it's because they were sophisticated on their own. But either way, it's a good development that you seen over time.

RS: Well, you mentioned that we hadn't really talked about protected species.

SR: No, we didn't.

RS: So, say a little bit about that in terms of—well, environmental groups, but also in terms of regulation.

SR: So, the fishing industry is interesting and it is a relatively easy thing to do. From that side of the house, we are monitoring to try to maximize jobs and benefits and minimize environmental harm. But if we fail, it's just less money for fishermen. The consequences of failure are not as significant. The other side is a very much more difficult problem. We're dealing with endangered species that if you fail, they're going to go extinct. There is not recovering from failure, so we have to be a lot more careful. The solutions, though, are also not very apparent. A lot of these species became endangered for over a century of degradation. The habitat has been wrecked. The climate is changing, we overfished them to the near-extinction. If they could have recovered on their own with the easy solutions, they would have done so. So, there are not a lot of easy solutions to these. A lot of the solutions that we've left with by the time we list them, are solutions that are going to cause massive disruption in the community, the economy, something like that. Now, we're facing a lawsuit on the Columbia River. Out there, the communities of Seattle, Portland—they all started, they became big cities in part because there's cheap electricity, funded the aluminum industry, which built the planes and Boeing. That cheap

electricity all came from the hydroelectric dams that we put in there. Those hydroelectric dams, the environmentalists argue, are killing all the salmon. We lost a litigate—a court case earlier this year and the environmentalists were saying the only option they want is all those dams to come out which means that all the electricity that we've been supplying will not come from those dams if that happens. So, where does that come from? When you start talking about that massive a change to protect the salmon, and we've been talking about that for, since the '90s, is a lot of people coming out and it matters a great deal. You can't...you can't lose that debate. You can't allow them to be extinct. So, it's very difficult what we're dealing with—we're dealing with vastly different constituents and it's not just a business proposition with cost and benefits. The Endangered Species Act is a very strict statute at times because we can't allow for extinction. So, that is a different skill set that our folks need. And the environmentalists who are out there, they're arguing for many of the same things we're arguing for. The question is: how disruptive are you going to be? There are some good people that normally would embrace environmental concerns, but because it's going to hit them at home—maybe cause them to move their home—they all of a sudden become antagonistic. So, that's been very difficult. We've made some great progress. Even so, on many of our species—there are still some that we aren't making progress on and that we're concerned about. There are some good success stories, but it takes time. You have to be very patient. You have to do—you didn't get there overnight, you're not going to recover them overnight and that's part of the difficulties of that side of the job. That side of the job is also very difficult. Much more difficult, I think, than the fishing side.

RS: What are some of the skills on board at NOAA that are crucial for dealing with those communities and coming up with the regulatory solutions? Not solutions, perhaps, but...

SR: The difficulty is, we've got to become an expert in so many things. We can't just be an expert in salmon biology, say. Because you may know that for salmon the best thing is an open-running river in a certain temperature range with certain flow rates. That's easy. But we have to have hydrologists to figure out is there a cost-effective way to reconfigure this dam so this animal can get around it? We need to have communication people to talk to local land owners. The kind of coalition builders that we have—that's an important skill, the negotiation skill. Because although we know that the ESA is a hammer, if we bang on too many nails with it, the hammer will get taken away. Congress, which is sitting down there, sometimes has threatened a lot that they will take away the hammer. And so we need to be mindful because often times the first thing that is the best for the salmon will cause such community disruption that maybe the second-best thing for the salmon is still good enough, but you can have much less disruption. Negotiation skills, not just a biologist, is what I need most. That can sort of figure that out, that can work on compromise but still maintain our scientific integrity. Those are the skills that we sort of look for.

RS: And then you have to have them out there in the regions.

SR: You have to have them out there, right. That's why most of my folks are out in the regions, because they've got all these issues they've got to talk to.

RS: Well, let me ask you then about when you hire people that are working for you, what kinds

of skill sets are you looking for?

SR: Well, I don't do much to much direct hire. I supervise the Regional Administrators and the Office Directors, and they do all the hiring.

RS: Well, let me ask you—do you find that working for NOAA and working for the government seems to be a desirable goal for younger people starting out?

SR: It's hard to say what they do. I have a daughter in college, and what I understand about younger people, though, is they have less job loyalty.

RS: Loyalty?

SR: Loyalty, and maybe that's a bad word. Their view is that they will work on a job and they will be happy to pick up and leave the job. I don't think when I started...when I started I thought my first major job, when I took it, that that's what I was going to do forever. I actually left that job and came here, but everything I read—take that for what it's worth—is that the new generation of college graduates believe that they will find a different position. They're more inclined to look for a job—their first job may not be, they're not necessarily thinking, I'm going to sign on with NOAA and that's what I'm going to do for the rest of my life. I'm going to sign on with NOAA and I'm going to try to find the best fit, and if I don't find that fit I'm going somewhere else and they're not that concerned about it. I think I would have been a little bit more concerned than what I understand or view the next generation to be. But that's not a bad thing. So, I think what we have to look for in terms of...I look less, I would encourage less at, are you going to hire someone who's going to be here forever, or are you going to hire somebody that's going to serve the needs that you have today and for the next five years. Beyond that, we'll see.

RS: Is NOAA good at training people, or do they expect them to come in job-ready, as it were?

SR: I think we expect—I think the federal government...it's hard to get a federal position unless you've got certain skills. There are very few sort of entry-level skills that you can have. Very few people—we don't hire people that we expect to train up into the position unless we're talking about training them for management. Right, but if I get a biological opinion writer, I'm going to look for somebody that has those kind of skills because it's so competitive to get those kind of positions. We're not going to hire just a generic good person that we'll train out. I think that's probably true with much of the federal government. We do hire—so, one of the things that it does is that we do get to look at contractors a lot. Because our needs are flexible, we often times will hire contractors instead of a federal employee. Sometimes those contractors will be here for a long time, and so we get to see and actually train up a position. We never hire a contractor thinking they'll become an FT, but often by working with us as a contractor for several years, they actually do become trained and so they're much more competitive for that FT position when that full-time equivalent position becomes open.

RS: Do you find the use of contractors has increased greatly over time?

SR: I don't know that it's increased greatly over time or not. I really don't know. I know that we use them a lot because our needs change, because we are not like a normal business. Normal business, you've got a CEO that manages the budget that can make hiring, firing decisions all within themselves, so you can be much more aligned of a purpose. So, you can hire the people that match your need. We have a split view. Our company is run by somebody who is not part of our company necessarily, by Congress. Congress will say, "this is your new mission." Even within Congress, you can have the authorizer say, "this is your new mission" and the appropriator say, "I don't care—I'm not going to give you any money for that new mission, I want you to do this other thing entirely." We do what the money does, right. So, you have all these disconnects between—even within Congress, between Congress and the administration. More so in the federal government than any other business, you will have an inability for us to actually budget proactively for our needs. We can make a budget proposal that gets wiped out, sequester or something like that. I can probably tell you exactly what it would need to do, all statutory mandates that Congress has given me, but Congress has not given me enough money to do all that. So, because we don't do that, we need more flexibility within our workforce. I cannot sit there and hire a, say, coral biologist right now knowing that I will always need a coral biologist for the next forty years. I might need it now, but maybe I'll do a contractor because next year I might need a monk seal biologist instead. So, I think contracting gives us the ability to be flexible given that we really have all these problems managing strategically for our budget needs. So, we don't know. If I were in a business, I could make a commitment and say, "I'm going to need a coral biologist for forty years, I'm going to hire this person and they will always do that." And I could actually follow through with that. But I may not be able to follow through with that.

RS: I never saw that connection with budget unpredictability.

SR: Oh, that's huge. And we have changing needs, right...Corals is a good example. Ten years ago, we didn't have any corals listed under the ESA, so all of my ESA folks, none of them were coral folks. Two years ago, we listed twenty species of coral. Now we need coral folks and we need them not in five years, but we need them today because once they're listed, immediately you have to do things about them. So, I can shift people around, but that's slow. I can hire contractors, that's a lot faster. So not only do we have the vagaries of Congress, but because the environment is changing, new species are listed, our mandates change over time—particularly with the protected resources. So, it's hard to plan for where the next big need is going to be.

RS: Well, thinking about careers, I wanted to ask you about what inspired you to get into science, and then into the regulatory side?

SR: I was a bad scientist. The second question first, why did I get into regulatory science? Because I was a bad scientist.

RS: Well, I don't have a list of what your BA and MS were—subjects.

SR: Well, okay...I went to University of Georgia to be a forest ecologist scientist and I was

burning down forests and I loved burning down forests. And I was measuring greenhouse gas emissions from forest fires and that was a fantastic job. Running around, setting forest fires on purpose, playing in the blaze...

RS: Dream job for a young person [laughter].

SR: Yeah, you'd set out this sort of research plot, and you'd have to—we would know where our pet copperheads were and had to avoid them, and you'd let them burn. So, that was a great job, but I was a poor field—I was a poor lab technician and I really disliked the fact that in the science field, nothing seemed to me ever to be done. I did my thesis, I would write my thesis and you can always write it better and better and better, and even then it was only a very small piece of a larger puzzle. So, after I got my Masters, I decided that my skill set was better suited to arguing about things than actually doing things, and so I went to law school. I went to law school out in Oregon in the midst of the spotted owl crisis, and I was always kind of an environmental person, but I was never an environmentalist—I was always more of a conservationist to the extent that I thought that you...I was not a preservationist but a conservationist. So, I thought you should be able to use the environment, but use it in a sustainable manner, not preserve it.

RS: Well, that spotted owl issue was huge.

SR: It was huge.

RS: The publicity was enormous.

