

Standing, Reef Fish, Ecosystem, and Socioeconomic SSC Webinar Meeting Summary August 11-12, 2020

The webinar meeting of the Gulf of Mexico (Gulf) Fishery Management Council's (Council) Standing, Reef Fish, Ecosystem, and Socioeconomic Scientific and Statistical Committees (SSC) was convened at 9:00 AM on August 11, 2020. The agenda for this webinar meeting was approved as written, along with the minutes from the Gulf SSC's July 21-23, 2020, joint webinar meeting with the South Atlantic Council's SSC. [Verbatim minutes from past SSC meetings can be reviewed here](#). Dr. Joe Powers reviewed the meeting objective, which is to review the proceedings of the NOAA Science and Technology Calibration Workshop for Red Snapper, with particular attention being paid to the methods used to generate the calibration ratios between the state-specific survey catch and effort data and the federal data.

Workshop Summary, Overview of Gulf State Methods and Resulting Calibrations

Overview of Meeting Outcomes

Council Staff reviewed the proceedings of the National Oceanic and Atmospheric Administration (NOAA) Science and Technology Calibration Workshop for Red Snapper, which took place on August 5, 2020. Red snapper annual catch limits (ACLs) for the five Gulf states established under Amendment 50A to the Fishery Management Plan for Reef Fish Resources in the Gulf of Mexico were set using data from the Marine Recreational Information Program's (MRIP) Access Point Angler Intercept Survey (APAIS) and Coastal Household Telephone Survey (CHTS). The five Gulf States (Florida, Alabama, Mississippi, Louisiana, and Texas) are responsible for monitoring private recreational catch and effort for red snapper landed in their state, and use their state-specific surveys. These state-specific surveys generate catch and effort data in their native data currencies, which need to be calibrated to MRIP-CHTS currency for quota monitoring and stock assessment purposes. Currently, for quota monitoring purposes, private recreational catch and effort data are recorded using MRIP's APAIS and Fishing Effort Surveys (FES; successor to CHTS), and converted back to MRIP-CHTS using ratio adjustments developed by the National Marine Fisheries Service (NMFS) by state for all states except Texas. No ratio adjustment is available for Texas because MRFSS data from that state predate the program's full implementation, are incomplete, and not capable of calibration. The four other Gulf states have developed their own calibration methods and ratios to calibrate their data to MRIP-FES and MRIP-CHTS, with these ratios being reviewed during the aforementioned August 5th workshop. At that workshop, Florida, Alabama, Mississippi, and Louisiana presented their revised methods for calculating their respective state-specific ACLs. Alabama recommended calibrating its Snapper Check survey directly to MRIP-CHTS, without converting to MRIP-FES first, since it was against the MRIP-CHTS methodology that Snapper Check was developed. Mississippi's Tails n' Scales (TnS) survey recommended a weighting procedure to determine Mississippi's calibration ratio. Louisiana clarified that their proposed ratio calibration used catch and effort data from all waves in 2015, and did not exclude any waves as was written in the NMFS consultant evaluation. Louisiana requested that the NMFS consultant report be corrected to reflect this error.

