

# Sustainable Fisheries Committee

**Agenda Item V.** SSC Report on Allocation Approaches Presentation

- September 2022 SSC Meeting: Dr. David Carter (SEFSC) presented current approaches to sector allocation analysis and noted timing and justification for allocation changes in the Gulf would be determined by the allocation review guidelines.
- The presentation discussed methods by which allocations could be modified.
- The allocation methods presented included: 1) catch-based allocations, 2) equal shares or lotteries, 3) auctions, 4) inter-sector trading, and 5) multi criteria allocations including ecological, biological, economic, and social factors.

- SSC members recognized allocation decisions are usually difficult; agreed SSC role should be limited to scientific aspects of allocations, and reiterated that allocation-related management decisions were ultimately the prerogative of the Council.
- Understanding objectives of reallocation important to evaluate whether the approach used will achieve stated goals.
- SSC may have more to contribute once allocation objectives are clearly specified.
- SSC needs a concrete statement from Council as to its allocation goals and objectives before evaluating efficacy.

# Sustainable Fisheries Committee

**Agenda Item VII:** SSC Recommendations on Acceptable Biological Catch  
(ABC) Control Rule

- Each regional Council must establish an ABC Control Rule based on scientific advice from its SSC. The current ABC Control Rule has been in place since 2011.
- ABC Control Rule accounts for scientific uncertainty; decrements ABC from OFL
- SSC members have regularly expressed a desire to revisit the current  $P^*$  approach Control Rule: tends to generate narrow buffers between the OFL and ABC that are not representative of the scientific uncertainty within the stock assessment.
- SSC requested comparison analysis of multiple stock assessments' results to quantify scientific uncertainty over time (Ralston et al. 2011).

- Results from the Ralston method using US Pacific stocks indicate a minimum “sigma” ( $\sigma_{\min}$ ) of 0.36 is appropriate for data-rich Tier 1 stocks and allows for  $\sigma$  to increase as data quality/quantity declines, resulting in larger buffers between OFL and ABC for lower tiers.
- This is in contrast to results from the Gulf Council’s current ABC Control Rule, which often uses  $\sigma$  values of 0.1 for many Gulf stocks.
- Because of the narrow buffers generated by the Gulf Council’s current ABC Control Rule, the SSC typically sets ABC at 75% of  $F_{\text{MSY}}$  or its proxy, as outlined in Appendix A of the Restrepo et al. 1998 report for Tier 1 stocks.

- SEFSC is evaluating the Ralston et al. (2011) approach using Gulf stocks, and is in consultation with Dr. Kristin Privitera-Johnson for development of projection-based estimates.
- Stock Synthesis assessments examined so far include those for cobia, greater amberjack, gray snapper, red grouper, vermilion snapper, and red snapper, which constitute 13 total assessments; more to follow.
- SEFSC described trends in SSB by species and assessment for common metrics, like SSB measured as mature female weight and fecundity in number of eggs.
- SEFSC demonstrated, using examples from the Ralston approach, the calculation of  $\sigma$  from the included stocks.

- SEFSC reviewed the Privitera-Johnson and Punt revision, which uses an updated Ralston analysis and shows a  $\sigma$  value of 0.403 (compared to 0.36).
- SEFSC anticipates that this approach will account for more uncertainty than the historical biomass approach.
- The Privitera-Johnson and Punt approach will require more work due to more extensive data requirements. SEFSC may need to slightly modify the approach due to the Gulf's use of sector allocations in projections.
- SSC appreciated the work completed thus far on the Ralston approaches, and looked forward to seeing more at its May 2023 meeting.



# Reef Fish Committee

**Agenda Item VIII.** SSC Review and Recommendations on  
Revised Recreational Red Snapper Calibration Ratios

- Fishery biologists representing marine fisheries agencies from Florida (Ms. Tiffanie Cross - FWRI) , Alabama (Mr. Kevin Anson - ALDCNR), and Mississippi (Mr. Trevor Moncrief - MDMR) presented proposals to revise calibrations for each state's respective estimates of private vessel and state charter for-hire landings of red snapper to MRIP's Coastal Household Telephone Survey (CHTS).
- At the Council's request, these proposals updated the years and waves considered by the SSC in August 2020 and provided justifications for these new selections.