SR: Right, the publicity was enormous, it was all about timber sales and all that. So, I was in Oregon in law school in Portland at the time and I was working with the U.S. Attorney's Office there while I was in law school and so I got hired by the Justice Department—the wildlife section here—to be on their spotted owl litigation team because I specialized in environmental law, so I was as qualified as I could be to be a forest owl litigator, and I was there for about two weeks on that litigation team and we lost—NMFS lost—a big case on the dams in the Columbia River back in the early '90s. And so I got shifted from the spotted owl team to the NMFS team to do salmon.

RS: So, that was Justice working with NOAA?

SR: Yeah, Justice represents us. So, if we ever get litigated, if we get sued, Justice will be the ones because they have the attorneys.

RS: Oh, okay.

SR: We have some attorneys, but they have the litigators, right. So, they do all the litigations. I get shifted to that, so I started to deal with NMFS cases then mainly because I was on sort of the NMFS docket doing fishing cases. I had all this background in forest law and birds and all that stuff and greenhouse gases and none in fish. That's how I became a fish person, right. So, then I went after I became the Assistant Section Chief and I was basically in charge of the entire NMFS

litigation portfolio. A promotion to be In-House Counsel for NMFS came up, so I took that job, left Justice, came here as the attorney, the Chief Attorney for NMFS—in-house counsel, we didn't litigate, but I was doing that. And then they hired me to be the Deputy when that position came over, and that was about ten years ago.

RS: Deputy...?

SR: The job I'm in now.

RS: Oh, okay. So you moved from—was it like a General Counsel level?

SR: Yes.

RS: To this Deputy Director?

SR: So, I was basically...Right, I was what you could consider is the General Counsel for the Fishery Service, and now I moved up to be the Deputy Director. I think because they couldn't find anybody else to do it, is what I believe. But in any event, they selected me. They wanted me to do it, so I did it.

RS: So you feel like a legal-slash-litigation background is important in this role?

SR: Well, it's not necessarily critical. There are people who have done the job—I had to act inside the agency for about two years, the guy I had acting for me did a fine job, he's an economist. I think Rebecca, before me, was an economist. I don't think you have to have a legal background. Being able to critically think about things logically is very important. Being able to negotiate is important. I think it has helped me because that's been my biggest asset, is to be able to do that, but other people have other skills and you can do what you want. What I rely on is my ability to look at that kind of things logically, and to deal with that, but other people do perfectly fine doing it with other kinds of skill sets.

RS: Well, I'm sure that background is helpful, though.

SR: It is helpful to me.

RS: Yeah...yeah. So, I wanted to ask you about when you came into this position, what was the regulatory focus and has that changed?

SR: So, when I came into the position it was in 2006. At the time, we were about ready to issue the last iteration of the statutory amendment so under the Magnuson Act. Let me talk about the fisheries part of it first. In 2006, we were struggling with ending overfishing.

RS: With what?

SR: With ending overfishing in U.S. fisheries.

RS: Overfishing.

SR: We did a good job about Americanizing the fisheries, but we'd overcapitalized them so there was too much fishing effort. So, we did two things for the first five or six years I was here. We changed the Magnuson Act— we --Congress did it, but we worked with Congress to do it, to put in much more strict requirements about ending overfishing. It was no longer a theoretical target, it was a mandate. And then—so that passed in 2007—then from 2007 to 2011 we actually did it. We imposed regulatory control effort, regulatory control that actually ended overfishing that we knew about. Sometimes it still crops up and happens, but it ended immediately because the fish stock is cyclical so you never can tell. But we ended all planned overfishing. That was a huge change. Now, on the fisheries side, we are—it's much more about tweaking the regulations within that construct and looking for opportunities. On the protected resources side, we had some success stories—we're all about just maintaining survival. So, we were ending what I think to be the sort of the great rush to list all of the marine species that needed to be listed. We were starting to rebuild. So, there was a lot of biological opinions which are the regulatory documents, listings. I think we're transitioning out of that now. We're focusing on recovery, right. I think we've got the base of what we need to do. We've in many areas solidified the species, but now we need to focus on recovery. I spend a lot more of my time now looking at ways to recover species and less time on putting them on the list and just trying to make sure they don't go extinct. The other big part, which we haven't talked about at all again, is habitat. That's my big third area. When I started here, we have a huge program in which we try to preserve habitat either for our fisheries or for our species that depend on it. At the time, the program was very disjointed. We were doing a lot of small-scale things because people wanted—because we had willing partners. In my view, we weren't really achieving what a federal agency could do. You were making living shorelines that may be as big as this room, as opposed to fixing the watershed problem. No one can fix the watershed problem if we can't fix it. We are the only ones that are of a size and scope enough, the federal agencies, to actually work on these big picture things. So, I really think the habitat program has transformed since I've been here from that kind of piecemeal habitat project to actually doing much bigger projects for a much bigger benefit.

RS: So, give me an example of a big project.

SR: Well, there are a couple of big projects. One is to look at the Russian River watershed in California. There are endangered species in it. What we have done there is worked with landowners up and down the river as opposed to these isolated things. To have a coordinated watershed plan to restore the *entire* river system from the delta—from the mouth of it where it goes into the ocean, way up until the biggest impassable barrier. So, that has taken us...we've had to work with NOS, with OAR, with other elements of NOAA. One of the biggest things that we've done there is—because we're not focusing on trying to restore this little piece or this little creek anymore. We're looking big picture. We're able to work with OAR and the Weather Service to predict what's called "atmospheric rivers" coming in. These big troughs of precipitation that come in. If we can predict those, we can talk to the Corps of Engineers about how much water to leave in the reservoir or to release for salmon. They were just being very

conservative and reflexive and the reservoir didn't have much water in it because they had to be able to catch this atmospheric river whenever it occurred. By connecting those two, the Corps can now tailor their flood control to the atmospheric river and we can have extra water for salmon. That one has a lot of on the ground pieces, but there are—but they're all connected in ways which we weren't even thinking of. On the other hand, compare that to what's going on in the Penobscot River in Maine. There, we've got Atlantic salmon, which is one of our critical endangered species—could not get past, I think, four huge dams in the river. We were a significant leader of the coalition that tore all those dams out. So, we took out three—we took out two big dams and put fish passages in two other ones so that now salmon are going to come back to that, and so rather than looking at these little small-scale weirs, which they were looking at, we're looking at the whole river and bringing everything to bear. What that means is that there are other positions in Maine, say, or California which we basically can't get to yet. But we weren't really moving the ball in terms of restoration by looking at these small things. It was only when we looked big, when we brought our abilities as a federal agency to coordinate on the watershed scale that we actually have seen some change.

RS: What would you attribute the change to, moving toward that big vision?

SR: Well, okay. So, I think it's two things which kind of coincided. One was the... it was sort of a negative reaction. Because we were doing all these small-scale things, people were wondering why we were doing habitat at all because we couldn't articulate that. We'd lost the connection between our progress and our mission. We were doing things like building bird sanctuaries—which is all well and good, but it's not the Fisheries Service's job. And so in budget cuts, people threatened to cut it out. But the other thing on the other side is we—one of our past administrators was Eric Schwaab from Maryland.

RS: What was his first name?

SR: Eric Schwaab.

RS: Eric Schwaab.

SR: And his view, before he came here, was that ending overfishing was really the big task of the 1900s, early 2000s, but that the task moving forward is creating habitats for fish production. We've done basically all we can do to the fishermen and still let them fish. If we want more fish in the ocean, we have to improve the habitat. And so he really wanted us to focus on big, broader things for habitat, and this is the kind of program mindset he brought to it. So, those two things happened at about the same time. One is our habitat program came under fire for all these external purposes because we kind of lost our way, and we had a brand-new administrator who thought habitat was one of the most important things we could do. And so, I think that was very transformative.

RS: Have you seen that during your career, where a lot depends on the individual vision of somebody high up?

SR: Oh, absolutely. Yeah. I think it does. It doesn't mean it had to be high up. What I've seen is you're not going to get anything done unless one or more people really believes and wants it to happen. If you can't get somebody who actually can effectuate that change, want it to happen—it won't happen. But I have seen massive change no matter whether you or the Assistant Administrator or the head of NMFS or some biologists who just takes it on their own initiative to try to build a coalition, to design it—you can have change in either direction, but it does take that. Clearly the Assistant Administrator by emphasizing certain things and deemphasizing others can set us on a path, but they're not the only ones. I think I've done that, I think Richard has done that, our Chief Scientist...everybody can do that at every level. If your sphere of influence is smaller...

RS: Well, I wanted to go back to the issue of Congress. So, how do you—do you testify before Congress? --

SR: Oh yes

RS: -- How do you move these regulatory issues to their attention?

SR: I don't testify—well, so Congress does not approve our regulations. Congress sets the scope within which I can work ahead of time. They will be as specific or not, but if they're vague or if they leave the details to us as they almost always do, then we'll do the regulations, we won't have to go to Congress. If Congress doesn't like the direction we're going, they will call and ask us to explain—and they may change the law, but they rarely will not weigh in officially on a regulation. Congress is an important partner. We effectuate Congress's laws. I can advise them ultimately on what the legal policy through the President, but if Congress says go this other direction, that's the direction we're going to go. So, it's important to work with Congress—I spend a lot of my time talking to congress people or their staffs and educating them on various issues. A lot of times what you'll get is somebody who will be concerned and will call their congressman and not call us, so it's important that we talk to them and so that they know. So we spend a lot of time educating them. I've been down to the Hill—I've got like three Hill calls this week so far, and I've got another one tomorrow talking about various things, explaining what we've done, explaining an issue that we may agree is an issue and Congress wants to know about it. Occasionally I will go to testify in front of one of our committees on various things. They will be interested in potential legislation, they will advise to testify...it often is not—when I go to testify, it often has very little to do about whatever they said it was going to be about. So, they'll call us to testify because we're the agency, and they want the agency's opinion, so we'll give the opinion and then they want to go through the litany of whatever problems that they've had with us on any other issue.