Consultants' Report from August 5, 2020 Calibration Workshop

Dr. Richard Cody from the NOAA Office of Science and Technology (OST) reviewed the independent consultants' report from the August 5th MRIP workshop. Broadly, the consultants encouraged NOAA OST to generate a finalized report detailing the methodologies and results from the state-specific calibration ratios analyzed and presented during the workshop. The consultants also stated that a standardized approach for calculating calibration ratios from the states would be ideal. However, they recognized that survey design differences and the differing years when state surveys were being run side-by-side with MRIP make standardization of calibration methods arduous. The consultants also included state-specific feedback on calibration ratio development. For Louisiana, while only 2015 data were used as comparison, the consultants approved of the calibration ratio method proposed. For Alabama, the consultants also approved of the method proposed but requested some further clarification for omitting 2017 data from the final calculation. For Florida, the consultants approved of the methodology used to calculate the calibration ratio, but suggested another approach for generating the variance estimate for the correlation analysis. The consultants suggested using a correlation coefficient value of 0.0, rather than the proposed 0.5, as this would limit the unknown sources of correlation to only positive correlations and aid in interpretation of analyses. For Mississippi, the consultants did not recommend the new meta-analysis re-weighting procedure presented. They stated the proposed calculation contained an interaction term between MRIP and TnS which makes interpretation between survey estimates difficult. The consultants also indicated that the proposed method should have used estimated variances, rather than the standard errors that were used in the analyses presented. The consultants stated that the estimated variance is more appropriate to use for survey weighting and more closely reflected the methods described in the supporting literature presented by Mississippi. The consultants did conclude that a meta-analysis approach would be appropriate should Mississippi be interested in investigating a calibration ratio approach using a composite estimate.

The SSC inquired about how averaging different sets of concurrent years for state surveys along with either MRIP-CHTS or MRIP-FES affected the calibrated ratio results. Dr. Cody indicated that those differences in considering particular years for calibration ratios for each state would be need to be published in a document as recommended by the consultants. This report would allow for some transparency and justification for why the calibration methods differed among the states. Dr. Luiz Barbieri asked about what further progress was needed by the states to have their calibration ratio methods approved. Dr. Cody stated that the role of the consultants was to review and potentially recommend approval by NOAA OST of the methodologies presented by the states and indicated that the SSC could make further recommendations about which presented state-specific ratios were most appropriate. He also indicated that the Transition Team Gulf Subgroup could also make recommendations on the presented calibration ratios, once that group is convened.

Recommendations from NMFS

Dr. Joe Powers asked Dr. Cody to provide more information on the participants and objectives of the Transition Team Gulf Subgroup. The Transition Team Gulf Subgroup represents a subsection of the larger MRIP Transition Team that was created during the beginning of the MRIP-CHTS to MRIP-FES transition. That larger team contained state agency, regional council, NOAA regional office, NOAA science center, and NOAA OST staff from both the Atlantic and Gulf. The

Transition Team Gulf Subgroup will comprise many of the same Gulf participants from the larger MRIP Transition Team but will be specifically tasked with examining issues related to collection of private recreational fisheries data within the Gulf. Dr. Cody indicated the group would be convened for their first meeting sometime in late September of 2020. Dr. Powers reiterated the importance of the SSC to be informed about the various state surveys and their proposed calibration ratio results.

Background: State Survey and Calibration Ratio Presentations

Dr. Joe Powers requested that each state briefly summarize the presentations they provided at the August 5th workshop. Representatives from all four states provided background on their respective recreational survey programs and methodologies for their calibration ratios. The SSC then provided feedback and discussed each presentation.

Alabama:

Mr. Kevin Anson from the Alabama Department of Conservation and Natural Resources reviewed the methods used by Alabama to determine its calibration ratio to MRIP-CHTS. Only private recreational data were considered in Alabama's analysis, which focused on harvested pounds of fish (as opposed to numbers of fish) for the years 2018-2019. The years 2014-2017 were also considered; however, some variability exists in these years, possibly due to state season variability. As such, 2018-2019 were selected for stability and consistency. Alabama determined that the majority of the difference between the estimates of harvested fish from Snapper Check and MRIP-FES are attributable to how fishing effort is estimated by FES. The resultant ratio of Snapper Check to MRIP-CHTS pounds was calculated by Alabama to be 0.5259, using a mean of the ratios from 2018-2019 and preliminary data for 2019. The inverse of the ratio, or MRIP-CHTS to Snapper Check, was calculated to be 1.9015. The annual proportional standard error (PSE) estimates from MRIP-CHTS and MRIP-FES were greater than those produced by Snapper Check.

