Standing, Reef Fish, and Socioeconomic SSC
Meeting Summary
Tampa, Florida
October 2-3, 2018

The meeting of the Standing, Reef Fish, and Socioeconomic Scientific and Statistical Committee (SSC) was convened at 8:30 am on October 2, 2018. The agenda was approved as written. Elections of the Chair and Vice-Chair were held, Dr. Joe Powers was elected Chair and Dr. Kai Lorenzen was elected Vice-Chair. The summary minutes of the August 2, 2018 Standing, Reef Fish, Mackerel and Shrimp, and the March 26-27, 2018 Standing, Reef Fish, Shrimp and Socioeconomic SSC meetings were approved as written.

Dr. Luiz Barbieri agreed to serve as the SSC representative at the October 22-25, 2018 Council meeting in Mobile, Alabama.

Best Scientific Information Available

Ms. Levy presented information regarding the best scientific information available (BSIA) including the SSC's role, debate and evaluation of scientific information, conducting peer reviews, and providing Acceptable Biological Catch (ABC) recommendations. Ms. Levy stated that BSIA appears in the Magnuson-Stevens Act, specifically in Section 2 and in Section 301 under National Standard 2. Ms. Levy also discussed the guidance outlined in the BSIA draft framework. It was unclear when a final draft of the BSIA framework would be available to all regional Councils.

Overall, Ms. Levy notified the SSC that when it judges scientific information to be BSIA, it should do so with reference to the specific management advice it provides to the Council (especially when in the form of a motion). Since management advice from the SSC should always be based on BSIA, it creates a legal issue when the SSC declares an analysis to be BSIA but ultimately uses a different analysis to provide management advice. For example, in the instance of stock assessments, if the SSC was able to use the stock assessment for stock status determination (overfished, overfishing), but did not consider the stock assessment projections suitable for the provision of catch advice, then the SSC should be explicit that it finds the assessment to be the BSIA for the status determination, but not the projections, and state why. Catch advice may then be based on a different analysis (e.g. a lower tier ABC control rule applied to catch-only data) which may be considered BSIA for this purpose. This guidance is based on a policy decision made by National Marine Fisheries Service (NMFS). NMFS cannot ignore superior or contrary data without explicit rationale (e.g. differing methodologies and cannot be compared). The SSC was reminded that it needs to focus on its role as advisor to the Council about scientific information for management purposes.

SSC Best Practices and Procedures

Dr. Anderson gave a presentation to facilitate discussion on the best practices and procedures of the SSC. The goal of this presentation was to outline clear communication strategies between the SSC and the Council. Dr. Anderson's recommendations were that staff could continue to improve

the scope of work and provide the scope of work prior to the meeting to the Council chair and the SSC chair for feedback. Staff could also provide the description of goals or objectives of management actions including Council summaries in the scope of work so the SSC can provide advice as it relates to the Council's goals and objectives. In the future, the SSC chair will try to 'front-load' discussions by appointing an SSC member to lead discussions on particular agenda items. Additionally, the SSC chair will draft a short "SSC procedures" white paper prior to the next SSC meeting, to facilitate implementation of these suggested strategies.

Update on Red Grouper Interim Analysis

Dr. Smith presented an interim analysis on red grouper conducted by the SEFSC. The purpose of this analysis was to develop a framework for providing updated harvest advice in periods between stock assessments. Red grouper is currently in between assessments and there is concern about the declining condition of the stock. The original intent was to develop a management strategy evaluation (MSE) to test the rigor of the interim analysis approach but the SEFSC will require additional time to complete the MSE. The SEFSC was able to provide an overview of the proposed approach and described several scenarios and harvest control rules (HCRs) that could be used to provide management advice for 2019. An interim analysis was prepared by the SEFSC for one index (the fishery independent bottom longline (BLL) index, determined as the best data available) and for one of the possible harvest control rules. The chosen HCR adjusts ABC recommendations based on deviations between projected and observed index values and can be adjusted, using a parameter β, to be more or less sensitive to these deviations. The ABC advice for 2018 and 2019 was set equal to ABC in 2017. It was noted that the SEDAR 42 assessment had resulted in a large increase in ABC relative to projections from the previous assessment, which took effect in 2016. This result has been questioned by the SSC and by stakeholders, and it was therefore decided to conduct interim analyses using SEDAR 42 ABC projections ('with SEDAR 42') but also, extending the final year ABC values from the previous assessment over the period to 2019 ('without SEDAR 42'). Analyses were presented using different values of β, and with and without SEDAR 42 scenarios. Of these, the scenario without SEDAR 42 and using $\beta=1$, which results in the interim catch advice being strongly driven by the index deviations, was chosen by the SSC as a realistic and conservative (with respect to risk of overfishing) scenario for the provision of interim management advice as requested by the council. However, the SSC had concern with selecting a β and only one index (BLL) and noted that the completed MSE would be informative in selecting appropriate β values.