RS: That must be hard to prepare for [laughter].

SR: It is a little hard to prepare because it's so open-ended as to what they can ask. They have the right to ask all of that, they're the congress people. What the challenge is we would like to be responsible, so we try very hard to be responsible at the moment, but if you can't, you can't. And sometimes I just have to take—you know, they've got a bigger issue within administration and

I'm just there to take the heat. And that happens a lot.

RS: I see that on C-SPAN all the time [laughter].

SR: Yeah, you see that. Yeah, right.

RS: You've had a lengthy career now, thinking back, talking about Congress—how would you characterize the relationship between Congress and NOAA over time, particularly in terms of interest in marine science, in habitat, environment, endangered species?

SR: Well, I... When I started, it was right at the end of Hollings from South Carolina. He was a huge marine supporter. We still had Inouye, we still had Ted Stevens. We didn't have Magnuson anymore, but so there was... it was really, in my view, the end of an era in terms of some of these big historical people who have really focused a lot on fishing issues or marine or ocean issues. At least for in terms of the fishing issues, there are still—there are a number of Congressional people that pay attention and care about that. It remains to be seen whether they're going to have that same kind of legacy that those folks did. And it comes and goes. Sometimes you see somebody up and coming who will have a legacy, and they won't get reelected. But what you often see is that many of the congressmen, they care about so many different things that you're never going to get—I don't know that you ever did—get one person who said "I am the champion for this." They are a champion for a lot of things, and their positions are always nuanced. They are for or against different things, and they may not... So, what I see is I don't see today the same kind of singular focus that I saw when I first started. That's not necessarily a bad thing. Maybe that's a sign that we've actually got it kind of right, and they can focus on other things, and that we don't need so much oversight. So, I don't necessarily view it as a bad thing, but we don't see that. Other parts of NOAA I can't really talk about, but I do see that through lessening of that sort of direct, more laser focus on us that we've had in the past. Which hopefully means they think we're doing okay.

RS: I just wondered because of you're having to go to Congress, and you know...

SR: Oh, they're still interested. They're still interested, but they seem to be interested. Right now, so we have—a good example is we usually, or Congress usually, I shouldn't say we usually, Congress usually had reauthorized the fishing statute once every ten years. So, the last one was in 2007, so the next one would be 2017 so they're coming close. There are some bills in there, but in 2007, Senator Stevens and Senator Inouye said—and Representative Young from Alaska—said this is going to happen, and it happened. Now, I'm not sure that Congress is going to do anything. It's not the same sort of emphasis on that. One interpretation—my interpretation is Congress is not nearly as concerned as they have been in the past. They don't feel motivated because there's not that big of a problem that they think they need to step in. There are minor things that they need to do here and there, but the fundamental structure is similar. I think that that's why you haven't seen as much oversight of us. At least, I'm going to keep telling myself that.

RS: [Laughter] Well, I like it.

SR: Yeah, it's good for me.

RS: Let me ask you to talk about, also thinking back on your career, a project or an issue you were involved in that you find particularly memorable or that you're proud of.

SR: So, one of the things that I am most proud of is my work with the North Atlantic right whales. So, this started when I was in the Justice Department. The right whales, they live in the Atlantic and they're called the right whales because they were the "right" whales to kill.

RS: Oh.

SR: They hung out near boats, they weren't scared of boats, and they floated. And so when the whaling industry wanted to kill the whales, they decimated the right whale population.

RS: What period did that occur?

SR: That occurred in the late 1800s, early 1900s. The whaling industry in the United States has largely been banned since the '50s—even before then it was questionable whether it was viable or not. So, there hasn't been any commercial whaling of right whales for a long time, but they still have had a lot of trouble. When I started dealing with right whales in the Justice Department, the best estimate was that there were only 297 of them left...in the world. And they all went up through Massachusetts into Boston. We didn't know where they went after that. But NMFS—and I was at Justice at the time—was saying that the loss of even one was going to jeopardize the population. And so I got involved because we were at that point being sued by a very interesting character named Max Strahan who was, for all I could tell, homeless. He would walk around but he really, absolutely cared about the whales. What he would do is, he would go get people to help him until he wore out his welcome by being verbally abusive and all that kind of stuff—he had some other issues. But he sued a lot, and he won—pro se—a lot. When I got started, he had just got through with an initial victory against the Coast Guard because the Coast Guard had run over some whales in the federal water by operating the boats too fast, and we couldn't afford to lose them. And so he was asking for all this relief from the Coast Guard. That's when I got on the case. So, we basically already lost and we were just trying to design the injunctive relief. We worked with the Coast Guard and the Coast Guard put in a number of very good measures that were designed to minimize their impact on whales so that they had to go slow when they were around the whales, they had to have a monitor and all that. It became an issue for the Coast Guard, and it was a court martial able offense, then, to hit a whale which --

RS: You mean it became an issue for the Coast Guard because it was too onerous for them?

SR: --No, it became a good issue because it became something that they were concerned about, right. So, now the captains—working with the military, once it becomes sort of the military doctrine, they will follow it. They are really good about that because they don't want to be court martialled and all that stuff. So, the Coast Guard really became a really good actor through that, and Strahan never got tired—he kept suing. But basically the Coast Guard had done everything

that it could do. NMFS did a lot of things that it could do to sort of protect the whales. So, I come over here and I still am working with the whales, and the two things that are at issue in the Bush administration, the two things that are hurting the whales are entanglement in fishing gear and getting hit by ships. Not the Coast Guard ships anymore, but other ships. We worked first on a rule with the lobster fishermen about breakaway lines so that they wouldn't entangle the whales, and it was hugely expensive in the State of Maine and I had to go deal with the economists at the White House and with all the Congressional folks about getting this rule in place and it was really traumatic. But we did it, and the number of whale entanglements has declined. And the other aspect was the ship speed rule, and this is a long way of getting to what I'm really proud about the most, which is the ship speed rule where we mandated that in certain areas at certain times, these big huge tankers had to go 10 knots or less because, at that point, if they struck a whale, the whale might live and the whale has a better chance to get out of the way. And it cost hundreds of millions of dollars in terms of delayed arrival dates for the ships. We had to go to the White House and Dick Cheney was adamantly opposed to this rule. We negotiated, we pulled out all the stops—we tried to find every friend we could have in the government to try to convince the White House to let us put this rule in, and in the end of the day we won. So, we beat Dick Cheney and put this rule in place. As of the last census, the whale numbers were—well, maybe the immediately preceding one—the whale numbers were up past 600. So, the whales have largely increased because of these two measures and other things that we've done. There's a lot of things a lot of people take credit for, but I believe—this is one of the things where I've actually said that I worked really hard, I fought the evil empire in terms of Dick Cheney, and we won and we put this thing in place and it was costly—it was not anywhere near as costly as we thought it was going to be, but it really has achieved some benefit in terms of whale recovery. Those whales were going to become extinct and that would have been a huge loss. So, that was difficult and it took years and years and years to get those two things. And we still continue to do whale recovery efforts, but that's what I'm most proud of here.

RS: Well, I would say congratulations. That's...

SR: They're not out of the woods yet.

RS: No, but—

SR: You're not going to reverse decades of whale harvest in a few years.

RS: Oh yeah, yeah I mean going back to what, the 1820s and 30s? I wanted to ask you something else, and that was the new President's task force on illegal, unregulated, or unreported fishing. Where did that come from and how do you see that going?

SR: Where'd it come from is a lot of things. It's a little unclear where it came from. We have been opposed to illegal, unregulated, unreported fishing for a long time internationally. We struggle to try to put in regulations to make practices illegal. We're concerned about that—we're concerned that our fishermen who have to make so many sacrifices to have legal sustainable fishing, they sell their same product on the store shelf against compared to some other one that was illegally caught but now, because it was illegally caught, it's cheaper. So, we've been very

concerned about it and we've done a number of things to try to put it in place. What we saw is a number of factors... the environmental community coming together, seek interest from the State Department and others wanted to really elevate that beyond a NMFS issue to a Presidential issue. And they convinced the President to do it. So, you had the White House and they wanted to do it so they had this task force. The task force was doing the kind of things that we wanted to do all along. For us, much of that—we work really hard to provide all the data and to actually sort of align some of the statements, the positions with reality, that's what we do a lot. People think, isn't this a great idea? We're like well, maybe you should think about this part of it. What came out was something that we thought was doable and really will put in—at least from our part—a unique new system of seafood traceability which will be a great tool for IUU fishing. I think a number of the environmental communities want to attack fraud, as well. Fraud, which is—every year they go to a number of restaurants and say this fish is not what it says it was because they do genetic testing. That's fraud, it's consumer fraud. If 7/11 sells you a Slurpee and it's not a Slurpee, that's fraud. The way that you deal with it—that's not a federal crime, though, likely. It is a state and local crime and the environmentalists would like it to be a federal crime. We have task forces to do these kind of things. I mean, there's other kinds of things, state and local things, the federal government is concerned about at a time. But the difficulty has been separating out the fraud aspects which we really as the Fisheries Service only have a peripheral relationship to, compared to the unsustainable fishing practices which is right within our wheelhouse. So, we're doing these traceability things, we are trying to work with state and local governments about fraud, but that's where the expectation setting comes in. Fraud is—at some point, the federal government can be concerned, but it is a state and local issue. Unless they're doing fraud in Customs, but much of it happens in a restaurant. Right, the restaurant will buy a box of Asian catfish and they'll sell it to you as salmon—probably not salmon, but something like that.

RS: Well, the traceability effort—is that, now that that's started here, is that something that's already been going on in other countries? Didn't you mention the EU?