Dr. Will Patterson asked Mr. Anson to provide more detail on the rationale for using data collected from 2018-2019 for calculating the proposed calibration ratio. Mr. Anson stated that differing season lengths and timing for both the federal and state recreational red snapper seasons in 2017 created some highly variable estimates that were likely unreliable. While, 2018-2019 had more consistency in fishing season duration that made annual estimates from those years more robust. The SSC also inquired as to why estimates in harvested biomass were so different between Alabama's state survey and MRIP. Mr. Anson stated that MRIP is consistently estimating greater harvest in both numbers of fish and pounds. He suggested the discrepancy could be attributed to differences in the average weight observed from the two surveys. The SSC further inquired as to why a state survey would be certified by NOAA when it yielded such differing estimates and why states surveys were being scaled to MRIP values. Dr. Cody responded that the NOAA certification process approves methodologies for private recreational data collection sampling designs, but cannot distinguish what drivers are responsible for accuracy between survey estimates. Currently, red snapper ACLs are published based on recreational estimates derived from MRIP-CHTS, so the state surveys must be adjusted to be comparable to those catch limits. The SSC asked if there was a method to quantify the accuracy of catch reporting in the state survey. Mr. Anson responded that

angler-reported surveys of catch could be referenced to state-conducted dockside observations using an identifier (i.e., vessel number) to match reports.

The SSC then more broadly discussed how to determine whether a particular state survey or MRIP was more accurate in reporting recreational data estimates. Further, the SSC indicated that paramount to the discussion was to determine what is most appropriate for direct input into the stock assessment. Mr. Anson reminded the SSC that the need for state surveys arose from shortened red snapper fishing seasons that requires monitoring precision on the levels of days to weeks that is not practical using MRIP methodologies. Dr. Paul Mickle from the Mississippi Department of Marine Resources (MDMR) further indicated that simply dividing survey estimates may not be appropriate and some other approach like a meta-analysis should be investigated further. Dr. Clay Porch reiterated the importance of having a consistent historical time series when developing the stock assessment models and indicated that MRIP has been back calibrated to perform this task while the state survey data has not undergone this process.

Dr. Mickle added that the issue at hand is resolving the disparate estimates of catch and fishing effort between the state and federal surveys by using a calibration ratio. The problem with this approach is that it assumes the surveys are directly comparable in terms of their precision, which may not be true.

Florida:

Ms. Beverly Sauls from the Florida Fish and Wildlife Conservation Commission (FWC) provided an overview of Florida's Gulf Reef Fish Survey's (GRFS) methods for determining private recreational catch and effort. GRFS measures only private vessel catch and effort along Florida's Gulf coast, excluding the shore mode and Monroe County. GRFS was benchmarked against MRIP-CHTS from 2015-2017, and against MRIP-FES in 2018 and 2019. She indicated she was amenable to using a correlation coefficient of 0.0, as opposed to 0.5, based on the NMFS consultants' report. The SSC stated that the consultants approved of Florida's method for calculating its calibration ratio. Further, the SSC indicated that specifics for calculating variance estimates depend more on what the estimate may be used for and whether the objective requires choosing a less or more biased estimate. A comparison of the estimates of catch, effort, and discards between GRFS and MRIP-FES show higher estimates of fishing effort and discards for MRIP-FES, coupled with substantially greater variance in MRIP-FES.

Louisiana:

Mr. Jason Adriance from the Louisiana Department of Wildlife and Fisheries (LDWF) detailed Louisiana's calibration of its LA Creel survey to MRIP-CHTS. Only data from 2015 were used for Louisiana's calibration, as this was the only year that both surveys occurred in the state. The calibration between LA Creel and MRIP-CHTS yields a ratio of 1.06. No calibration exists between LA Creel and MRIP-FES because both surveys did not exist at the same time. Dr. Sean Powers asked if Louisiana will need to develop a calibration ratio to MRIP-FES in the future as federal recreational data are now being collected using only MRIP-FES, and future stock assessments will be incorporating data from MRIP-FES. Dr. Cody indicated that, in the future, the calibration ratio for Louisiana will require updating to MRIP-FES. The SSC asked for an

explanation for the differences in harvest estimates for offshore fish species. Mr. Adriance indicated that encounter rates and site selection for the offshore portion of the sample frame might be different between the two surveys and account for some the differences between survey estimates.