Motion: The Committee recommends that the SEFSC continue the management strategy evaluation of the interim analysis approach.

Motion carried unanimously.

Overall, the SSC felt that the interim analysis was informative and suitable for provision of interim catch advice as had been requested by the Council. However, since the method has not been fully tested and assumptions had be made regarding use of SEDAR 42 ABC projections and the choice of HCR and the β value, the SSC felt it inappropriate to provide this advice as an ABC determination since that would <u>require</u> the Council to adjust the Annual Catch Limit (ACL). Also, the SSC discussed that an operational assessment for red grouper is in progress (SEDAR 61) and

modification of the ABC will be considered based on the results of this assessment. That said, the SSC thought that the data and analysis presented indicated a decline in the red grouper stock, and were sufficient to provide an ACL recommendation for the Council to consider.

Second Substitute Motion: The Committee recommends an interim ACL for red grouper in 2019 of 4.6 mp. This recommendation is based on the SEFSC interim analysis conducted, not including the SEDAR 42 assessment, and using a beta value of one.

Second Substitute Motion carried 11-7.

Briefing on MRIP Transition to Improved Survey Designs

In response to a 2006 NRC review, National Marine Fisheries Service (NMFS) has been working on ways to improve fishing effort estimates on the Atlantic and Gulf coasts. To improve estimates of recreational fishing effort, the Marine Recreational Information Program (MRIP) survey has recently implemented changes to its methodology to estimate effort. MRIP staff provided an overview of the change from a phone-based to a mail-based effort survey that has improved response rates and address the declining rate of households with landlines. Overall, these changes have improved the sample frame and improved the quality of responses by allowing more time to recall fishing activity and allowing all household members to respond without requiring them to answer the phone. The new survey methodology has been peer-reviewed and implemented. Fully incorporating the results into stock assessments and management advice requires calibration of the various methods into a common currency for use in stock assessment, quota monitoring, and management.

Comparisons of harvest (i.e., A (landings) + B1 (dead discards) in numbers of fish)) and total catch (i.e., A + B1 + B2 (live discards) in numbers of fish) were presented for several key stocks in the Gulf. For all stocks, estimates of harvest and total catch were higher using the new mail survey effort estimation methods (i.e., Fishing Effort Survey (FES)) and were typically 2-3x larger than the previous telephone-based survey estimates. The revised numbers will be calibrated with the historical methods back to 1981 as stock assessments are completed for each species. Until stock assessments are completed, the harvest estimates will be converted to the pre-FES currency to ensure that the landings and ACLs remain in a common currency.

SSC members reviewed the FES estimates of private boat effort and noted a dramatic decline in effort after 2013. MRIP staff explained that this resulted from Louisiana migrating to LA Creel and as a result, Louisiana's recreational effort is no longer included in the MRIP survey. The SSC requested that this be annotated on the chart to explain the change in effort and the fact that these figures do not include Louisiana after 2013. The SSC also noted that stocks with sector allocation were primarily determined based on historical participation and the perception of this may change based on the data from the new MRIP survey.

The Great Red Snapper Count

Dr. Drymon gave a presentation summarizing the status, preliminary findings, and timeline for a comprehensive effort to estimate red snapper abundance in the Gulf. He described five components

of the study: 1) Data mining and habitat mapping, 2) Calibration and validation, 3) Sampling, 4) Results, and 5) Conclusions. He stated that the objective of the data mining and habitat mapping was to predict the probability of presence of red snapper to inform sample selection protocols for red snapper sampling. The study uses multiple gear types, and calibration efforts are ongoing to ensure accurate estimates of fish density and abundance. Data collected during the spring and summer of 2018 are currently being analyzed, and the project will be completed in summer 2019. Stakeholder engagement is a large part of this effort. Investigators are working closely with key partners to provide background information about the project and results as they become available.