SR: Europe has had its' traceability requirement for imports for a while...less than a decade, I'm not exactly sure when it came in. The United States gets, in some manner, a free pass in Europe because our system is so good that Europe relies on the United States statement that it is sustainable as opposed to having to trace it. I don't think any other country has that same kind of entryway into Europe. But most of our major fish producers want to go through Europe, and so they already have a traceability system. Almost every major producer—when I was talking with our fishing industry, many of them back when we were thinking about this—they would show me their inventory control system. They keep track of their product, they know where it came from and where it goes. And for U.S. domestic fish—by regulation because some of the other monitoring things we talked about—we know, the government knows. So, traceability for U.S. product is not that big of a deal. We have it, our companies have it, most of these big international players have it. Some of our imports, particularly where they are, at some point, relying on artisanal fishermen, that are going out in canoes and doing things, it gets difficult. Sometimes it's difficult to trace product where it gets intermixed in, like tuna salad, as opposed to a tuna. But it is not nearly as difficult as you might think and it is much more prevalent than you might think. There's actually a bioterrorism act that the Food and Drug Administration administers which says for any food product that is imported in the United States, imported into

the United States or sold in the United States, you have to in some ability be able to trace from the consumer to the farm that the thing was grown in—it applies to fish, it applies to lettuce, apples... So that they can, if there's a health outbreak, they can go back to the farm and look at that. That's a traceability system. It's not as easy as some of the things we're talking about, but they have to be able to trace in some pattern. And so that's been in place for several years. So, it is not nearly as new as people think. It's not as sophisticated as what we're about to impose, it is directed at sustainability, is what we're about to do. But it is achievable, I think. For some of the reasons we just talked about.

RS: Particularly it sounds like it's another piece in the sustainability effort.

SR: Oh, I think it very much will be. There are always talks about how many billions of dollars in illegal trade are coming through, and it is—even within the U.S., it is sometimes difficult to get the fishermen to comply if they know that they're going to get out-competed. They don't mind regulations nearly as much if they're perceived to be fair. If everybody's doing the same thing, that's fine. Fishing's no different than anything else, I think. But if they perceive they are having to pay the price and other people can get away with it, that really undermines the credibility of the system, and so this really helps us with that. It will help us with—we are concerned about global sustainability of fish products. There is so many interconnections that we don't understand. We can't just say, if they overfish the Mediterranean, we're fine, we're not going to worry about it. I think we know now that things are a lot more complicated than that.

RS: Well, I've asked you a lot of questions and we're almost out of time. Is there anything that we haven't touched on that you would like to have included? Or any other...

SR: The one thing we haven't touched on that is another big important piece of mine—I'll try to do it in the few minutes remaining—is aquaculture. So, that is the fourth big office area that I deal with, although it is small because we don't regulate a lot of aquaculture. The dynamic in the United States is that we know from the Food and Drug Administration, Health and Human Services, that we need to eat a certain number of seafood meals a week for our own health. They recently increased that up to two from one. And if you are a pregnant mother or something, it can provide enormous health benefits and all that. So, part of my job is to make sure that there are enough fish for the U.S. populous to eat. The U.S. populous is growing, so the number of fish that we need to eat over the next thirty years is going to increase rapidly. Right now, we import 90% of the seafood that we eat—a lot of that is U.S. product that has gone elsewhere for processing and comes back, so it's not quite as bad as it seems. But we do import a lot, and half of that is aquaculture—more than half is some aquaculture product. That is something that 20 years ago wasn't the case, right. A lot more of it was wild fish. Now, aquaculture can be perfectly healthy and some environmental parameters can be controlled and it can be more sustainable even than wild ocean fishing. It also cannot. It depends on how you do it—it could be very destructive, it can be very unhealthy depending on what you do with it. So, we're very concerned about that, but right now, almost all that aquaculture is foreign. There's very little in the United States. That's an enormous missed opportunity and it's a security concern for us because we need to be able to domestically supply our own people with our own fish that is caught under conditions that we understand. So, we need to both—I think what we're going to

see in the next decade or two, and we're already seeing it, basically, in other countries, is an increase in aquaculture production to be able to feed our own people with marine aquaculture, not necessarily catfish. There's some of that can be done on land, some of that's going to be done in oceans. That is the real growth area that I see us moving into. We've got a few plans, it's really in its' infancy in the United States. We doubled the aquaculture production on the East Coast last year, but we're talking about really small numbers—that's easy to do.

RS: Geographically, where do you see it growing?

SR: Well, it's growing in Chesapeake Bay right now. It's going to go to the Gulf of Mexico because it's shallow, so you have not as many issues. I think Hawaii's very supportive of aquaculture, so you'll see it there. I think you might see it in California. You will never see it in Alaska because they are opposed—it's a state by state kind of regional issue. And it'll depend on different species. We're seeing a lot of shellfish culture everywhere. When you're actually talking about fish, it's a little bit different, that's lagging behind. So, I think that's the big challenge: how do we feed our people? We're not going to be able to increase wild production, people going out on boats in the ocean fishing—that's not going to supply the fish that we or the globe needs. I mean Asia...they eat more fish than we do and their population is growing even bigger than ours, so they're going to take more of the production and go there. So, how are we going to feed our people? We need to invest in aquaculture. What is our role?

RS: That's what I was going to say. What does NOAA do to stimulate that?

SR: Right, so what is our role? We have a couple roles. One is we've gotten away from that industry stimulation. I talked at the very beginning about how we used to have a program that was trying to create an American fishing industry. We don't have that program anymore. Do we need a program to create an American aquaculture industry? We don't have that right now, but we're talking about those kinds of things. What can we do? We probably will not create the same kind of program, but we're trying to invest, we're trying to work on the regulatory structure so that you can actually build these facilities in federal waters. If it's the state waters, we have less of a role there. We're trying to work with other agencies to support aquaculture production with the Corps, particularly you need a Corps permit for almost anything.

RS: Corps of Engineers?

SR: Corps of Engineers. So, we're working with them to try to create a more welcoming environment for aquaculture facilities because we do see it as a need that's going to have to be filled. We're not exactly advocates, because that's not our role to be an advocate. We are a government agency and we have concerns, right. We believe that well-done aquaculture is necessary, but there's plenty of examples historically, less now, but historically of unwell-done aquaculture which has been bad. So, we're an advocate for sustainable aquaculture—not just any aquaculture. We have some science and technology support roles, some tech transfer role that we're doing, we're working on regulatory...but were not marketing U.S. aquaculture. I don't see us doing that.

RS: Okay. Alright, so I need to take a couple pictures. Let me turn this off.

<i>NATIONAL MARINE FISHERIES SERVICE POLICY 04-114</i> Effective on: September 5, 2019	
To be reviewed on: September 2024	
Science and Technology	
Implementing Recreational Fishery Catch and Effort Survey Design Changes	
NOTICE: This publication is available at: https://www.fisheries.noaa.gov/national/laws-and-policies/policy-directive-system	
Author name: D. Van Voorhees Office: Science and Technology	Certified by: David Detlor Office: Science and Technology
Type of Issuance: Revision, September 2019	
SUMMARY OF REVISIONS: Expanded to assure that new and modified recreational catch and effort survey designs are capable of producing scientifically sound data.	

I. Introduction

When Congress reauthorized the Magnuson-Stevens Fishery Conservation and Management Act (MSA; 16 U.S.C. § 1801 *et seq.*) in 2006, it added Section 401(g), which requires that the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service (NMFS) establish a program to improve the quality and accuracy of information generated by the Marine Recreational Fishery Statistics Survey (MRFSS). *See* 16 U.S.C. § 1881(g)(3). It further required that the program take into consideration, and, to the extent feasible, implement the recommendations of the National Research Council’s 2006 report, *Review of Recreational Fisheries Survey Methods*. Accordingly, the Marine Recreational Information Program (MRIP) has been developing new and modified survey designs for tracking recreational fishing effort and catch and to provide more accurate and timely statistical estimates of cumulative totals throughout each fishing season.

Decisions to substitute recreational catch and effort data, derived from new and improved survey methods developed through MRIP into NMFS legacy databases derived from previously conducted survey designs, used for fisheries stock assessments and management decisions must be based on robust determinations that the new designs are scientifically sound. Further, measures must be taken to enable incorporation of estimates derived via new methods into existing time series of recreational catch with minimal disruption. Toward that end, MRIP established a rigorous process to certify new and legacy recreational catch and effort survey designs and estimation methods. A critical component of the certification process is the independent peer review of survey and estimation methods proposed for certification. Once certified, the methodology for a full survey or a component thereof, is eligible for implementation and potential MRIP funding, subject to funds availability. In general, MRIP only supports surveys (via funding, staff, etc.) that apply methods that have been MRIP

certified. However, MRIP may support continuing use of legacy survey methods, i.e. those that have been in use to provide recreational catch statistics, that are not certified, provided: (1) the data produced by such surveys has been utilized in peer reviewed applications, such as NMFS fisheries stock assessments; (2) an MRIP Regional Implementation Plan identifies the need to continue such survey; and (3) a plan to certify those survey methods is in place and is being followed.

1.1: Transition

Once new or improved certified survey designs are implemented, the designs may result in changes to catch estimates that render legacy estimates, derived from earlier survey designs, inconsistent with (i.e., higher or lower than) the estimates made with the new design. In such cases, NMFS must appropriately transition from current to new survey methods. The difference in catch estimates resulting from use of modified data collection designs must be accounted for prior to using the results of the new methods in catch time series for stock assessments or for management accounting. This policy therefore directs that a Transition Plan must be prepared for the implementation of any modifications to survey sampling or estimation methods that may result in consistently higher or lower statistical estimates of catch or effort as compared to estimates based on replaced or modified survey and estimation designs. A Transition Plan must outline the steps and activities needed to ensure a smooth transition to the new survey method, while taking into account the necessary time and effort to incorporate new estimates into the science and management processes. Until such a plan is approved and implemented, the statistics resulting from use of the modified methods should not be treated as the best scientific information available for use in fishery stock assessments and management actions. To coordinate development of such Transition Plans, an MRIP Transition Team has been established, co-led by the NMFS Office of Science and Technology and the Office of Sustainable Fisheries.