Mississippi:

Dr. Mickle reviewed Mississippi's differences with other areas of the Gulf, its survey (TnS), and its proposed calibrations. TnS has observed compliance rates in angler reporting in excess of 95%. MDMR expressed concern that the number of survey intercepts by MRIP's APAIS does not appear to have any correlation with the estimates of catch; such a correlation is present with TnS, and may be due to inconsistent and/or insufficient sampling by MRIP. MDMR used a ratio-based re-weighting procedure to weight survey PSEs for creating its calibration; however, this method was not accepted by the NMFS consultants. Dr. Mickle said that MDMR will continue working on its calibration.

The SSC asked how Mississippi was quantifying both in-and out-of-season discards. Mr. Trevor Moncrief stated that discards are difficult to measure but that an in-season metric of discards/angler can be generated from in-season data to identify outliers. He also indicated that out-of-season discards are not observed by TnS. Dr. Patterson asked about how MDMR was able to generate a near-census of private recreational red snapper fishing effort. Dr. Mickle described the channeling of effort due to limited ingress/egress points to offshore waters through barrier island passes, and Mississippi's high degree of enforcement. Further, though TnS doesn't run year-round, non-compliance outside of the MDMR-established season is estimated to be low.

SSC Discussion and Recommendations

The SSC discussed the necessity for a commensurate way of determining catch and effort, while also recognizing the differences inherent between the states and how they survey their anglers. The assertion in the NMFS white paper on the use of recreational data for management and stock assessments (*Recommended Use of the Current Gulf of Mexico Surveys of Marine Recreational Fishing in Stock Assessments*) that MRIP-FES represents the best scientific information available was debated. The SSC also agreed that scaling a state's data to MRIP-FES is not the same as calibrating those data, and that scaling to MRIP-FES is tantamount to using the MRIP-FES data. Some SSC members concurred that it is possible that, perhaps in some cases, the state surveys are doing a better job of quantifying catch and effort than MRIP-FES

Dr. Barbieri postulated developing an integrated approach of including the state data in MRIP, thereby supplementing MRIP with the state surveys, which were specifically designed to improve upon catch and effort estimation over MRIP-FES. Dr. Mickle called the SSC's attention to the background materials for this meeting, with particular attention to the summary of the fourth red snapper calibration workshop (*Item VIIIa: Red Snapper IV Workshop Summary from September 2018*). This document describes multiple ways of approaching calibrating the recreational red snapper catch and effort data Gulf-wide for quota monitoring and stock assessments, including proposals for various modeling efforts.

It was suggested that the spatiotemporal application of the state surveys may be more appropriate than MRIP-FES for monitoring recreational red snapper catch and effort. However, the SSC has previously, for other species, noted that MRIP-FES represented the best scientific information available, and that the disparities between the state surveys and MRIP-FES vary by state due to fundamental differences in survey design. SSC members discussed whether the calibration approach was the best option available in the short-term, as it would result in a commensurate data currency for fisheries management and stock assessment purposes.

Results of Individual State Calibrations and State Specific Annual Catch Limits

Mr. Jeff Pulver from the NMFS Southeast Regional Office (SERO) presented the methodology used to calculate the MRIP FES:CHTS calibrations ratios for Alabama, Louisiana, Mississippi, and Florida. The current red snapper catch limits (overfishing limit, acceptable biological catch, and ACLs) were established using MRIP-CHTS data; further, quota monitoring is currently performed using MRIP-FES. Therefore, a calibration from MRIP-FES to CHTS is necessary for quota monitoring in the same data currency as the current catch limits. For Alabama and Louisiana, a single ratio was calculated between the state and MRIP-CHTS surveys. Florida and Mississippi required a ratio between MRIP-FES to the respective state surveys, and a ratio from MRIP-FES to MRIP-CHTS. The ratio calculated for Alabama was updated from the one presented during the August 5, 2020, workshop to now include finalized MRIP-CHTS landings from 2019.