Right-sizing" Stock Assessments

SEFSC staff began a discussion of "right-sizing" stock assessments, a concept which would aim to pair a fish stock, and the data available about that stock, with the stock assessment models of appropriate complexity to generate management advice. Historically, concern has been expressed about the complexity of the model used versus the data available for a given species, and the assumptions which become necessary to make in order to allow that model to function. Determining the appropriate model for the data available for a species will ultimately increase the timely throughput of assessments at an acceptable level of transparency and thoroughness.

The new research track/operational assessment approach to SEDAR assessments relies heavily on stock assessment prioritization, which will determine assessment frequency and the level of assessment complexity. Categorizing stocks and their available data (and data quality) will help determine the type of assessment used by species or species group. There are three key steps to this process:

- Conduct stock assessment prioritization
- Conduct stock assessment classification
- Conduct gap analysis

The SSC will review the Gulf Council's version of the SEFSC stock assessment prioritization tool at its January 2019 meeting. This tool is designed to use the input of a variety of quantitative and qualitative sources to prioritize the assessments of managed species in a region. Stock assessment classification will follow, and will determine the appropriate model complexity for a species, given the data available. A species' classification will be graded on a scale of 0-5 for data inputs: catch, size and/or age composition data, abundance, life history, and ecosystem linkages. A higher scale value indicates a more complete knowledge of the respective input. The species will then be assigned to the appropriate assessment category ranging from simplest to most complex and data intensive:

- Data-limited, index based, aggregated biomass dynamics, virtual population analysis, statistical catch-at-length, statistical catch-at-age

A subsequent gap analysis would determine the frequency with which assessments should be conducted for a given species. Data gaps would also be quantified and documented.

Right-sizing is more likely to succeed with proper planning of stock assessment needs well in advance of the present year, and by avoiding making ad hoc changes to the SEDAR assessment schedule, especially within two years of the present year. This is a defined goal of the SEDAR Steering Committee.

Expansion of the inclusion of ecosystem components into recent stock assessments has been an ongoing effort at the SEFSC through hypothesis testing (e.g., red tide). Using a more structured method of inclusion of these tests within models is being incorporated, and can be further explored in the research track approach.

SEDAR Steering Committee Report

The Council has been asked to consider a 'scope of work,' which serves as a type of draft version of the terms of reference (TORs), prior to finalizing the TORs for each stock assessment. The goal is to finalize the needs of the Council as far in advance as possible. This opportunity will allow the Council and its SSC to identify specific items to address in each assessment well before the assessment begins, allowing for better planning and use of resources.

SEDAR Assessment Schedule

During the SEDAR Steering Committee meeting the recent red snapper workshop in New Orleans was highlighted. Although this workshop was specific to red snapper, it highlighted the difficulty in reconciling the differences between survey methodologies for the old (MRIP) and new (FES/APAIS) data, and the state-collected survey data (TPWD, LA Creel, Tails and Scales, Snapper Check, FL Gulf Reef Fish Survey) for other species. During the discussion of the Gulf SEDAR Schedule, the SEFSC wanted to know whether the Council wanted to move forward with the MRIP-Lite updates currently on the SEDAR schedule. The SSC was asked whether they recommended that the Council wait for all calibrations to be completed for the listed species, or incorporate the calibrations into the stock assessment one at a time.

Council, SEFSC, and NFMS lead the discussion with the SSC regarding potential issues with moving forward with the MRIP-Lite update assessments at this time. These Lite update assessments would only replace recreational catch data with FES/APAIS-adjusted data, and would not update any of the other recreational data products like age and length composition data, discard data, recreational CPUE. If conducted, the SSC will have to review the MRIP-Lite update assessments and recommend future efforts for the Council. Some species without state surveys could be calibrated under the new FES/APAIS-adjusted survey data; however, many managed species under consideration are components of some of the state-level catch and effort surveys. Estimates for species which are not currently the subject of state-level surveys may require reconciliation between FES/APAIS and MRIP values prior to those data being used in a stock assessment. SSC members estimated that it may take 6 to 12 months, or longer, before the varying survey currencies can be reconciled. Scientists are still trying to understand how calibrations are going to align with state surveys for red snapper and for other species. The red grouper assessment (SEDAR 61) is the first Gulf assessment that will incorporate new MRIP-calibrated data to account for the FES and the Access Point Angler Intercept Survey (APAIS).