1.2: Certification

To be considered for MRIP certification, recreational catch and effort survey design and estimation method components must fall into one of three categories:

- 1) New or replacement designs and methods;
- 2) Modifications or recommended improvements to existing designs and methods; or
- 3) Existing survey designs and estimation methods.

Moreover, to be eligible for funding consideration, certified survey components must be relevant to marine recreational fisheries data collection within the scope of MRIP, provide data currently being provided by MRIP, and meet standards of MRIP survey components for statistical robustness available at (add correct web link when final) .

To be considered MRIP certified, surveys or survey components must:

- 1) Adhere to applicable MRIP standards and procedures including: the MRIP Program Management, Policy and Procedural Manual: MRIP Data Standards; Recreational Fishing Survey Standards and Best Practices; other MRIP standards as applicable.

- 2) Be peer reviewed and supported by the results of the review;
- 3) Be recommended for approval by the MRIP Program Management Team (PMT) and other MRIP teams assigned by the PMT to review the survey;
- 4) Be approved by the MRIP Executive Steering Committee; and
- 5) Be approved by NMFS Leadership.

II. Objective

The objectives of this Policy are to assure that new and improved recreational catch and effort survey designs implemented by NMFS or its partners provide data that: meet the requirements of the Information Quality Act; are eligible to be accepted as Best Scientific Information Available (BSIA) under the MSA; and can be efficiently incorporated into time series of catch data for fisheries stock assessments and management decision-making. Specifically:

2.1: Establish that only survey designs that have been certified, or are on a path to certification, hereunder are eligible for technical and funding support for implementation by NMFS. It is the further objective of this Policy to require that certified survey designs provide only those recreational catch and effort statistics that fulfill the requirements of 50 CFR §600.315, and will therefore be eligible to be considered as BSIA in the assessment and management of the Nation's marine fisheries, taking into consideration other relevant factors that may determine what constitutes BSIA.

2.2: Ensure the comparability of long-term time series of recreational fishery catch and effort statistics as new, more statistically valid survey designs are implemented to replace legacy survey designs, and to ensure the efficient integration of appropriately calibrated statistics into fishery science products and fishery management measures.

III. Authorities and Responsibilities

This policy directive establishes the following authorities and responsibilities.

3.1 The Office of Science and Technology (ST) is responsible for executing the certification process and for ensuring that only surveys operated in compliance with this Policy are eligible to receive funding and technical support from programs funded through the Fisheries Statistics Division of the Office of Science and Technology. ST is responsible for coordinating all scientific reviews and analyses relating to MRIP surveys under consideration for certification.

3.2 The NMFS Chief Science Advisor & Director of Scientific Programs is responsible for final approval of all certified survey designs.

3.3 ST and the Office of Sustainable Fisheries (SF) co-lead the Transition Team.

- ST is responsible for ensuring Transition Plans are prepared whenever new or modified recreational fishing catch or effort survey designs are deemed appropriate for implementation but produce statistical estimates that are consistently higher or lower than

legacy survey design estimates. ST coordinates all aspects of science input to Transition Plans.

- SF coordinates all aspects of fishery management input to Transition Plans.


IV. Measuring Effectiveness

The effectiveness of this Policy Directive can be assessed through monitoring to assure that:

- Surveys that are provided with funding and technical support are certified or are continuing legacy surveys that meet the requirements stated in Section I above; and
- Catch statistics provided by certified survey designs are eligible for use as BSIA in peer-reviewed fisheries stock assessments.

V. References

Procedure 04-114-01 Guidance and Procedures for the Transition Process for Modification of Recreational Fishing Catch and Effort Methods is being re-issued concurrently with this revised policy to ensure effective implementation. Procedure 04-114-02 for Certification of Recreational Fisheries Catch and Effort Survey and Estimation Methods is being issued concurrently with this revised policy. Other procedural directives will be issued to implement this policy as needed.

Signed  09/05/2019
Chris Oliver Date
Assistant Administrator for Fisheries



Gulf State Recreational Catch and Effort Surveys Transition Workshop

This workshop will allow NOAA Fisheries, its partners, and a team of independent experts to make the decisions necessary to complete a Transition Plan for the use of state recreational fishing data in the federal stock assessment and management process.

Event Info

Date

February 23, 2022 - February 25, 2022

Key Documents

- > Draft Agenda
- > Transition Timeline Milestones
- > Statement of Task for Survey Research Roadmap
- > Terms of Reference for Independent Peer Review

About

This virtual workshop will serve as a forum for NOAA Fisheries, its state and regional partners, and a team of independent experts to agree on the elements of a Gulf State Recreational Catch and Effort Estimation Surveys Transition Plan. When executed, this plan will allow for the full use of state recreational fishing data—including recreational catch and effort estimates produced by Texas' Coastal Creel Surveys, Louisiana's LA Creel, Mississippi's Tails n' Scales, Alabama's Snapper Check, and Florida's State Reef Fish Survey—in NOAA Fisheries' stock assessment and management processes. The Transition Plan will include:

- A plan for storing state data;
- Calibration approaches to support the near-term and long-term use of state data; and
- A collaborative survey research roadmap that will evaluate the drivers of differences between survey estimates and lead to improvements to all of the state and federal surveys in the region.

The need for a Transition Plan is outlined in NOAA Fisheries' [Policy Directive for Implementing Recreational Fishery Catch and Effort Survey Design Changes \(PDF, 4 pages\)](#). The development of a research plan is an imperative step toward a directive NOAA Fisheries received from the House Committee on Appropriations in 2021 to "contract with a non-governmental entity with expertise in statistics and fisheries-dependent data collection to provide the following:

- An independent assessment of the accuracy and precision of both the Federal and State recreational catch data programs in the Gulf of Mexico;
- Recommended improvements to be made to the Federal and State recreational catch data programs in the Gulf of Mexico to improve accuracy and precision; and
- An independent assessment, based on the results of the two prior items, of how best to calibrate the Federal and State recreational catch data programs in the Gulf of Mexico to a common currency."

Anticipated Outcomes

- **Establish a research plan to improve our understanding of the differences between state and federal estimates of recreational catch.** In response to a 2021 Congressional directive, this plan will include an independent peer review of each of the recreational fishing surveys

administered in the Gulf of Mexico. Over the long term, research may identify design changes that would improve survey accuracy and minimize differences in estimates.

- **Select an approach that will allow state data to be used in federal stock assessments and management decisions.** Approaches will consider the data requirements of National Standard 2, and may allow for the calibration of all available estimates into a common currency, the incorporation of all available data into stock assessment models, and/or the integration of separate model outputs into stock assessment results. Different calibration approaches may be selected for near-term and long-term use.
- **Establish the data input, storage, and output requirements of a regional state survey database.** Assign roles and responsibilities to initiate its development.
- **Agree on the goals and components of a communications plan** to maintain transparency throughout the transition process.



Each of the decision points listed above will be documented in the Gulf State Recreational Catch and Effort Estimation Surveys Transition Plan. This plan will be considered a living document.

Participants

- Office of Science and Technology
- Office of Sustainable Fisheries
- Southeast Regional Office
- Southeast Fisheries Science Center
- Gulf States Marine Fisheries Commission
- Texas Parks and Wildlife Department
- Louisiana Department of Wildlife and Fisheries
- Mississippi Department of Marine Resources
- Alabama Department of Conservation and Natural Resources
- Florida Fish and Wildlife Conservation Commission
- Gulf of Mexico Regional Fishery Management Council
- Statistical Consultants

Background

NOAA Fisheries has convened five previous workshops to support the development and implementation of Gulf state recreational fishing surveys, bringing state, regional, and federal partners together with independent experts in survey statistics.

- [Red Snapper Recreational Catch Accounting Methods Workshop I](#) (PDF, 5 pages), [Workshop II](#) (PDF, 7 pages), and [Workshop III](#) (PDF, 7 pages) focused on coordinating between state, regional, and federal partners; meeting science and management needs; and integrating new state-run surveys into the Marine Recreational Information Program.
- [Workshop IV](#)  explored how a comparable time series of catch estimates could be maintained within and across states using different data collection designs.
- [Workshop V](#)  invited Louisiana, Mississippi, Alabama, and Florida to present simple ratio-based calibrations to convert between state and federal catch estimates.

NOAA Fisheries certified the LA Creel, Tails n' Scales, Snapper Check, and State Reef Fish Survey designs between 2017 and 2019. State estimates will be fully incorporated into federal stock assessments or management decisions once we have completed and executed the Transition Plan described above. Indeed, [certification](#) means these state survey designs have achieved statistical rigor and passed a peer review. It is the transition process that determines how differences between state and federal estimates will be examined and accounted for, and how state and federal estimates will be [calibrated into a common currency](#) to allow for comparability across the region's data collection programs.

Last updated by Office of Science and Technology on 02/17/2022

Gulf State Surveys Transition Workshop Scheduled for February 23-25

"NOAA Fisheries Science & Technology" [science.noaa@fisheries@public.govdelivery.com]

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**NOAA
FISHERIES**

NEWSCAST

February 18, 2022

Marine Recreational Information Program

Gulf State Surveys Transition Workshop Scheduled for February 23-25

The three-day Gulf State Recreational Catch and Effort Surveys Transition Workshop will begin Wednesday, February 23, 2022. This virtual workshop will serve as a forum for NOAA Fisheries, its state and regional partners, and a team of independent experts to agree on the elements of a Gulf State Recreational Catch and Effort Surveys Transition Plan. When executed, this plan will allow for the full use of state recreational fishing data in NOAA Fisheries' stock assessment and management processes.