Alabama's Snapper Check to MRIP-CHTS ratio was calculated from the ratio of the means of the 2018-2019 pounds, and was equal to 0.4875, which reduced the state's ACL from 1,122,662 pounds (lbs) whole weight (ww) to 550,104 lbs ww. Louisiana's LA Creel ratio to MRIP-CHTS was equal to 1.06, which increased Louisiana's ACL from 816,223 lbs ww to 865,207 lbs ww.

For Florida and Mississippi, estimates were developed from preliminary state to MRIP:FES ratios, followed by calculating the FES:CHTS ratios. Average annual landings from two time periods were used to develop preliminary FES:CHTS ratios: three-year (i.e., 2015-2017) and five-year (i.e., 2015-2019) averages. Mr. Pulver also presented the number of MRIP-FES completed surveys for Alabama, Louisiana, Mississippi, and Florida. Overall, the number of surveys has increased during the last five years. The MRIP-FES response rate for the mail survey was approximately 30-35% for the four states. Comparatively, the MRIP-CHTS response rate decreased during the years 2015-2017, while the number of surveys attempted remained stable. Between Alabama, Florida, and Mississippi, the latter had the least number of primary mode intercepts with red snapper (average of 43 intercepts). Alabama had an average of 196, and Florida an average of 153 intercepts from 2015-2019.

The FES:CHTS ratios estimated for Florida were: 2.79 (2015-2017) and 2.99 (2015-2019). The FES:CHTS ratios estimated for Mississippi were: 2.25 (2015-2017) and 2.03 (2015-2019). Mr. Pulver noted that the PSE for Mississippi landings in 2015 was greater than 50, but that it decreased in subsequent years. Mr. Pulver then presented calculations for state quotas based on their ratio estimates. Florida, with a GRFS:FES ratio of 0.38, had an ACL increase from 1,913,451 lbs ww to 2,028,641 lbs ww (2015-2017 average) or 2,174,062 lbs ww (2015-2019 average). Mississippi's ACL was recalculated using the preliminary MRIP-FES to TnS of 5.86,

resulting in a decrease from 151,550 lbs ww to 58,189 lbs ww (2015-2017) or 52,499 lbs ww (2015-2019).

The SSC inquired if the difference in coastal areas between the states had an influence in the number of surveys conducted. Dr. Mickle spoke of the level of detail in the TnS survey, which includes surveying anglers using both public and private access points. The SSC recognized that the difference in methodology by the state and federal surveys should be explored further, as to not penalize a state when the difference after calibration greatly reduce the state's quota. The SSC also recommended exploring sources of bias related to season duration, as well as the influence of out-of-state anglers.

SSC Discussion and Recommendations

Dr. Mickle cautioned treating TnS and MRIP-FES, or any of the state surveys, as being equal in terms of each survey's precision in its estimates of catch and effort. The state surveys have been designed by each state for each state, and as such perform differently compared to each other and to MRIP-FES. SSC members thought that simply scaling the state surveys to MRIP-FES didn't seem to be the answer, and supported further studies to investigate alternative methods of calibration. Dr. Cody identified another potential unknown in all of the surveys, which is the private access component, which is not captured by APAIS intercepts. Mr. Mareska countered that the requirement to report every trip in Alabama and Mississippi is a fundamental difference in those states' surveys versus MRIP-FES, which is capturing a portion of the private vessel catch and effort. Dr. Mickle added further that Mississippi will operate a program by where dockside samplers visit private access points at anglers' homes to count and measure fish when allowed.