- ***SSC Evaluation of Terms of Reference***

The SSC was tasked with considering the following terms of reference for each state's proposal:

- 1. Is the proposed revised calibration ratio calculated in a method that is not dissimilar from that which was approved as consistent with the best scientific information available (BSIA) by the SSC in August 2020?*
- 2. Is the justification for the year(s) and waves(s) recommended for calculating the proposed revised calibration ratio sufficient? If not, describe why and if possible, offer alternatives.*
- 3. Are there any additional clarifications necessary for considering a state's proposed revised calibration ratio as being consistent with BSIA?*

- An MRIP Gulf Transition Team Subgroup has been formed to investigate differences between the state surveys and MRIP-FES.
- The team has developed short- and long-term research goals to improve understanding of recreational fisheries data collection in the Gulf.
- In the interim, for red snapper, calibration to MRIP-CHTS will be required until the results of the SEDAR 74 stock assessment are available to be considered for use in management.

## Florida Proposal

- Florida uses the State Reef Fish Survey (SRFS) to measure catch and fishing effort, and estimate landings and discards, for several reef fish species.
- SRFS only covers the recreational private vessel (no shore or for-hire) mode for 13 reef fish species, including red snapper.
- Effort estimation is conducted via a monthly mail survey.
- SRFS catch data are estimated from dockside intercepts and complement the MRIP Access Point Angler Intercept Survey (APAIS). Intercept sampling sites are randomly selected at the same time for both surveys .
- FWRI methods for calibration are unchanged from 2020.

- Ms. Cross detailed four options for a calibration ratio informed using varying time series:
  - May 2015 – December 2019 (original calibration);
  - May 2015 – December 2017 (SRFS and MRIP-CHTS overlap years, recommended by the SSC in August 2020);
  - 2018, 2019, and 2021 (SRFS and MRIP-FES overlap years);
  - All available overlapping estimates from May 2015 to December 2021, excluding 2020.
- The resulting ratios are not statistically dissimilar between SRFS and either MRIP-CHTS or MRIP-FES for any of the options presented.

## **Florida Evaluation**

- SSC acknowledged Florida's exclusion of 2020 due to disruption of the catch portion of the survey during the COVID-19 pandemic.
- SSC members discussed the merits of moving away from 2015 – 2017 data due to the inclusion of the CHTS telephone survey.
- Florida did not select a preferred method, relying instead on the judgement of the SSC to determine the most appropriate time series.

**Motion: The SSC recommends that the proposed Florida's calibration from SRFS to MRIP-CHTS for the private angling component of red snapper use data from 2018, 2019, and 2021 to determine the updated calibration ratio of 1.29 in numbers of fish and 1.34 in pounds whole weight.**

*Motion carried with two abstentions and three absent.*

In addressing the terms of reference:

- 1) The SSC found that the methodology used by Florida was not dissimilar from that proposed as BSIA in August of 2020.
- 2) The SSC recommended using 2018, 2019, and 2021 for Florida's updated calibration ratio based on the presented justifications.
- 3) After discussing the changing relationship between MRIP-CHTS and MRIP-FES from 2015 to 2021, the SSC sought no further clarification on Florida's proposal.



## **Alabama Proposal**

- The primary objective of the Snapper Check is to provide monitoring of the private recreational sector for the AL red snapper fishing season.
- Mandatory reporting and dockside sampling participation are required to land red snapper as a private angler during the fishing season.
- The dockside survey intercepts also collect biological and trip information. Dead discards are not required to be reported.
- Residency status (state and county) of each interviewed angler is collected during each wave at all sites, and used to adjust the effort information calculated from the effort survey.

- Matching of effort and catch data is conducted using unique identifiers supplied on the landing reports and collected in dockside surveys. This also allows for the calculation of non-response to the effort survey.
- APAIS intercepts are conducted by the same staff as for Snapper Check intercepts.
- For effort, Snapper Check measures by the vessel, whereas MRIP measures by the angler.

- Mr. Anson presented differences in fishing effort observed between Alabama's two coastal counties (Baldwin in the east and Mobile in the west).
- Angler counts in APAIS during open red snapper seasons have been substantially higher since 2014, and more anglers are being interviewed by APAIS in Baldwin County, which hosts more tourism and non-coastal resident anglers.
- Mr. Anson concluded that 2018 and 2019 MRIP-CHTS may be elevating effort estimates caused by sampling that was not representative of Alabama's anglers.
- He added that daily angler effort has been significantly reduced in 2021 and 2022 compared to 2018. The AL fishing season duration increased 340% from 2018 to 2022, and 288% from 2021 to 2022.