Anticipated Outcomes

- Establish a research plan to improve our understanding of the differences between state and federal estimates of recreational catch.
- Select an approach that will allow state data to be used in federal stock assessments and management decisions.
- Establish the data input, storage, and output requirements of a regional state survey database.
- Agree on the goals and components of a communications plan to maintain transparency throughout the transition process.

Register and Join Online

This workshop will be open to the public and broadcast via WebEx. Attendees must register for each day separately and will be placed in listen only mode

- Register for Day One (Wednesday, February 23). On the day of the meeting, join [here](#). To dial in, call 1-415-527-5035 and enter access code 2763 626 8584. The event password is noaa.
- Register for Day Two (Thursday, February 24). On the day of the meeting, join [here](#). To dial in, call 1-415-527-5035 and enter access code 2760 640 8219. The event password is noaa.
- Register for Day Three (Friday, February 25). On the day of the meeting, join [here](#). To dial in, call 1-415-527-5035 and enter access code 2764 458 8236. The event password is noaa.

Meeting Materials

More information about the workshop—including an agenda, a list of participants, and key workshop documents—can be found on the [Gulf State Recreational Catch and Effort Surveys Transition Workshop event page](#). Note: The workshop agenda is considered a draft. Items may be added and/or revised up to the start of the event.

About MRIP


The Marine Recreational Information Program is the state-regional-federal partnership responsible for developing, improving, and implementing surveys that measure how many trips saltwater anglers take and how many fish they catch.

Do you have a question about recreational fishing data collection or estimation? Email **Dave Bard** at david.bard@noaa.gov or visit countrymyfish.noaa.gov.

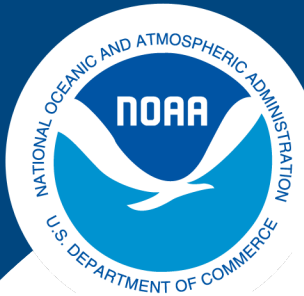
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Tab E, No. 4(a)

SBRM 5-Year Review

January 2022 Gulf SSC Meeting
January 13, 2022

Standardized Bycatch Reporting Methodology

What are SBRMs?

- Definition of a Standardized Bycatch Review Methodology (SBRM)
 - An established, consistent procedure or procedures used to collect, record, and report bycatch data in a fishery
- Purpose of SBRM
 - Collect, record, and report bycatch data that, in conjunction with other information, are used to assess the amount and type of bycatch.

The Council has SBRMs for each FMP

What is bycatch?

- According to the Magnuson-Steven Act:
 - The term "bycatch" means fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards.
 - Does not include fish released alive *under a recreational catch and release fishery management program*.
 - The term "fish" includes turtles but does not include marine mammals or seabirds.
- Bycatch does not include incidental catch. Incidental catch are non-targeted species that are kept/landed while fishing for other species.
- Therefore, ***bycatch is composed of discarded species.***

The purpose of this presentation is to:

- Inform the SSC of the requirement to review SBRMs
 - Outline what should be in an SBRM review
 - Discuss specific fisheries and SBRMs
 - Assess the adequacy of current SBRMs in each fishery.
 - For each fishery:
 - Are SBRMs adequate to assess the scope of bycatch (based on the four criteria)?
- Or:**
- Do current SBRM require changes/amendments?

Councils must review SBRMs by February 21, 2022 (and review once every 5 years)

- (1) Characteristics of bycatch occurring in the fishery
- (2) Feasibility of the methodology from cost, technical, and operational perspectives,
- (3) Uncertainty of the data resulting from the methodology, and
- (4) How the data resulting from the methodology are used to assess the amount and type of bycatch occurring in the fishery.

What questions do we want the SSC to answer?

- **For each FMP:**
 - Is the SBRM feasible from cost, technical and operational perspectives?
 - Can the uncertainty associated with bycatch data be described, quantitatively or qualitatively?
 - Are the data adequate to assess the amount and type of bycatch occurring in the fishery?
 - Are the data useful in management of these FMPs?

Gulf Council Managed FMPs

- Reef Fish
- Shrimp
- Coastal Migratory Pelagics (Joint with SA)
- Spiny Lobster (Joint with SA)
- Red Drum (No allowable harvest in federal waters; bycatch does occur in federal waters)
- Coral- (No allowable harvest)

Reef Fish FMP



- **31 Species In Gulf**
- **837 Federally Permitted Commercial Vessels (NMFS 2020)**
- **1,289 Federally Permitted For-Hire Vessels (NMFS 2020)**
- **Primary Gear: Longline, Vertical Line, Modified Buoy Gear**

Reef Fish FMP- Review Criteria #1

Characteristics of Bycatch

- Bycatch Reporting Methodology
 - Commercial Vessels
 - **Logbooks:** Required for all vessels, must include quantity (lb) of all species, area caught, gear, etc.
 - **Supplementary Discard Data Program:** If selected, must report number and average size of fish being discarded by species and reasons for discards (rolling 20% of permitted fishermen/year; each vessel/5yrs).
 - **Reef Fish Observer Program:** Observers report all catch, including protected resources (~2% of annual trips).
 - **Shark Longline Observer Program:** Observers record all catch, including protected resources (**Not technically a reef fish SBRM, but provides important bycatch data**).

Reef Fish FMP- Characteristics of Bycatch (Cont.)

- **For-Hire Vessels**

- **MRIP APAIS/CHTS/FES:** Estimates catch rates and effort for captured species, including discards.
- **Southeast Regional Headboat Survey:** Logbook and dockside sampling. Collects information on fish discards.
- **Southeast For-Hire Electronic Reporting Program** (Implemented in 2021): Mandatory electronic reporting of all catch and effort data (including all discards) for all permitted Gulf and South Atlantic for-hire trips.

- **Private Recreational Vessels**

- **MRFSS/MRIP CHTS or FES:** Estimates of catch and effort for captured species including discards.

- **Amount and Type of Bycatch:**

- Summarized in subsequent slides. However, *the numbers are less important than whether our SBRMs are adequate to accurately estimate bycatch.*

Reef Fish FMP- Characteristics of Bycatch (Cont.)

Amount and type of bycatch (Commercial)

- Top ten species by gear type on commercial trips that land reef fish

VERTICAL LINE		LONGLINE		All	
Stock	# Mean discards / year	Stock	# Mean discards / year	Stock	Reason for Discard
Red Snapper	25,667	Red Grouper	30,835	Red Grouper	Not legal size (98%)
Red Grouper	12,016	Red Snapper	14,420	Red Snapper	Other Regs (63%)
Gray Triggerfish	9,522	Blueline Tilefish	545	Gray Trigger	Other Regs (55%)
Vermilion Snapper	8,145	Gag	241	Vermillion Snapper	Size (96%)
Gag	1,628	Yellowedge Grouper	76	Gag	Size (97%)
Yellowtail Snapper	546	Gray Triggerfish	67	Yellowtail Snapper	Size (97%)
Greater Amberjack	507	Greater Amberjack	64	Blueline Tilefish	Market (56%)
Lane Snapper	275	Lane Snapper	53	Greater AJ	Out of Season (45%)
Gray Snapper	227	Gray Snapper	52	Lane Snapper	Size (83%)
Scamp	216	Scamp	41	Gray Snapper	Size (93%)

Source: SEFSC Discard Logbook (accessed May 2021).

Reef Fish FMP- Characteristics of Bycatch (Cont.)

Amount and type of bycatch (Recreational)

Species	Headboat			Charter			Private		
	Landings (1000s)	Discards (1000s)	Ratio (D:L)	Landings (1000s)	Discards (1000s)	Ratio (D:L)	Landings (1000s)	Discards (1000s)	Ratio (D:L)
Gag	2.9	19	629%	21	110	528%	245	2,189	893%
Gray Snapper	35	4.5	13%	268	282	105%	3,329	14,263	428%
Gray Triggerfish	66	101	1536%	30	339	1139%	114	1,899	1658%
Greater Amberjack	1.7	5.2	314%	25	54	216%	60	292	490%
Hogfish	1.8	1.2	67%	11	6.1	53%	191	63	33%
Lane Snapper	80	9	11%	128	61	48%	766	1,194	156%
Mutton Snapper	.6	.03	5%	16	12	77%	74	261	354%
Red Grouper	3.9	64	1631%	60	283	470%	307	2,400	782%
Red Snapper	115	106	92%	280	489	174%	1,900	5,988	315%
Vermilion Snapper	438	35	8%	591	59	10%	1,052	498	47%
Yellowtail Snapper	6.5	1.5	24%	238	105	44%	555	1281	231%

Sources: SEFSC Recreational MRIP-FES ACL Dataset (September 2020), SEFSC Headboat Logbook CRNF files (expanded; July 2020).

Note: Discards from Louisiana (2015-2018) and Texas are not included in charter and private modes.

Importance of Bycatch in Estimating Fishing Mortality / Effect of Bycatch on Ecosystems

- Discard mortality estimates are species dependent, variable, and highly uncertain.
- Discard mortality correlated with:
 - increased depths,
 - seasons associated with warmer water temperatures,
 - bottom longline gear, and
 - external evidence of barotrauma (Pulver, 2017).
- Discard mortality is accounted for in stock assessments. The accuracy of bycatch estimates are fundamental to appropriate management.
- If not properly accounted for, discard mortality could reduce stock biomass to an unsustainable level.