Workshop Summary of Tasks for Gulf Transition Team

Revisiting and Updating Calibrations

Dr. Cody reviewed the participants on the MRIP transition team, and thought that a subgroup of that body would be appropriate for continually reviewing the calibrations. This includes revisiting and updating preliminary calibrations.

Transparency in Data Delivery, Management, Accessibility, and QA & QC

A primary concern for the transition team needs to be transparency and quality assurance when navigating this process. The involvement of the Gulf States Marine Fisheries Commission in this transition is strongly suggested as they already house some state data and have a history of working with state agencies; this may also maximize efficiency through more direct state involvement.

Future Research

The SSC thought that the MRIP transition team should consider integrative research approaches. Several ongoing pilot studies could affect survey estimates; changes to these recreational fishing surveys need to be coordinated to minimize disruptions in stock assessments and management

processes. The MRIP transition team may be useful in tackling these tasks in a more formal process that still allows for collaboration.

Examining Drivers for Differences between Survey Estimates

The SSC reiterated the importance to elucidate the differences in survey methodology among states, in addition to the differences between state and federal surveys. Dr. Cody reminded the SSC that the calibration process should include determining the drivers behind the differences in the various survey methods and also mentioned that this will likely not be the last calibration process; as more data become available, they can be used to revisit calibration procedures to see how well data streams match. He also added that MRIP is not a static survey.

SSC Discussion and Recommendations

Dr. Patterson preferred separating the idea of scaling the state survey estimates to the federal estimates from the idea of survey certification, adding that what survey “certification” means should be made clear. Further, Mississippi’s survey, which appears to be a near-census of that state’s in-season catch and effort, should be examined for opportunities to carry forward in future survey efforts.

Dr. Barbieri stated that the Council is requesting guidance from the SSC on how to proceed with monitoring and management of private recreational red snapper. Progress on the issue of these data calibrations will be necessary to satisfy management requirements. SSC members discussed and dismissed the inclusion of consideration of Texas in any recommendations, since no ability to calibrate Texas’ survey to MRIP currently exists. The ratios and years of data used for the state-specific ratios were also discussed, with consideration given to consistency in time series.

Motion: The SSC considers the methods proposed to generate conversion ratios between Gulf state surveys and MRIP data as appropriate for quota monitoring of the red snapper state specific ACLs. Specifically, these methods consist of:

- FL: GRFS to CHTS ratio of 1.0602 (2015-2017)
- AL: Snapper Check to CHTS ratio of 0.4875 (CHTS data for 2018-2019)¹
- MS: Tails n’ Scales to CHTS ratio of 0.3840 (2015-2017)
- LA: LA Creel to CHTS ratio of 1.06 (2015)

Motion carried with 1 abstention.

Mr. Blanchet noted that the original version of “*Recommended Use of the Current Gulf of Mexico Surveys of Marine Recreational Fishing in Stock Assessments*” (NMFS white paper) was intended to be updated as new information became available. Dr. Cody replied that an updated version of the document is complete but had not yet been published as of this meeting; this updated version corrects errors identified previously by Louisiana and Florida.

¹ Alabama’s ratio is based on pounds of fish

Public Comment

None received.

Other Business

No other business was brought before the SSC.

The meeting was adjourned at 3:45 pm on August 11, 2020. Because all agenda items were completed on August 11, the SSC did not reconvene on August 12.

SSC Participants

Standing SSC

Joe Powers, *Chair*

Kai Lorenzen, *Vice Chair*

Lee Anderson

Luiz Barbieri

Harry Blanchet

Dave Chagaris

Benny Gallaway

Bob Gill

Doug Gregory

Walter Keithly

Camp Matens

Jim Nance

Will Patterson

Sean Powers

Ken Roberts

Steven Scyphers

Jim Tolan

Special Reef Fish SSC

Jason Adriance

Judd Curtis

John Mareska

Special Socioeconomic SSC

Jack Isaacs

Andrew Ropicki

Special Ecosystem SSC

Paul Sammarco

[A list of all meeting participants can be viewed here.](#)