## Alabama Evaluation

- The SSC acknowledged that the methods used by Alabama were similar to those determined to be consistent with BSIA in August of 2020.
- The SSC thought the rationale for including 2020 was firm, given that Alabama's angler intercepts and effort survey were functioning as intended during 2020.
- The SSC noted that there was not a considerable change in methodology in sampling between 2018 and 2021.
- Some SSC members thought that 2018 – 2021 were similar enough in most respects to be considered together.

**Motion: The SSC recommends that the proposed Alabama's calibration from Snapper Check to MRIP-CHTS (Snapper Check / MRIP-CHTS) for the private angling and state charter for-hire component of red snapper use data from 2018, 2019, 2020, and 2021, to determine the updated calibration ratio of 0.548 in pounds whole weight.**

*Motion carried with two abstentions and three absent.*

In addressing the terms of reference:

- 1) the SSC found that the methodology used by Alabama was not dissimilar from that proposed as BSIA in August of 2020.
- 2) The SSC did not think there was adequate justification for using only 2020 and 2021 for Alabama's calibration ratio. The SSC recommended using 2018 – 2021 for Alabama's updated calibration ratio based on the aforementioned discussions.
- 3) The SSC sought no further clarification on Alabama's proposal.

## Mississippi Proposal

- Mr. Trevor Moncrief presented an overview of Mississippi's Tails 'n Scales survey (TnS).
- The survey is mandatory: uses a 24-hr unique trip identifier.
- Anglers cannot make another red snapper trip under TnS until they complete reporting on the previous trip.
- Strength of TnS: enforcement, which observes ~95% compliance.
- TnS has operated consistently within the 2018 – 2021 time frame, with limited modifications to the user experience interface for the required mobile application and changes to aid law enforcement.

- Mr. Moncrief outlined Mississippi's proposed revised calibration, which limits the comparison between TnS and MRIP-CHTS to waves 3 and 4 (May-June and July-August).
- There is concern about the validity of MRIP estimates outside of the high use waves (3 and 4) from 2018 – 2020.
- Waves in which the red snapper fishery does not primarily occur are subject to larger disparities in estimates, which is likely associated with a smaller number of completed MRIP surveys.
- When comparing estimated MRIP fishing effort and Mississippi's recreational license data, newly derived effort estimates using MRIP-FES potentially represent a significant overestimation of angler effort.



- Dr. Richard Cody (NOAA Office of Science and Technology) noted that for MRIP, Florida harvest estimates are derived using an effort survey along with a separate dockside survey; whereas, Mississippi and Alabama operate a single survey to provide catch and effort information.
- Dr. Cody added that a relationship between the variance of estimates, as opposed to the number of APAIS samples, may better correlate to the resultant landings estimates.
- An SSC member asked whether MRIP has researched some of the issues outlined for Mississippi, such as the effect of low sample sizes, for improving the accuracy and precision of MRIP's estimates. Dr. Cody replied that exploring these issues was one of the goals of the MRIP Transition Team and the SEDAR 74 Research Track assessment for red snapper.

## Mississippi Evaluation

- The magnitude of catch for 2019 and 2021 were both implausibly high; however, MS accepts using 2019 to have a consistent, three-year time series to inform its calibration.
- Some SSC members thought excluding 2021 simply because of the magnitude of the estimates from wave 3 and 4 in that year may not be appropriate. Observing anomalies in those waves is not unprecedented and it was argued that an appropriate calibration ratio would reflect those anomalous observations within its calculation.
- MS demonstrated quantitatively that the estimate from 2021 was not possible for the state's anglers to achieve, and that excluding such data is normal practice in science.

- Some SSC members thought it more appropriate to either include both 2019 and 2021, or exclude them, but not to treat them differently.
- An SSC member noted that if 2021 is not realistic, then excluding it is reasonable based on best practices and the scientific literature.
- Another SSC member observed that two years are lower (2018, 2020) and two higher (2019, 2021), so discerning a trend based on a sample size of two in each mode is not possible.