Reef Fish FMP- Review Criteria #2

Feasibility of the methodology from cost, technical and operational perspectives

- **Are these SBRMs feasible from a cost, operational, and technical standpoint?**
 - **Commercial SBRMs:**
 - Logbooks – Long-term program, appears feasible. Modernization possible.
 - Supplementary Discard Data Program – Long term program, appears feasible. Data utility questionable?
 - Reef Fish Observer Program – Feasible provided funding continues.
 - **Recreational SBRMs:**
 - **For-Hire**
 - MRIP – Long-term program, appears feasible.
 - SRHS – Long term program, appears feasible.
 - SEFHIER – New program, infrastructure in place, appears feasible and funding appears stable.
 - **Private**
 - MRFSS/MRIP/APAIS/FES – Long-term program, appears feasible.

Reef Fish FMP- Review Criteria #3

Uncertainty of the data resulting from the methodology

Is level of uncertainty understood/acceptable given obstacles (financial, legal, etc.)?

- **Commercial SBRMs:**
 - **Logbooks:** Rare/unknown species may not be identified before discard. Protected species potentially not reported.
 - **Supplementary Discard Data Program:** High uncertainty with discard CVs often exceeding 100%. Non-reporting is an issue. Vessels may check “no discards” box on form and still be in compliance (>50% of trips).
 - **Reef Fish Observer Program:** At ~ 2% coverage, less accurate in estimating capture of rare species. *RFOP indicates that self-reported discard rates are consistently lower than observer reported rates.*
- **Recreational SBRMs:**
 - **For-Hire**
 - **MRIP (APAIS/CHTS/FES):** Self reported by fishermen, includes dockside surveys.
 - **SRHS:** Logbook and Dockside sampling. Provides a measure to estimate accuracy of self-reported (through MRIP, SEFHIER) headboat landings. Collect info on discarded fish.
 - **SEFHIER:** Data forthcoming, but expected to improve data on for-hire vessels in Gulf. Data collected on all discards (including sea turtles, ESA listed fish).
 - **Private**
 - **MRFSS/MRIP:** Self-reported from Rec fishermen, including dockside surveys.
 - **LA Creel:** Discard estimates (self-reported) for most Council-managed species.
 - **TPWD:** Estimates of landed fish, but bycatch not reported.



Reef Fish FMP- Review Criteria #4

How the data resulting from the methodology are used to assess the amount and type of bycatch occurring in the fishery

How are we using the SBRM data that are collected in this fishery?

- SEFSC uses these data in stock assessments to incorporate bycatch into estimates of total fishing mortality.
- SSC uses information as they review the status of the fisheries and develop acceptable biological catch recommendations.
- The Councils use SBRM-derived bycatch information to:
 - assess if new management measures are necessary
 - develop measures/evaluate the potential impacts of measures.

All aspects of fishery management in the region that have bycatch implications use data from the SBRM.

Questions?

Discussion on Adequacy of Fishery SBRMs

Shrimp FMP



- Four managed shrimp species (brown, white, pink, royal red)
- Currently 1,467 federally permitted vessels in Gulf
- Primary gear: Trawls

Shrimp FMP- Review Criteria #1

Characteristics of Bycatch

- **Bycatch Reporting Methodology-Commercial vessels**
 - **Electronic Logbooks (Including cELB):** Required for all vessels; accurate calculation of vessel effort, CPUE at fishing locations. Must provide size/number of trawls, types of BRDs and TEDs.
 - **Gulf of Mexico Shrimp Observer Program:** Observers report all catch, including protected resources (~2.5% of annual trips; Scott-Denton et al., 2020)
 - **Other Programs (Not SBRMs):**
 - SEFSC cooperates with states to monitor fishing effort
 - NMFS OLE maintains spreadsheet with boarding details
 - Sea Turtle Salvage and Stranding Network: Maintains database of sea turtle strandings in the Gulf. Uses that along with observer data and other data to monitor sea turtle mortalities from fishery interactions.

Shrimp FMP- Characteristics of Bycatch (Cont.)

- Amount and type of bycatch

- Note that while bycatch will be summarized in the report, the focus of this document is to analyze whether our SBRMs are adequate to accurately estimate bycatch.
- Protected species bycatch includes 131 sea turtles (73% released alive) and 2 smalltooth sawfish (release condition unknown). Preliminary data for 2015-2019 indicates similar catch rate.

	Gulf Penaeid Mandatory Observer Percentage	Gulf Mandatory Rock Shrimp Percentage	Gulf Mandatory Skimmer Percentage
Fish (Unspecified)	31.8	22.0	32.7
Atlantic Croaker	15.7	0.3	10.6
Brown Shrimp	12.6	1.3	32.5
White Shrimp	11.4	0.0	9.6
Arthropod Other	6.2	3.9	4.2
Seatrout	5.4	0.1	1.5
Invertebrates	5.2	7.6	0.6
Pink Shrimp	3.4	1.7	-
Longspine Porgy	3.1	-	-
Rock Shrimp	0.3	35.6	-
Other Important Species			
Red Snapper	0.3	0.0	0.0
Spanish Mackerel	0.2	0.0	0.3
Red Drum	0.2	-	0.0
Lane Snapper	0.2	0.0	0.0

*Source: Scott-Denton et al., 2020 (Observer data from 2011-2016)

Importance of Bycatch in Estimating Fishing Mortality / Effect of Bycatch on Ecosystems

- Shrimp trawl gear can affect the abundance of species that are targeted by other fisheries.
- Little is known about the status of finfish and invertebrate species that are present in shrimp trawl bycatch in the greatest numbers, because they aren't generally targeted in any fisheries.

Shrimp FMP- Review Criteria #2

Feasibility of the methodology from cost, technical and operational perspectives

Are the SBRMs implemented and in use feasible from a cost, operational, and technical standpoint?

- **Electronic Logbooks (Including cELB):** Modification currently being discussed by Council, program is expected to be maintained
- **Gulf of Mexico Shrimp Observer Program:** Expected to continue at approximate current coverage level (Funding dependent)
- **Other Programs:** Expected to continue largely independent of Council
 - SEFSC cooperates with states to monitor fishing effort
 - NMFS OLE boardings
 - Sea Turtle Salvage and Stranding Network.

Shrimp FMP- Review Criteria #3

Uncertainty of the data resulting from the methodology

Is the level of uncertainty understood/acceptable given obstacles (financial, legal, etc.)?

- **Gulf of Mexico Shrimp Observer Program is best method for estimating discard rates/species**
- **Generally low CVs (<0.2 associated w/ bycatch species)**
- **Logbook data:**
 - **Some biases (inaccurate reporting of bycatch, protected species; low compliance rates)**
 - **Very useful for effort by area; info on capture of rare species.**
- **Using observer program (catch/discard rates) combined with logbook data (for effort) is best method overall for estimating bycatch.**

Shrimp FMP- Review Criteria #4

How the data resulting from the methodology are used to assess the amount and type of bycatch occurring in the fishery

How are we using the SBRM data that are collected in this fishery?

- SEFSC uses these data in stock assessments to incorporate bycatch into estimates of total fishing mortality.
- SSC uses information as they review the status of the fisheries and develop overfishing limit and acceptable biological catch recommendations.
- The Councils use SBRM-derived bycatch information to:
 - assess if new management measures are necessary
 - develop measures/evaluate the potential impacts of measures.

All aspects of fishery management in the region that have bycatch implications use data from the SBRM.

Questions?

Discussion on Adequacy of Fishery SBRMs

Coastal Migratory Pelagics (CMP) FMP



- Jointly managed with South Atlantic
- King mackerel, Spanish mackerel, cobia
- Primary gear: Trolling, handline, gillnet

CMP FMP- Review Criteria #1

Characteristics of Bycatch

- **Bycatch Reporting Methodology**
 - **Commercial Vessels**
 - **Logbooks:** Required for all vessels, must include quantity (lb) of all species, area caught, gear, etc.
 - **Supplementary Discard Data Program:** If selected, must report number and average size of fish being discarded by species and reasons for discards (rolling 20% of permitted fishermen/year; each vessel/5yrs). Must also report reason.
 - **Southeast Gillnet Observer Program:** Covers all anchored, strike, or drift gillnet fishing, regardless of species, year round in Gulf
 - **Recreational Vessels**
 - **Charter/Headboat:**
 - **MRIP (APAIS/CHTS/FES)**
 - **SRHS**
 - **SEFHIER (2021)**
 - **Private angler:**
 - **MRIP**
 - **LA Creel**
 - **TPWD:** No bycatch reporting

CMP FMP- Characteristics of Bycatch (Cont.)

- Amount and type of bycatch (Commercial)
 - Characterized by low discards
 - “Not legal size” is most frequently cited reason for discard of Gulf CMP species

Gillnet		Handline		Trolling	
American Shad	272	Red Snapper	136	King Mackerel	725
Sharks Unclassified	108	King Mackerel	128	Crevalle Jack	216
Grass Porgy	74	Spanish Mackerel	94	Red Snapper	141
Sea Catfishes	50	Bluefish	80	Sharks Unclassified	97
Bonnethead Shark	29	Gray Triggerfish	76	Little Tunny	64
Grunts Unclassified	29	Yellow Jack	62	Blacktip Shark	60
Ladyfish	26	Crevalle Jack	58	Cobia	44
Weakfish	25	Blue Runner	47	Red Drum	25
Blacktip Shark	15	Bony Fish Unclassified	24	Amberjacks Unclassified	19
Red Grouper	13	Sharks Unclassified	20	Greater Amberjack	15

Source: SEFSC Coastal Logbook (accessed May 2020) and Discard Logbook (accessed May 2020).

CMP FMP- Characteristics of Bycatch (Cont.)