The original intent of the MRIP-Lite update assessments was to provide updated catch advice including OFL and ABC for each species based on the new FES survey methodology. Given the current condition of the data and the discrepancies among the various surveys, the SSC made the following motion:

Motion: The Committee recommends that the MRIP calibration updates currently scheduled for 2018-2019 for gag, greater amberjack, gray snapper, vermilion, and red snapper be incorporated into regularly scheduled assessments when stock status determination and management advice can be provided.

Motion carried with one opposed.

Stock Assessment Schedule 2021

The SSC was asked to recommend stock assessment needs for 2021 and beyond. The terminal years for gag and greater amberjack have been noted as 2019 and 2017, respectively. The terminal year for gag is intended to allow the inclusion and contrast of the most recent red tide year, which is 2018. The terminal year for greater amberjack was in 2017 to exclude the most recent fishing season change for the recreational sector, which was in 2018, because it will be unlikely to yield more than one year of data under that regulatory change based on the current assessment schedule. Terminal years for vermilion snapper and cobia are both currently set at 2018. The SSC had no changes for the proposed 2021 assessment schedule, which will complete operational assessments on red snapper, scamp, and gag, and begin a research track assessment on red grouper. The Florida FWC will also complete a benchmark assessment on mutton snapper in 2021, and begin a benchmark assessment on West Florida hogfish.

Gulf of Mexico Allocation Review Triggers

Staff presented a discussion paper on the NMFS Fisheries Allocation Review Policy (NMFS Policy Directive 01-119) and an accompanying procedural directive addressing criteria for initiating allocation reviews (NMFS Procedural Directive 01-119-01). The presentation summarized the review policy, detailed the types of review triggers suggested, and listed Gulf fisheries allocations that would be subject to the policy.

The Committee discussed the three types of triggers presented and cautioned that, in public-interest based triggers, petitions could be influenced by special interests groups and diverted to serve the motives of a particular constituency. Committee members argued that the risk of diverting petitions may not be significant because petitions would not guarantee a potential resource reallocation but would merely suggest to the Council to initiate a review to determine whether or not an evaluation of alternative allocations would be warranted.

The Committee commented on the ease of implementation of time-based triggers. Committee members suggested that the Gulf Council could streamline its review process by adopting the same set of triggers as the North Pacific Fishery Management Council (NPFMC). The North Pacific

Fishery Management Council (NPFMC) adopted a 10-year timeframe as the primary trigger for review of non-LAPP allocations, and the existing Council public input process as the secondary trigger for review.

The Committee discussed indicator-based triggers and noted that indicator-based triggers could constitute suitable review triggers. Committee members suggested that the Council could use time-based and indicator-based criteria as primary and secondary triggers, respectively. Committee members noted that, relative to public interest and time-based criteria, the selection of indicator-based triggers would involve additional steps because it would also require the determination of the methods used to track changes in the indicator-based criteria and the establishment of thresholds below (or above) which the allocation review would be initiated. Committee members indicated that criteria such as the status of the stock and the accountability of the sectors between which the stock is allocated could be considered as indicator-based criteria. Committee members noted that for some indicator-based criteria, e.g., socio-economic indicators, time series data may not be available to allow tracking over time for the purpose of allocation review.

The Committee requested that staff provide a document listing existing allocations in the Gulf, the regulatory actions that established the allocations, and a summary of the methods used to allocate the resources. The Committee also requested that staff present (at a future meeting) the objectives of FMPs, including allocations subject to the review policy. Committee members noted that allocation decisions are typically negotiated and that some allocations may have been set with very limited information. Committee members also noted that allocations changes can be temporary and could affect the number of discards. The Committee inquired about the process the Council would follow to comply with the allocation review policy. Staff indicated that the Council would send a letter to NMFS listing Gulf allocations subject to the policy and detailing the triggers or set of triggers selected for the allocation review.

Specify the TORs for the 2020 Operational Assessments for Gag and Greater Amberjack

Council staff reviewed the draft TORs ('scope of work') for the 2020 operational assessments for gag and greater amberjack. Committee members asked about the limitations of an operational stock assessment. Staff clarified that an operational assessment was essentially a hybrid of the old update and standard-track assessments. In an operational assessment, new data can be added and changes to how the model operates are permitted. However, a main purpose behind the research track/operational assessment framework is to increase throughput, and this effort is countered as the complexity of an operational assessment increases with additional TORs.