**Motion: The SSC recommends that the proposed Mississippi's calibration from Tails 'n Scales to MRIP-CHTS (Tails 'n Scales / MRIP-CHTS) for the private recreational sector of red snapper use data from 2018 – 2020, as the base years and restricts the harvest comparison to just waves 3 and 4. The updated calibration ratio is 0.503 in pounds whole weight.**

*Motion carried 12-5 with 5 abstentions.*

In addressing the terms of reference:

- 1) The SSC found that the methodology used by Mississippi was not dissimilar from that proposed as BSIA in August of 2020.
- 2) The SSC agreed with excluding 2021 due to the implausibility of that estimate, and understood the justification provided by Mississippi for using only waves 3 and 4. The SSC recommended using waves 3 and 4 from years 2018 – 2020 for Mississippi's updated calibration ratio based on the aforementioned discussions.
- 3) The SSC sought no further clarification on Mississippi's proposal.

# Reef Fish Committee

**Agenda Item IX:** SSC Review and Recommendations for:

1. SEDAR 75 Gray Snapper Stock Assessment Report
2. 2023 Red Grouper Interim Analysis

## **SEDAR 75 Gray Snapper Stock Assessment Report**

- SEFSC (Dr. Francesca Forrestal) presented the SEDAR 75 Operational Assessment of Gulf of Mexico Gray Snapper.
- SEDAR 75 resolved several concerns from the previous model (SEDAR 51 2018), and incorporated updated recreational landings data calibrated to the Marine Recreational Information Program's Fishing Effort Survey (MRIP-FES).
- SEFSC reviewed the model's construction and development, indices of relative abundance, base model estimations and results, diagnostics, and yield projections based on the Council's currently defined status determination criteria. SEDAR 75 uses data through 2020.

- Data used include catch and effort from directed fleets (commercial longline, commercial vertical line, commercial nets and traps, recreational shore, recreational private vessel, and charter for-hire and headboats combined), with all of Monroe County in Florida included in the Gulf.
- The estimates of natural mortality, maximum age (28), and sex ratio (50:50) were unchanged from SEDAR 51.
- The ratio of fecundity to length was updated with additional samples, with functional maturity estimated at 2.5 years.



- Recreational landings comprise the bulk of total landings, and follow an increasing trend over the time series.
- Commercial discards are thought to be very low (no trip limit, good dockside price, 12" TL minimum size limit). Fits improved compared to SEDAR 51.
- Recreational discards are underestimated by the model in many years for all modes, with recreational discards increasing with time.
- Some discussion about the potential for the same undersized fish to be discarded multiple times; this issue is particularly applicable to gray snapper (bridge, jetty, and pier fishing)

- SEFSC showed the model fits to indices of relative abundance, which show fits that follow trends well for most surveys except the FWRI age-0 and age-1 surveys (recruitment proxies).
- Recruitment is estimated to be increasing over time, with a decrease in the last 2 years.
- Steepness is fixed at 0.99, indicating a poor stock-recruitment relationship.
- The initial and present stock size is thought to be larger than estimated by SEDAR 51.

- SEFSC summarized the projections settings, which set relative fishing mortality at the average of 2018 – 2020 and selectivity and retention at the values estimated for 2020.
- Recruitment follows the model-derived Beverton-Holt stock-recruit relationship, uses 2021 landings as reported from SERO, and the mean of 2019 – 2021 for 2022 and 2023.

- SSC discussed using  $F_{26\%SPR}$  for gray snapper, and the parallels drawn at the time for Amendment 51 with the productivity of gray snapper compared to red snapper.
- At the SSC's January 2019 meeting, the SEFSC presented updated projections for gray snapper using three different values for  $F_{MSY}$  proxies ( $F_{26\%SPR}$ ,  $F_{30\%SPR}$ , and  $F_{40\%SPR}$ ), along with changing the MSST from  $1-M*B_{MSY}$  to  $0.5*B_{MSY}$ .
- In January 2023, the SSC found the presented SEDAR 75 analyses to be statistically sound and appropriate, and reiterated that 26% SPR is scientifically acceptable as a proxy for MSY, but acknowledged it to be on the lower end of acceptable proxies.

OFL and ABC projections for both  $F_{26\%SPR}$  and  $F_{30\%SPR}$  are shown in the table below, with ABC projected at the yield at 75% of  $F_{MSY}$  for each MSY proxy. In mp ww.