- Amount and type of bycatch (Recreational)**

- Top ten species with discards reported on recreational trips capturing a CMP species, 2015-2019
- Private sector has greatest discards

Rank	HEADBOAT		CHARTER		PRIVATE	
	Species	Discards (N)	Species	Discards (N)	Species	Discards (N)
1	Red Snapper	135,074	Red Snapper	879,641	Spotted Seatrout	10,183,221
2	Gray Triggerfish	102,231	Gray Triggerfish	737,277	Ladyfish	6,469,167
3	Red Grouper	52,792	Spanish Mackerel	399,356	Spanish Mackerel	6,031,247
4	White Grunt	37,405	Red Grouper	354,287	Red Snapper	5,545,785
5	Vermilion Snapper	36,140	Spotted Seatrout	281,654	Gray Snapper	3,165,484
6	Tomtate	26,812	White Grunt	256,977	White Grunt	2,631,791
7	Gag	15,837	Blue Runner	243,670	Hardhead Catfish	2,310,774
8	Black Sea Bass	13,881	Gray Snapper	193,107	Blue Runner	2,034,310
9	Sand Perch	9,956	Hardhead Catfish	190,490	Pinfish	1,982,762
10	Greater Amberjack	8,588	Gag	182,702	Scaled Sardine	1,851,526

Note: Charter and private modes do not include data from LA and TX

Sources: MRIP FES survey data; Headboat data from SEFSC Headboat Logbook CRNF files (expanded; July 2020).

Importance of Bycatch in Estimating Fishing Mortality / Effect of Bycatch on Ecosystems

- Bycatch mortality rates vary from ~5% (cobia) to ~100% (king mackerel gillnet)



Photo Courtesy of NOAA Fisheries

CMP FMP- Review Criteria #2

Feasibility of the methodology from cost, technical and operational perspectives

Are the SBRMs implemented and in use feasible from a cost, operational, and technical standpoint?

- **Commercial**
 - **Logbooks** – Long-term program, appears feasible. Modernization possible.
 - **Supplementary Discard Data Program** – Long term program, appears feasible; utility questionable?
 - **Southeast Gillnet Observer Program** – Long term program, appears feasible
- **Recreational**
 - **Charter/Headboat:**
 - **MRIP (APAIS/CHTS/FES)** – Long-term program, appears feasible
 - **SRHS** – Long-term program, appears feasible
 - **SEFHIER (2021)** – New program, infrastructure in place, appears feasible and funding appears stable
 - **Private angler:**
 - **MRFSS/MRIP**– Long-term program, appears feasible

CMP FMP- Review Criteria #3

Uncertainty of the data resulting from the methodology

Is the level of uncertainty understood/acceptable given obstacles (financial, legal, etc.)?

- **Commercial SBRMs:**
 - **Logbooks:** High Uncertainty. Protected species potentially not reported.
 - **Supplementary Discard Data Program:** Non-reporting is an issue. Vessels may check “no discards” box and still be in compliance (>50% CMP trips).
 - **Gillnet Observer Program:** Gives accurate estimates of bycatch for gillnet fisheries.
- **Recreational SBRMs:**
 - **For-Hire**
 - **MRIP (APAIS/CHTS/FES):** Self reported by fishermen, includes dockside surveys.
 - **SRHS:** Dockside sampling, discard reporting. Provides a measure to estimate accuracy of self-reported headboat landings.
 - **SEFHIER:** Data forthcoming, but expected to improve data on for-hire vessels in Gulf. All discards self reported.
 - **Private**
 - **MRFSS/MRIP:** From Rec fishermen, including dockside surveys. Self-reported.

CMP FMP- Review Criteria #4

How the data resulting from the methodology are used to assess the amount and type of bycatch occurring in the fishery

How are we using the SBRM data that are collected in this fishery?

- SEFSC uses these data in stock assessments to incorporate bycatch into estimates of total fishing mortality.
- SSC uses information as they review the status of the fisheries and develop acceptable biological catch recommendations.
- The Councils use SBRM-derived bycatch information to:
 - assess if new management measures are necessary
 - develop measures/evaluate the potential impacts of measures.

All aspects of fishery management in the region that have bycatch implications use data from the SBRM.

Questions?

Discussion on Adequacy of Fishery SBRMs

Spiny Lobster FMP



- Jointly managed with South Atlantic
- Primary gear: Traps, diving, hoopnets/bullnets

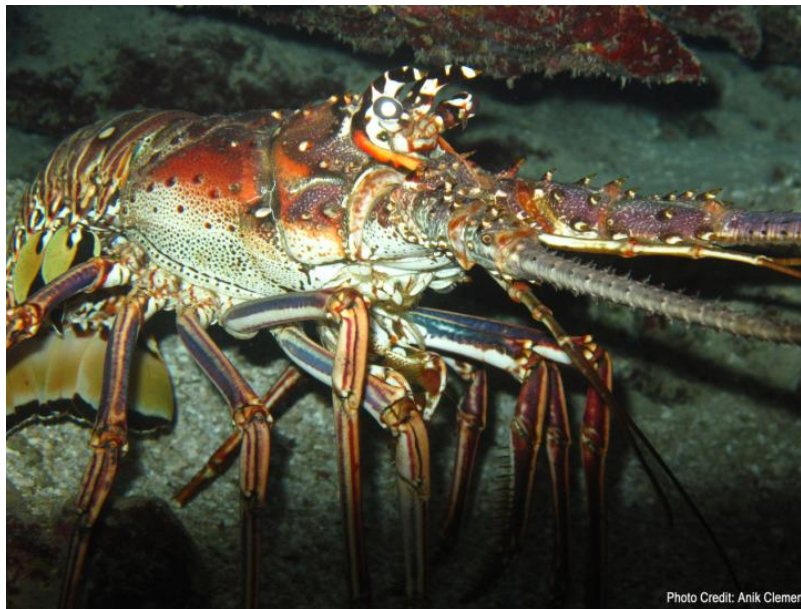
Spiny Lobster FMP- Review Criteria #1

Characteristics of Bycatch

- **Bycatch Reporting Methodology**
 - **Commercial Fishery**
 - **Commercial Catch Monitored by FWC**
 - **Sea Turtle Strandings and Salvage Network** – Database of strandings
 - **Recreational**
 - FWC monitor bycatch of spiny lobster, low discards
- **Amount and type of bycatch**
 - Low discards (~8-15%)
 - Most of the finfish caught in commercial spiny lobster traps are juveniles that escape within 48 hours
 - “Ghost Fishing”– Discarded, lost, abandoned traps that keep fishing
 - 18% of traps lost annually in years without major storm
 - Traps estimated to fish for one year after loss (637,622 \pm 74,367 dead lobsters/year) (FWC, 2017)
 - After 2 weeks in trap, lobster survivability drops dramatically (Butler et al., 2018).

Importance of Bycatch in Estimating Fishing Mortality / Effect of Bycatch on Ecosystems

- Mortality of commercially and recreationally important finfish is negligible (Matthews and Donahue 1997).
- Impacts of “ghost fishing” must be included in management decisions.



Spiny Lobster FMP- Review Criteria #2

Feasibility of the methodology from cost, technical and operational perspectives

Are the SBRMs implemented and in use feasible from a cost, operational, and technical standpoint.

- **Commercial**

- FWC Manages

- **Recreational**

- FWC Operates

Spiny Lobster FMP- Review Criteria #3

Uncertainty of the data resulting from the methodology

- The uncertainty of the data resulting from the SBRM has been evaluated through analyses associated with regulatory and FMP amendments implementing the Spiny Lobster FMP. Bycatch levels are low for both sectors.

Spiny Lobster FMP- Review Criteria #4

How the data resulting from the methodology are used to assess the amount and type of bycatch occurring in the fishery

- The Councils use SBRM-derived bycatch information to:
 - assess if new management measures are necessary
 - develop measures/evaluate the potential impacts of measures.

Questions?

Discussion on Adequacy of Fishery SBRMs

Red Drum FMP



Photo Courtesy of Gulf of Mexico Fisheries Management Council

- No active federal fishery in the Gulf of Mexico

Review Criteria #1: Characteristics of Bycatch

- Red drum may not be harvested in or from the Gulf Exclusive Economic Zone (EEZ).
 - Red Drum that are captured in the EEZ must be released immediately with as little harm done to the animal as possible.
- **There is currently no allowable catch and no federal fishery for red drum in the Gulf.**
 - Retained red drum reported in EEZ may be result of how area is reported.
- Red drum may be captured incidentally in other fisheries (e.g. reef fish), but this bycatch would be captured under the SBRMs in place for that fishery.

- Review Criteria #2 -- Feasibility of the methodology from cost, technical and operational perspectives
 - N/A: No allowable catch in fishery
- Review Criteria #3 -- Uncertainty of the data resulting from the methodology
 - N/A: No allowable catch in fishery
- Review Criteria #4 -- How the data resulting from the methodology are used to assess the amount and type of bycatch occurring in the fishery
 - N/A: No allowable catch in fishery

Questions?

Discussion on Adequacy of Fishery SBRMs

Coral and Coral Reefs FMP



- Hard coral harvest prohibited in Gulf of Mexico
- Octocoral off Florida coast (and in EEZ bordering FL) managed by FL

- **Review Criteria #1: Characteristics of Bycatch**
 - Black coral and stony coral harvest prohibited in Gulf EEZ.
 - Octocorals may be harvested in FL waters and in the EEZ off FL. FL manages this octocoral harvest.
 - Coral captured in the EEZ must be released immediately with as little harm done to the animal as possible.
- **Review Criteria #2 -- Feasibility of the methodology from cost, technical and operational perspectives**
 - N/A: No allowable harvest of coral (except aquaculture)
- **Review Criteria #3 -- Uncertainty of the data resulting from the methodology**
 - N/A: No allowable harvest of coral (except aquaculture)
- **Review Criteria #4 -- How the data resulting from the methodology are used to assess the amount and type of bycatch occurring in the fishery**
 - N/A: No allowable harvest of coral (except aquaculture)

Next Steps

Now

- IPT Final Review

Jan 2022

- SSC Review

Jan 2022

- Council Finalizes

After Council
Finalization

- NMFS Determination



Questions?

Discussion on Adequacy of Fishery SBRMs