Committee members focused on proposed TOR #4, which recommended running a less data-intensive model alongside the previously used Stock Synthesis model for each species. Doing so would provide contrast to the Stock Synthesis base case, and would allow for consideration of a model which assumes much less about the data used in the assessment (albeit with potentially less accuracy about the results). Committee members agreed that a less complex model (e.g., a biomass dynamic approach) would be useful for greater amberjack, which originally used a surplus production model. Greater amberjack has recently been fraught with concerns over aging

accuracy, changes in fishery-dependent yield streams, and sample size issues in early age composition data. Consideration of a less complex model may be in line with the effort to "right-size" stock assessments by species. The Committee added that it did not think such an effort was necessary for gag.

The Committee expressed some concern over inclusion of the results of the recalibrated MRIP data, and whether those data would be available for inclusion in the gag and greater amberjack operational assessments. Staff noted that both assessments are scheduled to begin in 2020, which gives at least 18 months for the reconciliation of the differences between the current MRIP data and the new FES/APAIS data for each species.

The Committee also revisited the issue of the metric by which spawning stock biomass would be measured for gag. In the previous benchmark stock assessment (SEDAR 33), spawning stock biomass was measured as both females-only and sexes-combined. However, an examination of sex ratios for gag revealed that females outnumber males by approximately 35:1. An assessment of gag in the South Atlantic used sexes-combined when defining spawning stock biomass. The SSC determined that, since the framework for females-only and sexes-combined analyses of spawning stock biomass have already been developed in a past assessment, those two metrics should be provided for the gag operational assessment.

Staff will make the recommended changes to the draft TORs and forward them to the SEFSC and SEDAR for consideration

Discussion on Gulf Council Fishery Monitoring and Research Priorities for 2020-2025

Staff presented a brief summary of the previous research priorities established by the Council and noted that these priorities followed metrics similar to what other fishery management councils have established. Staff outlined a timeline for the SSC to review upcoming research priorities, which are due in October 2019, and will bring a draft of the 2020-2025 research priorities mid-way through 2019. Staff was requested to add a section for research to inform strategies for improved stakeholder engagement, communication, and outreach. Additionally, another topic of quantifying indicator-based triggers in the economic and socio-cultural section should be added.

Something's Fishy" Red Grouper Questionnaire

Staff presented a summary of the data collected from 'Something's Fishy.' The purpose of this project was to engage stakeholders prior to a stock assessment by asking for peoples' general sentiments without using specific or leading questions. 'Something's Fshy' was available via Google sheet on the Council's website and Facebook page, and was available for one month, closing one week prior to the data workshop for SEDAR 61.

The meeting adjourned at 10:30 a.m. on October 3, 2018.

Standing SSC
Joe Powers, Chair
Kai Lorenzen, Vice-Chair
Luiz Barbieri
Harry Blanchet via webinar
Lee Anderson
Benny Gallaway
Bob Gill
Douglas Gregory
Jeff Isely
Walter Keithly
Robert Leaf
Camp Matens
James Nance
Will Patterson
Sean Powers
Ken Roberts
Steven Scyphers
James Tolan

Reef Fish SSC
Jason Adriance
Judson Curtis
John Mareska

Socioeconomic SSC
Kari MacLauchlin-Buck
Jack Isaacs
Andrew Ropicki

Council Staff
Assane Diagne
Matt Freeman
John Froeschke
Morgan Kilgour
Ava Lasseter
Emily Muehlstein
Ryan Rindone
Charlotte Schiaffo
Carrie Simmons

Presenters
Richard Cody
Laura Diederick
Kelly Denit
John Foster
Skyler Sagarese
Matthew Smith
Marcus Drymon
Lee Anderson
Mara Levy

Council Member
Martha Guyas

Others
Eric Bovee
Jason Delacruz
Michael Drexler, OC
Sue Gerhart, NMFS
Peter Hood, NMFS
Fatemah Jamal
Mike Jepson, NMFS
Michael Larkin, NMFS

Mara Levy, NMFS
Charlotte Marin, FWC
Elineide Marques
Elizabeth Mays
Amy Oxton
Jeff Pulver, NMFS
Beverly Sauls, FWC
Andy Strelcheck, NMFS