	$F_{30\%SPR}$		$F_{26\%SPR}$	
Year	OFL	ABC	OFL	ABC
2024	7.758	5.820	9.402	7.063
2025	7.171	5.620	8.351	6.633
2026	6.601	5.394	7.405	6.199
2027	6.088	5.167	6.610	5.795
2028	5.647	4.952	5.969	5.438

- The SSC noted that the stock currently has more biomass in the water than is needed to sustain present harvest levels at either  $F_{MSY}$  proxy.
- The SSC noted that  $F_{26\%SPR}$  is likely at the lower end of the acceptable spectrum of plausible  $MSY$  proxies for gray snapper.
- The SSC did not consider gray snapper less productive than red snapper, with respect to selecting an  $F_{MSY}$  proxy, but did acknowledge that  $F_{26\%SPR}$  was among the lowest observed in the Gulf.
- The SSC acknowledged a planned discussion about setting  $F_{MSY}$  proxies for March 2023.

**Motion: The SSC moves to accept the SEDAR 75 Gulf of Mexico Gray Snapper Operational Assessment as consistent with the best scientific information available. Under the current  $F_{MSY}$  proxy of  $F_{26\%SPR}$ , the model derived estimates indicate the stock is not overfished and is not undergoing overfishing.**

*Motion carried without opposition and 3 absent.*

**Motion: Based on the projection settings accepted by the SSC for the SEDAR 75 Operational Assessment the SSC recommends the following catch levels for Gulf of Mexico Gray Snapper: OFL be set as the yield (million pounds whole weight; mp ww) at  $F_{26\%SPR}$  and ABC as the yield (mp ww) at 75% of  $F_{26\%SPR}$  for the period 2024-2028.**

*Motion carried without opposition and 3 absent*

- **The SSC also supports the constant catch scenario (which is a mean of the 5-year period) that results in an OFL of 7.547 mp ww and an ABC of 6.226 mp ww.**
- *Motion carried without opposition and 3 absent*



## **2023 Red Grouper Interim Analysis**

- SEFSC (Dr. Katie Siegfried) presented the 2023 Gulf red grouper interim analysis (IA), using landings and data and the NMFS Bottom Longline (BLL) index of relative abundance through 2022.
- These data have been prepared to help inform the SSC about the condition of the Gulf red grouper stock, for which the catch limits were previously reduced following the SEDAR 61 stock assessment in response to projections about substantial episodic mortality from the 2018 red tide in the eastern Gulf.
- Catch limits were subsequently increased following the 2021 IA, which indicated the index used to track the population trend for the stock had improved.
- The SEFSC provides these IAs for Gulf red grouper annually for SSC evaluation; the 2022 IA was provided as a “health check”.

- In 2021, the red grouper IA adjusted catch advice using an index-based harvest control rule (HCR) and a 3-year moving average of the NMFS BLL.
- This 2023 IA also adjusts catch advice using an index-based HCR and a 3-year and 5-year moving average of the NMFS BLL.
- The reference year of 2018 is the first year following the terminal year in the SEDAR 61 stock assessment (2017), and corresponds to a reference catch of 5.57 mp gw.
- The updated index includes 2020, which saw reduced spatial coverage in sampling due to the COVID-19 pandemic. Higher abundance was observed in 2021, with a decrease following in 2022; however, over the last 10 years, the trend in the index was flat.

- SSC discussed the amount of time elapsed since the terminal year of the assessment, acknowledging that the IA does not update other factors like changes in growth, reproduction, recruitment, etc.
- SSC acknowledged that uncertainty about the catch advice should be expected to increase with time from the SEDAR 61 terminal year (2017); SSC does not generally support catch recommendations beyond 5 years from the beginning of the initial projections period.

- It was noted that the results from the next planned red grouper operational assessment are not anticipated to be reviewed by the SSC until 2025, with management advice expected thereafter.
- Further, if a change in catch limits were recommended by the SSC at this meeting, that management change would not be expected to take effect until early 2024 at best, at about the same time the next red grouper operational assessment begins.
- Generally, with a flat NMFS BLL index and no information presented on the younger, smaller fish often selected by the recreational sector (which has seen a spike in landings in 2021 and 2022), the SSC lacked the information to modify management recommendations.

**Motion: The SSC recommends not modifying the current catch limits for Gulf red grouper based on the 2023 interim analysis.**

*Motion carried without opposition.*